

## Simulation Results for [BarberSaloon3.java](#)

```
***          Barber Saloon Simulation 1          ***

***          Parameters          (panel of configuration)          ***

nClients=      25,      the nr total of clients
nChairs=       4,      the nr total of chairs (=> barber chair included).
minTimeHairCut= 15.0,   the minimum fixed time for hair cut (minutes).
variableTimeCut= 15.0,  for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0, for max time between hair cuts (minutes).
maxTimeBetweenClients= 120.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins= 187,  the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.

***          Begin Simulation Barber Saloon (Sleeping Barber)          ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 3. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.37 minutes...
      Barber begins hair cut of 19.58 minutes. ClientId: 0 Freechairs = 3 Cut? false.
      Client id=0 begins hair cut of 19.58 minutes.
      Client id=0 ends hair cut of 19.58 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 1.
      *** Client id=0 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 1 ***

Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 26.45 minutes. ClientId: 1 Freechairs = 3 Cut? false.
      Client id=1 begins hair cut of 26.45 minutes.
      Client id=1 ends hair cut of 26.45 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 2.
      *** Client id=1 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 2 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 28.5 minutes. ClientId: 2 Freechairs = 3 Cut? false.
      Client id=2 begins hair cut of 28.5 minutes.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 2. Trials: 1.
      Client id=2 ends hair cut of 28.5 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 3.
      *** Client id=2 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 3 ***

      Barber begins hair cut of 21.39 minutes. ClientId: 3 Freechairs = 3 Cut? false.
      Client id=3 begins hair cut of 21.39 minutes.
      Client id=3 ends hair cut of 21.39 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 4.
      *** Client id=3 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 4 ***

Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 27.85 minutes. ClientId: 4 Freechairs = 3 Cut? false.
      Client id=4 begins hair cut of 27.85 minutes.
      Client id=4 ends hair cut of 27.85 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 5.
      *** Client id=4 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 5 ***

Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 15.39 minutes. ClientId: 5 Freechairs = 3 Cut? false.
      Client id=5 begins hair cut of 15.39 minutes.
      Client id=5 ends hair cut of 15.39 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 6.
      *** Client id=5 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 6 ***

Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 27.96 minutes. ClientId: 6 Freechairs = 3 Cut? false.
      Client id=6 begins hair cut of 27.96 minutes.
      Client id=6 ends hair cut of 27.96 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 7.
      *** Client id=6 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 7 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 17.13 minutes. ClientId: 7 Freechairs = 3 Cut? false.
      Client id=7 begins hair cut of 17.13 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 2. Trials: 1.
      Barber begins hair cut of 17.13 minutes. ClientId: 7 Freechairs = 2 Cut? false.
      Client id=7 ends hair cut of 17.13 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 8.
      *** Client id=7 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 8 ***

      Client id=8 begins hair cut of 21.4 minutes.
      Client id=8 ends hair cut of 21.4 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 9.
      *** Client id=8 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 9 ***

Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 3. Trials: 1.
      Barber begins hair cut of 28.84 minutes. ClientId: 9 Freechairs = 3 Cut? false.
      Client id=9 begins hair cut of 28.84 minutes.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
      Barber begins hair cut of 28.84 minutes. ClientId: 9 Freechairs = 2 Cut? false.
      Client id=9 ends hair cut of 28.84 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 10.
      *** Client id=9 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 10 ***

      Client id=10 begins hair cut of 16.81 minutes.
```

## Simulation Results for [BarberSaloon3.java](#)

```
Client id=10 ends hair cut of 16.81 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 11 ***

Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 3. Trials: 1.
Client id=11 begins hair cut of 20.18 minutes.
Barber begins hair cut of 20.18 minutes. ClientId: 11 Freechairs = 3 Cut? false.
Client id=11 ends hair cut of 20.18 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 20.61 minutes. ClientId: 12 Freechairs = 3 Cut? false.
Client id=12 begins hair cut of 20.61 minutes.
Client id=12 ends hair cut of 20.61 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 28.82 minutes. ClientId: 13 Freechairs = 3 Cut? false.
Client id=13 begins hair cut of 28.82 minutes.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 2. Trials: 1.
Client id=13 ends hair cut of 28.82 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 14 ***

Barber begins hair cut of 19.42 minutes. ClientId: 14 Freechairs = 3 Cut? false.
Client id=14 begins hair cut of 19.42 minutes.
Client id=14 ends hair cut of 19.42 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 15 ***

Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 20.98 minutes. ClientId: 15 Freechairs = 3 Cut? false.
Client id=15 begins hair cut of 20.98 minutes.
Client id=15 ends hair cut of 20.98 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 16 ***

Client id= 16 arrives. Client id=16 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 28.64 minutes. ClientId: 16 Freechairs = 3 Cut? false.
Client id=16 begins hair cut of 28.64 minutes.
Client id=16 ends hair cut of 28.64 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 17.
*** Client id=16 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 17 ***

Client id= 17 arrives. Client id=17 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 18.06 minutes. ClientId: 17 Freechairs = 3 Cut? false.
Client id=17 begins hair cut of 18.06 minutes.
Client id=17 ends hair cut of 18.06 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 18.
*** Client id=17 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 18 ***

Client id= 18 arrives. Client id=18 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 20.6 minutes. ClientId: 18 Freechairs = 3 Cut? false.
Client id=18 begins hair cut of 20.6 minutes.
Client id=18 ends hair cut of 20.6 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 19.
*** Client id=18 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 19 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 19 arrives. Client id=19 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 21.98 minutes. ClientId: 19 Freechairs = 3 Cut? false.
Client id=19 begins hair cut of 21.98 minutes.
Client id=19 ends hair cut of 21.98 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 20.
*** Client id=19 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 20 ***

Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 15.77 minutes. ClientId: 20 Freechairs = 3 Cut? false.
Client id=20 begins hair cut of 15.77 minutes.
Client id=20 ends hair cut of 15.77 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 21.
*** Client id=20 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 21 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 21 arrives. Client id=21 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 22.87 minutes. ClientId: 21 Freechairs = 3 Cut? false.
Client id=21 begins hair cut of 22.87 minutes.
Client id=21 ends hair cut of 22.87 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 22.
*** Client id=21 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 22 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 22 arrives. Client id=22 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 22.88 minutes. ClientId: 22 Freechairs = 3 Cut? false.
Client id=22 begins hair cut of 22.88 minutes.
Client id=22 ends hair cut of 22.88 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 23.
*** Client id=22 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 23 ***

Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 3. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.23 minutes...
Client id=23 begins hair cut of 17.58 minutes.
Client id=23 ends hair cut of 17.58 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 24.
*** Client id=23 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 24 ***
```

## Simulation Results for [BarberSaloon3.java](#)

```
Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 3. Trials: 1.
  Barber begins hair cut of 28.38 minutes. ClientId: 24 Freechairs = 3 Cut? false.
  Client id=24 begins hair cut of 28.38 minutes.
  Client id=24 ends hair cut of 28.38 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 25.
  *** Client id=24 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 25 ***
```

```
>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
  *** Summary of Clients (threads) finished (joined) ***
```

```
Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.     Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.
```



```
****                               End Simulation                               ****
```

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```
***                               Barber Saloon Simulation 2                               ***
***                               Parameters                               (panel of configuration)                               ***
```

```
nClients=      25,      the nr total of clients
nChairs=       5,      the nr total of chairs (=> barber chair included).
minTimeHairCut= 15.0,   the minimum fixed time for hair cut (minutes).
variableTimeCut= 15.0,  for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0, for max time between hair cuts (minutes).
maxTimeBetweenClients= 80.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins= 187,  the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.
```

```
***                               Begin Simulation Barber Saloon (Sleeping Barber)                               ***
```

```
Client id= 0 arrives.
>>>> Barber maybe sleeps... saloon calm... Free chairs were 5. Client id=0 seats and waits. Freechairs = 4.
Trials: 1.
  >>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.67 minutes...
  Client id=0 begins hair cut of 15.28 minutes.
  Barber begins hair cut of 15.28 minutes. ClientId: 0 Freechairs = 4 Cut? false.
  Client id=0 ends hair cut of 15.28 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 1.
  *** Client id=0 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 1 ***
```

```
>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 4. Trials: 1.
  Barber begins hair cut of 19.13 minutes. ClientId: 1 Freechairs = 4 Cut? false.
```

## Simulation Results for [BarberSaloon3.java](#)

```
Client id=1 begins hair cut of 19.13 minutes.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 3. Trials: 1.
Client id=1 ends hair cut of 19.13 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 2.
*** Client id=1 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 2 ***

Barber begins hair cut of 27.28 minutes. ClientId: 2 Freechairs = 4 Cut? false.
Client id=2 begins hair cut of 27.28 minutes.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 3. Trials: 1.
Client id=2 ends hair cut of 27.28 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 3.
*** Client id=2 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 3 ***

Client id=3 begins hair cut of 23.02 minutes.
Barber begins hair cut of 23.02 minutes. ClientId: 3 Freechairs = 4 Cut? false.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 3. Trials: 1.
Client id=3 ends hair cut of 23.02 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 4.
*** Client id=3 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 4 ***

Client id=4 begins hair cut of 27.33 minutes.
Barber begins hair cut of 27.33 minutes. ClientId: 4 Freechairs = 4 Cut? false.
Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 3. Trials: 1.
Client id=4 ends hair cut of 27.33 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 5.
*** Client id=4 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 5 ***

Client id=5 begins hair cut of 18.92 minutes.
Barber begins hair cut of 18.92 minutes. ClientId: 5 Freechairs = 4 Cut? false.
Client id=5 ends hair cut of 18.92 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 6.
*** Client id=5 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 6 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 15.32 minutes. ClientId: 6 Freechairs = 4 Cut? false.
Client id=6 begins hair cut of 15.32 minutes.
Client id=6 ends hair cut of 15.32 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 7.
*** Client id=6 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 7 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 25.17 minutes. ClientId: 7 Freechairs = 4 Cut? false.
Client id=7 begins hair cut of 25.17 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 25.17 minutes. ClientId: 7 Freechairs = 3 Cut? false.
Client id=7 ends hair cut of 25.17 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 8.
*** Client id=7 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 8 ***

Client id=8 begins hair cut of 23.08 minutes.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 3. Trials: 1.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
Client id=8 ends hair cut of 23.08 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
*** Client id=8 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 9 ***

Client id=9 begins hair cut of 18.14 minutes.
Barber begins hair cut of 18.14 minutes. ClientId: 9 Freechairs = 3 Cut? false.
Client id=9 ends hair cut of 18.14 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 10.
*** Client id=9 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 10 ***

Client id=10 begins hair cut of 18.34 minutes.
Barber begins hair cut of 18.34 minutes. ClientId: 10 Freechairs = 4 Cut? false.
Client id=10 ends hair cut of 18.34 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 11 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 15.5 minutes. ClientId: 11 Freechairs = 4 Cut? false.
Client id=11 begins hair cut of 15.5 minutes.
Client id=11 ends hair cut of 15.5 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 17.12 minutes. ClientId: 12 Freechairs = 4 Cut? false.
Client id=12 begins hair cut of 17.12 minutes.
Client id=12 ends hair cut of 17.12 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 20.4 minutes. ClientId: 13 Freechairs = 4 Cut? false.
Client id=13 begins hair cut of 20.4 minutes.
Client id=13 ends hair cut of 20.4 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 14 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 26.39 minutes. ClientId: 14 Freechairs = 4 Cut? false.
Client id=14 begins hair cut of 26.39 minutes.
```

## Simulation Results for [BarberSaloon3.java](#)

```
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 3. Trials: 1.
Client id= 16 arrives. Client id=16 seats and waits. Freechairs = 2. Trials: 1.
    Client id=14 ends hair cut of 26.39 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 15.
    *** Client id=14 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 15 ***

    Barber begins hair cut of 25.66 minutes. ClientId: 15 Freechairs = 3 Cut? false.
    Client id=15 begins hair cut of 25.66 minutes.
    Barber begins hair cut of 25.66 minutes. ClientId: 15 Freechairs = 3 Cut? false.
    Client id=15 ends hair cut of 25.66 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 16.
    *** Client id=15 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 16 ***

    Client id=16 begins hair cut of 18.61 minutes.
Client id= 17 arrives. Client id=17 seats and waits. Freechairs = 3. Trials: 1.
    Client id=16 ends hair cut of 18.61 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 17.
    *** Client id=16 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 17 ***

    Client id=17 begins hair cut of 20.49 minutes.
    Barber begins hair cut of 20.49 minutes. ClientId: 17 Freechairs = 4 Cut? false.
    Client id=17 ends hair cut of 20.49 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 18.
    *** Client id=17 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 18 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 18 arrives. Client id=18 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 29.8 minutes. ClientId: 18 Freechairs = 4 Cut? false.
    Client id=18 begins hair cut of 29.8 minutes.
    Client id=18 ends hair cut of 29.8 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 19.
    *** Client id=18 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 19 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 19 arrives. Client id=19 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 24.61 minutes. ClientId: 19 Freechairs = 4 Cut? false.
    Client id=19 begins hair cut of 24.61 minutes.
    Client id=19 ends hair cut of 24.61 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 20.
    *** Client id=19 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 20 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 23.34 minutes. ClientId: 20 Freechairs = 4 Cut? false.
    Client id=20 begins hair cut of 23.34 minutes.
    Client id=20 ends hair cut of 23.34 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 21.
    *** Client id=20 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 21 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 21 arrives.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.6 minutes... Client id=21 seats and waits.
Freechairs = 4. Trials: 1.
    Client id=21 begins hair cut of 16.69 minutes.
    Client id=21 ends hair cut of 16.69 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 22.
    *** Client id=21 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 22 ***

Client id= 22 arrives. Client id=22 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 23.35 minutes. ClientId: 22 Freechairs = 4 Cut? false.
    Client id=22 begins hair cut of 23.35 minutes.
    Client id=22 ends hair cut of 23.35 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 23.
    *** Client id=22 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 23 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 24.22 minutes. ClientId: 23 Freechairs = 4 Cut? false.
    Client id=23 begins hair cut of 24.22 minutes.
    Client id=23 ends hair cut of 24.22 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 24.
    *** Client id=23 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 24 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 4. Trials: 1.
    Barber begins hair cut of 25.51 minutes. ClientId: 24 Freechairs = 4 Cut? false.
    Client id=24 begins hair cut of 25.51 minutes.
    Client id=24 ends hair cut of 25.51 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 25.
    *** Client id=24 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
    *** Summary of Clients (threads) finished (joined) ***

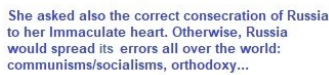
Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
```



```
Client id: 22 finished => thread joined.      Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.
```

\*\*\*\*\*

```
*** Begin Simulation Barber Saloon (Sleeping Barber) ***
```



<http://www.christianideas.eu/docs/school/threads/BarberSaloon3.txt.pdf>

## Simulation Results for [BarberSaloon3.java](#)

```
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 3. Trials: 1.
  Client id=3 ends hair cut of 23.02 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 4.
  *** Client id=3 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 4 ***

  Client id=4 begins hair cut of 27.33 minutes.
  Barber begins hair cut of 27.33 minutes. ClientId: 4 Freechairs = 4 Cut? false.
Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 3. Trials: 1.
  Client id=4 ends hair cut of 27.33 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 5.
  *** Client id=4 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 5 ***

  Client id=5 begins hair cut of 18.92 minutes.
  Barber begins hair cut of 18.92 minutes. ClientId: 5 Freechairs = 4 Cut? false.
  Client id=5 ends hair cut of 18.92 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 6.
  *** Client id=5 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 6 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 4. Trials: 1.
  Barber begins hair cut of 15.32 minutes. ClientId: 6 Freechairs = 4 Cut? false.
  Client id=6 begins hair cut of 15.32 minutes.
  Client id=6 ends hair cut of 15.32 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 7.
  *** Client id=6 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 7 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 4. Trials: 1.
  Barber begins hair cut of 25.17 minutes. ClientId: 7 Freechairs = 4 Cut? false.
  Client id=7 begins hair cut of 25.17 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 3. Trials: 1.
  Barber begins hair cut of 25.17 minutes. ClientId: 7 Freechairs = 3 Cut? false.
  Client id=7 ends hair cut of 25.17 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 8.
  *** Client id=7 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 8 ***

  Client id=8 begins hair cut of 23.08 minutes.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 3. Trials: 1.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
  Client id=8 ends hair cut of 23.08 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
  *** Client id=8 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 9 ***

  Client id=9 begins hair cut of 18.14 minutes.
  Barber begins hair cut of 18.14 minutes. ClientId: 9 Freechairs = 3 Cut? false.
  Client id=9 ends hair cut of 18.14 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 10.
  *** Client id=9 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 10 ***

  Client id=10 begins hair cut of 18.34 minutes.
  Barber begins hair cut of 18.34 minutes. ClientId: 10 Freechairs = 4 Cut? false.
  Client id=10 ends hair cut of 18.34 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 11.
  *** Client id=10 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 11 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 4. Trials: 1.
  Barber begins hair cut of 15.5 minutes. ClientId: 11 Freechairs = 4 Cut? false.
  Client id=11 begins hair cut of 15.5 minutes.
  Client id=11 ends hair cut of 15.5 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 12.
  *** Client id=11 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 4. Trials: 1.
  Barber begins hair cut of 17.12 minutes. ClientId: 12 Freechairs = 4 Cut? false.
  Client id=12 begins hair cut of 17.12 minutes.
  Client id=12 ends hair cut of 17.12 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 13.
  *** Client id=12 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 4. Trials: 1.
  Barber begins hair cut of 20.4 minutes. ClientId: 13 Freechairs = 4 Cut? false.
  Client id=13 begins hair cut of 20.4 minutes.
  Client id=13 ends hair cut of 20.4 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 14.
  *** Client id=13 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 14 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 4. Trials: 1.
  Barber begins hair cut of 26.39 minutes. ClientId: 14 Freechairs = 4 Cut? false.
  Client id=14 begins hair cut of 26.39 minutes.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 3. Trials: 1.
Client id= 16 arrives. Client id=16 seats and waits. Freechairs = 2. Trials: 1.
  Client id=14 ends hair cut of 26.39 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 15.
  *** Client id=14 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 15 ***

  Barber begins hair cut of 25.66 minutes. ClientId: 15 Freechairs = 3 Cut? false.
  Client id=15 begins hair cut of 25.66 minutes.
  Barber begins hair cut of 25.66 minutes. ClientId: 15 Freechairs = 3 Cut? false.
  Client id=15 ends hair cut of 25.66 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 16.
  *** Client id=15 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 16 ***

  Client id=16 begins hair cut of 18.61 minutes.
Client id= 17 arrives. Client id=17 seats and waits. Freechairs = 3. Trials: 1.
```

## Simulation Results for [BarberSaloon3.java](#)

```
Client id=16 ends hair cut of 18.61 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 17.
*** Client id=16 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 17 ***

Client id=17 begins hair cut of 20.49 minutes.
Barber begins hair cut of 20.49 minutes. ClientId: 17 Freechairs = 4 Cut? false.
Client id=17 ends hair cut of 20.49 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 18.
*** Client id=17 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 18 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 18 arrives. Client id=18 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 29.8 minutes. ClientId: 18 Freechairs = 4 Cut? false.
Client id=18 begins hair cut of 29.8 minutes.
Client id=18 ends hair cut of 29.8 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 19.
*** Client id=18 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 19 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 19 arrives. Client id=19 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 24.61 minutes. ClientId: 19 Freechairs = 4 Cut? false.
Client id=19 begins hair cut of 24.61 minutes.
Client id=19 ends hair cut of 24.61 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 20.
*** Client id=19 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 20 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 23.34 minutes. ClientId: 20 Freechairs = 4 Cut? false.
Client id=20 begins hair cut of 23.34 minutes.
Client id=20 ends hair cut of 23.34 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 21.
*** Client id=20 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 21 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 21 arrives.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.6 minutes... Client id=21 seats and waits.
Freechairs = 4. Trials: 1.
Client id=21 begins hair cut of 16.69 minutes.
Client id=21 ends hair cut of 16.69 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 22.
*** Client id=21 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 22 ***

Client id= 22 arrives. Client id=22 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 23.35 minutes. ClientId: 22 Freechairs = 4 Cut? false.
Client id=22 begins hair cut of 23.35 minutes.
Client id=22 ends hair cut of 23.35 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 23.
*** Client id=22 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 23 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 24.22 minutes. ClientId: 23 Freechairs = 4 Cut? false.
Client id=23 begins hair cut of 24.22 minutes.
Client id=23 ends hair cut of 24.22 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 24.
*** Client id=23 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 24 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 25.51 minutes. ClientId: 24 Freechairs = 4 Cut? false.
Client id=24 begins hair cut of 25.51 minutes.
Client id=24 ends hair cut of 25.51 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 25.
*** Client id=24 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.     Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.

****                                ****

*****

***                                Barber Saloon Simulation 3                                ***

***                                Parameters                                (panel of configuration)                                ***
```



## Simulation Results for [BarberSaloon3.java](#)

```
nClients=          25,      the nr total of clients
nChairs=           4,      the nr total of chairs (=> barber chair included).
minTimeHairCut=    15.0,    the minimum fixed time for hair cut (minutes).
variableTimeCut=   15.0,    for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0,    for max time between hair cuts (minutes).
maxTimeBetweenClients= 60.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins=  187,     the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.

***      Begin Simulation Barber Saloon (Sleeping Barber)      ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 3. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.34 minutes...
Barber begins hair cut of 16.76 minutes. ClientId: 0 Freechairs = 3 Cut? false.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 2. Trials: 1.
Client id=0 begins hair cut of 16.76 minutes.
Client id=0 ends hair cut of 16.76 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 1.
*** Client id=0 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 1 ***

Barber begins hair cut of 28.26 minutes. ClientId: 1 Freechairs = 3 Cut? false.
Client id=1 begins hair cut of 28.26 minutes.
Client id=1 ends hair cut of 28.26 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 2.
*** Client id=1 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 2 ***

Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 26.5 minutes. ClientId: 2 Freechairs = 3 Cut? false.
Client id=2 begins hair cut of 26.5 minutes.
Client id=2 ends hair cut of 26.5 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 3.
*** Client id=2 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 3 ***

Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 25.45 minutes. ClientId: 3 Freechairs = 3 Cut? false.
Client id=3 begins hair cut of 25.45 minutes.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 2. Trials: 1.
Client id=3 ends hair cut of 25.45 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 4.
*** Client id=3 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 4 ***

Barber begins hair cut of 23.14 minutes. ClientId: 4 Freechairs = 3 Cut? false.
Client id=4 begins hair cut of 23.14 minutes.
Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 2. Trials: 1.
Client id=4 ends hair cut of 23.14 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 5.
*** Client id=4 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 5 ***

Barber begins hair cut of 28.86 minutes. ClientId: 5 Freechairs = 3 Cut? false.
Client id=5 begins hair cut of 28.86 minutes.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 2. Trials: 1.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 1. Trials: 1.
Client id=5 ends hair cut of 28.86 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 6.
*** Client id=5 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 6 ***

Client id=6 begins hair cut of 28.4 minutes.
Barber begins hair cut of 28.4 minutes. ClientId: 6 Freechairs = 2 Cut? false.
Client id=6 ends hair cut of 28.4 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 7.
*** Client id=6 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 7 ***

Barber begins hair cut of 28.04 minutes. ClientId: 7 Freechairs = 3 Cut? false.
Client id=7 begins hair cut of 28.04 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 2. Trials: 1.
Client id=7 ends hair cut of 28.04 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 8.
*** Client id=7 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 8 ***

Barber begins hair cut of 23.84 minutes. ClientId: 8 Freechairs = 3 Cut? false.
Client id=8 begins hair cut of 23.84 minutes.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 2. Trials: 1.
Client id=8 ends hair cut of 23.84 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
*** Client id=8 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 9 ***

Barber begins hair cut of 29.61 minutes. ClientId: 9 Freechairs = 3 Cut? false.
Client id=9 begins hair cut of 29.61 minutes.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
Barber begins hair cut of 29.61 minutes. ClientId: 9 Freechairs = 2 Cut? false.
Client id=9 ends hair cut of 29.61 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 10.
*** Client id=9 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 10 ***

Client id=10 begins hair cut of 17.89 minutes.
Client id=10 ends hair cut of 17.89 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 11 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 24.76 minutes. ClientId: 11 Freechairs = 3 Cut? false.
```

## Simulation Results for [BarberSaloon3.java](#)

```
Client id=11 begins hair cut of 24.76 minutes.
Client id=11 ends hair cut of 24.76 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 16.77 minutes. ClientId: 12 Freechairs = 3 Cut? false.
Client id=12 begins hair cut of 16.77 minutes.
Client id=12 ends hair cut of 16.77 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 13 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 25.02 minutes. ClientId: 13 Freechairs = 3 Cut? false.
Client id=13 begins hair cut of 25.02 minutes.
Client id=13 ends hair cut of 25.02 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 14 ***

Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 23.46 minutes. ClientId: 14 Freechairs = 3 Cut? false.
Client id=14 begins hair cut of 23.46 minutes.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 2. Trials: 1.
Client id=14 ends hair cut of 23.46 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 15 ***

Barber begins hair cut of 26.92 minutes. ClientId: 15 Freechairs = 3 Cut? false.
Client id=15 begins hair cut of 26.92 minutes.
Client id= 16 arrives. Client id=16 seats and waits. Freechairs = 2. Trials: 1.
Client id=15 ends hair cut of 26.92 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 16 ***

Client id=16 begins hair cut of 25.57 minutes.
Barber begins hair cut of 25.57 minutes. ClientId: 16 Freechairs = 3 Cut? false.
Client id= 17 arrives. Client id=17 seats and waits. Freechairs = 2. Trials: 1.
Client id=16 ends hair cut of 25.57 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 17.
*** Client id=16 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 17 ***

Client id=17 begins hair cut of 20.99 minutes.
Barber begins hair cut of 20.99 minutes. ClientId: 17 Freechairs = 3 Cut? false.
Client id=17 ends hair cut of 20.99 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 18.
*** Client id=17 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 18 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 18 arrives. Client id=18 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 23.26 minutes. ClientId: 18 Freechairs = 3 Cut? false.
Client id=18 begins hair cut of 23.26 minutes.
Client id= 19 arrives. Client id=19 seats and waits. Freechairs = 2. Trials: 1.
Client id=18 ends hair cut of 23.26 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 19.
*** Client id=18 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 19 ***

Barber begins hair cut of 25.62 minutes. ClientId: 19 Freechairs = 3 Cut? false.
Client id=19 begins hair cut of 25.62 minutes.
Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 2. Trials: 1.
Client id= 21 arrives. Client id=21 seats and waits. Freechairs = 1. Trials: 1.
Barber begins hair cut of 25.62 minutes. ClientId: 19 Freechairs = 1 Cut? false.
Client id=19 ends hair cut of 25.62 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 20.
*** Client id=19 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 20 ***

Client id=20 begins hair cut of 22.01 minutes.
Client id= 22 arrives. Client id=22 seats and waits. Freechairs = 1. Trials: 1.
Client id=20 ends hair cut of 22.01 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 21.
*** Client id=20 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 21 ***

Client id=21 begins hair cut of 26.65 minutes.
Barber begins hair cut of 26.65 minutes. ClientId: 21 Freechairs = 2 Cut? false.
Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 1. Trials: 1.
Client id=21 ends hair cut of 26.65 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 22.
*** Client id=21 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 22 ***

Client id=22 begins hair cut of 23.84 minutes.
Barber begins hair cut of 23.84 minutes. ClientId: 22 Freechairs = 2 Cut? false.
Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 1. Trials: 1.
Client id=22 ends hair cut of 23.84 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 23.
*** Client id=22 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 23 ***

Client id=23 begins hair cut of 26.02 minutes.
Barber begins hair cut of 26.02 minutes. ClientId: 23 Freechairs = 2 Cut? false.
Client id=23 ends hair cut of 26.02 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 24.
*** Client id=23 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 24 ***

Client id=24 begins hair cut of 18.26 minutes.
Barber begins hair cut of 18.26 minutes. ClientId: 24 Freechairs = 3 Cut? false.
Client id=24 ends hair cut of 18.26 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 25.
*** Client id=24 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 25 ***
```

## Simulation Results for [BarberSaloon3.java](#)

```
>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
*** Summary of Clients (threads) finished (joined) ***
```

```
Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.     Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.
```

```
****                               ****
                        End Simulation
```

```
*****
```

```
***                               Barber Saloon Simulation 5                               ***
```

```
***                               Parameters                               (panel of configuration)                               ***
```

```
nClients=                25,      the nr total of clients
nChairs=                  5,      the nr total of chairs (=> barber chair included).
minTimeHairCut=           15.0,   the minimum fixed time for hair cut (minutes).
variableTimeCut=          15.0,   for max variable time in hair cut (minutes).
maxTimeBetweenCuts=       1.0,    for max time between hair cuts (minutes).
maxTimeBetweenClients=    30.0,   for max arrival time between 2 clients (minutes).
pauseBeforeJoins=        187,    the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4,    the nr total of attempts to cut hair per client.
```

```
***                               Begin Simulation Barber Saloon (Sleeping Barber)                               ***
```

```
>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 4. Trials: 1.
  >>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.61 minutes...
    Client id=0 begins hair cut of 26.47 minutes.
    Barber begins hair cut of 26.47 minutes. ClientId: 0 Freechairs = 4 Cut? false.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 3. Trials: 1.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 2. Trials: 1.
  Client id=0 ends hair cut of 26.47 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 1.
  *** Client id=0 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 1 ***

  Client id=1 begins hair cut of 20.04 minutes.
  Barber begins hair cut of 20.04 minutes. ClientId: 1 Freechairs = 3 Cut? false.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 2. Trials: 1.
  Client id=1 ends hair cut of 20.04 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 2.
  *** Client id=1 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 2 ***

  Client id=2 begins hair cut of 20.86 minutes.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 2. Trials: 1.
  Barber begins hair cut of 20.86 minutes. ClientId: 2 Freechairs = 2 Cut? false.
  Client id=2 ends hair cut of 20.86 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 3.
  *** Client id=2 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 3 ***

  Client id=3 begins hair cut of 17.99 minutes.
  Barber begins hair cut of 17.99 minutes. ClientId: 3 Freechairs = 3 Cut? false.
Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 2. Trials: 1.
  Client id=3 ends hair cut of 17.99 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 4.
  *** Client id=3 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 4 ***

  Client id=4 begins hair cut of 15.17 minutes.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 2. Trials: 1.
  Barber begins hair cut of 15.17 minutes. ClientId: 4 Freechairs = 2 Cut? false.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 1. Trials: 1.
  Client id=4 ends hair cut of 15.17 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 5.
  *** Client id=4 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 5 ***

  Client id=5 begins hair cut of 21.03 minutes.
  Barber begins hair cut of 21.03 minutes. ClientId: 5 Freechairs = 2 Cut? false.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 1. Trials: 1.
  Client id=5 ends hair cut of 21.03 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 6.
  *** Client id=5 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 6 ***

  Client id=6 begins hair cut of 27.91 minutes.
  Barber begins hair cut of 27.91 minutes. ClientId: 6 Freechairs = 2 Cut? false.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 1. Trials: 1.
  Client id=6 ends hair cut of 27.91 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 7.
```

## Simulation Results for [BarberSaloon3.java](#)

```
*** Client id=6 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 7 ***

Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 1. Trials: 1.
    Client id=7 begins hair cut of 16.47 minutes.
    Barber begins hair cut of 16.47 minutes. ClientId: 7 Freechairs = 1 Cut? false.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 0. Trials: 1.
    Client id=7 ends hair cut of 16.47 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 8.
    *** Client id=7 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 8 ***

    Client id=8 begins hair cut of 27.71 minutes.
    Barber begins hair cut of 27.71 minutes. ClientId: 8 Freechairs = 1 Cut? false.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 0. Trials: 1.
    Client id=8 ends hair cut of 27.71 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 9.
    *** Client id=8 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 9 ***

    Client id=9 begins hair cut of 21.38 minutes.
    Barber begins hair cut of 21.38 minutes. ClientId: 9 Freechairs = 1 Cut? false.
Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 0. Trials: 1.
    Client id=9 ends hair cut of 21.38 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 10.
    *** Client id=9 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 10 ***

    Client id=10 begins hair cut of 15.31 minutes.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 0. Trials: 1.
    Barber begins hair cut of 15.31 minutes. ClientId: 10 Freechairs = 0 Cut? false.
    Client id=10 ends hair cut of 15.31 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 11.
    *** Client id=10 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 11 ***

    Client id=11 begins hair cut of 20.71 minutes.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 0. Trials: 1.
    Barber begins hair cut of 20.71 minutes. ClientId: 11 Freechairs = 0 Cut? false.
Client id= 16 arrives. Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 1.

    Client id=11 ends hair cut of 20.71 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 12.
    *** Client id=11 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 12 ***

    Client id=12 begins hair cut of 27.85 minutes.
Client id= 16 arrives again. Client id=16 seats and waits. Freechairs = 0. Trials: 2.
    Barber begins hair cut of 27.85 minutes. ClientId: 12 Freechairs = 0 Cut? false.
Client id= 17 arrives. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 18 arrives. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 19 arrives. Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 1.

    Client id=12 ends hair cut of 27.85 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 13.
    *** Client id=12 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 13 ***

    Client id=13 begins hair cut of 21.63 minutes.
    Barber begins hair cut of 21.63 minutes. ClientId: 13 Freechairs = 1 Cut? false.
Client id= 19 arrives again. Client id=19 seats and waits. Freechairs = 0. Trials: 2.
Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 18 arrives again. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 2.

    Client id=13 ends hair cut of 21.63 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 14.
    *** Client id=13 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 14 ***

    Client id=14 begins hair cut of 23.02 minutes.
    Barber begins hair cut of 23.02 minutes. ClientId: 14 Freechairs = 1 Cut? false.
Client id= 20 arrives. Client id=20 seats and waits. Freechairs = 0. Trials: 1.
Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 18 arrives again. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 18 arrives again. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 4.

    *** Client id=18 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 15 ***

    Client id=14 ends hair cut of 23.02 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 15.
    *** Client id=14 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 16 ***

    Client id=15 begins hair cut of 25.17 minutes.
Client id= 21 arrives. Client id=21 seats and waits. Freechairs = 0. Trials: 1.
    Barber begins hair cut of 25.17 minutes. ClientId: 15 Freechairs = 0 Cut? false.
Client id= 22 arrives. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 4.

    *** Client id=17 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 17 ***

Client id= 22 arrives again. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 22 arrives again. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 3.
```

## Simulation Results for [BarberSaloon3.java](#)

```
Client id=15 ends hair cut of 25.17 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 18 ***

Client id=16 begins hair cut of 25.24 minutes.
Barber begins hair cut of 25.24 minutes. ClientId: 16 Freechairs = 1 Cut? false.
Client id= 23 arrives. Client id=23 seats and waits. Freechairs = 0. Trials: 1.
Client id= 22 arrives again. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=22 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 19 ***

Client id=16 ends hair cut of 25.24 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 17.
*** Client id=16 departed. Freechairs = 1. Hair cut? true. Trials? 2. Clients departed: 20 ***

Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 0. Trials: 1.
Client id=19 begins hair cut of 22.64 minutes.
Barber begins hair cut of 22.64 minutes. ClientId: 19 Freechairs = 0 Cut? false.
Client id=19 ends hair cut of 22.64 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 18.
*** Client id=19 departed. Freechairs = 1. Hair cut? true. Trials? 2. Clients departed: 21 ***

Client id=20 begins hair cut of 15.89 minutes.
Barber begins hair cut of 15.89 minutes. ClientId: 20 Freechairs = 1 Cut? false.
Client id=20 ends hair cut of 15.89 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 19.
*** Client id=20 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 22 ***

Client id=21 begins hair cut of 28.66 minutes.
Barber begins hair cut of 28.66 minutes. ClientId: 21 Freechairs = 2 Cut? false.
Client id=21 ends hair cut of 28.66 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 20.
*** Client id=21 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 23 ***

Client id=23 begins hair cut of 17.28 minutes.
Barber begins hair cut of 17.28 minutes. ClientId: 23 Freechairs = 3 Cut? false.
Client id=23 ends hair cut of 17.28 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 21.
*** Client id=23 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 24 ***

Client id=24 begins hair cut of 28.01 minutes.
Barber begins hair cut of 28.01 minutes. ClientId: 24 Freechairs = 4 Cut? false.
Client id=24 ends hair cut of 28.01 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 22.
*** Client id=24 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.     Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.     Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.     Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.     Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.

****                                End Simulation                                ****

*****

***                                Barber Saloon Simulation 6                                ***

***                                Parameters                                (panel of configuration)                                ***

nClients=                25,          the nr total of clients
nChairs=                  4,          the nr total of chairs (=> barber chair included).
minTimeHairCut=           15.0,       the minimum fixed time for hair cut (minutes).
variableTimeCut=          15.0,       for max variable time in hair cut (minutes).
maxTimeBetweenCuts=       1.0,        for max time between hair cuts (minutes).
maxTimeBetweenClients=    6.0,        for max arrival time between 2 clients (minutes).
pauseBeforeJoins=         187,       the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4,        the nr total of attempts to cut hair per client.

***                                Begin Simulation Barber Saloon (Sleeping Barber)                                ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 3. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.36 minutes...
Client id=0 begins hair cut of 23.33 minutes.
Barber begins hair cut of 23.33 minutes. ClientId: 0 Freechairs = 3 Cut? false.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 2. Trials: 1.
```



## Simulation Results for [BarberSaloon3.java](#)

```
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 1. Trials: 1.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 0. Trials: 1.
Client id= 4 arrives. Saloon full. Client id=4 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 5 arrives. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 6 arrives. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 7 arrives. Saloon full. Client id=7 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 4 arrives again. Saloon full. Client id=4 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 8 arrives. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 1.

    Client id=0 ends hair cut of 23.33 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 1.
    *** Client id=0 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 1 ***

    Barber begins hair cut of 17.24 minutes. ClientId: 1 Freechairs = 1 Cut? false.
    Client id=1 begins hair cut of 17.24 minutes.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 0. Trials: 1.
Client id= 7 arrives again. Saloon full. Client id=7 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 10 arrives. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 11 arrives. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 4 arrives again. Saloon full. Client id=4 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 12 arrives. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 13 arrives. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 1.

    Client id=1 ends hair cut of 17.24 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 2.
    *** Client id=1 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 2 ***

    Barber begins hair cut of 21.34 minutes. ClientId: 2 Freechairs = 1 Cut? false.
Client id= 4 arrives again. Client id=4 seats and waits. Freechairs = 0. Trials: 4.
    Client id=2 begins hair cut of 21.34 minutes.
Client id= 14 arrives. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 11 arrives again. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 12 arrives again. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 15 arrives. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 11 arrives again. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 16 arrives. Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 14 arrives again. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 4.

    *** Client id=5 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 3 ***

Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 7 arrives again. Saloon full. Client id=7 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 17 arrives. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 14 arrives again. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 18 arrives. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 4.

    *** Client id=8 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 4 ***
```

## Simulation Results for [BarberSaloon3.java](#)

Client id= 12 arrives again. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 3.

Barber begins hair cut of 21.34 minutes. ClientId: 2 Freechairs = 0 Cut? false.  
Client id=2 ends hair cut of 21.34 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 3.  
\*\*\* Client id=2 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 5 \*\*\*

Client id=3 begins hair cut of 22.65 minutes.  
Client id= 14 arrives again. Client id=14 seats and waits. Freechairs = 0. Trials: 4.  
Client id= 11 arrives again. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 4.

\*\*\* Client id=11 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 6 \*\*\*

Client id= 19 arrives. Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 16 arrives again. Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 20 arrives. Saloon full. Client id=20 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 7 arrives again. Saloon full. Client id=7 comes maybe later. Freechairs = 0. Trials: 4.

\*\*\* Client id=7 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 7 \*\*\*

Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 15 arrives again. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 20 arrives again. Saloon full. Client id=20 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 21 arrives. Saloon full. Client id=21 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 22 arrives. Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 4.

\*\*\* Client id=6 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 8 \*\*\*

Client id= 23 arrives. Saloon full. Client id=23 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 18 arrives again. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 2.

Barber begins hair cut of 22.65 minutes. ClientId: 3 Freechairs = 0 Cut? false.  
Client id=3 ends hair cut of 22.65 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 4.  
\*\*\* Client id=3 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 9 \*\*\*

Client id=9 begins hair cut of 27.36 minutes.  
Client id= 24 arrives. Client id=24 seats and waits. Freechairs = 0. Trials: 1.  
Client id= 18 arrives again. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 18 arrives again. Saloon full. Client id=18 comes maybe later. Freechairs = 0. Trials: 4.

\*\*\* Client id=18 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 10 \*\*\*

Client id= 12 arrives again. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 4.

\*\*\* Client id=12 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 11 \*\*\*

Client id= 19 arrives again. Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 16 arrives again. Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 4.

\*\*\* Client id=13 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 12 \*\*\*

Client id= 16 arrives again. Saloon full. Client id=16 comes maybe later. Freechairs = 0. Trials: 4.

\*\*\* Client id=16 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 13 \*\*\*

Client id= 19 arrives again. Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 15 arrives again. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 17 arrives again. Saloon full. Client id=17 comes maybe later. Freechairs = 0. Trials: 4.

\*\*\* Client id=17 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 14 \*\*\*

Client id= 20 arrives again. Saloon full. Client id=20 comes maybe later. Freechairs = 0. Trials: 3.

## Simulation Results for [BarberSaloon3.java](#)

```
Client id= 23 arrives again.           Saloon full. Client id=23 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 21 arrives again.           Saloon full. Client id=21 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 20 arrives again.           Saloon full. Client id=20 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=20 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 15 ***
Client id= 22 arrives again.           Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 10 arrives again.           Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=10 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 16 ***
    Barber begins hair cut of 27.36 minutes. ClientId: 9 Freechairs = 0 Cut? false.
Client id= 19 arrives again.           Saloon full. Client id=19 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=19 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 17 ***
    Client id=9 ends hair cut of 27.36 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 5.
    *** Client id=9 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 18 ***
    Client id=4 begins hair cut of 18.73 minutes.
Client id= 23 arrives again. Client id=23 seats and waits. Freechairs = 0. Trials: 3.
Client id= 15 arrives again.           Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=15 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 19 ***
Client id= 21 arrives again.           Saloon full. Client id=21 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 21 arrives again.           Saloon full. Client id=21 comes maybe later. Freechairs = 0. Trials: 4.
    *** Client id=21 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 20 ***
Client id= 22 arrives again.           Saloon full. Client id=22 comes maybe later. Freechairs = 0. Trials: 3.
    Client id=4 ends hair cut of 18.73 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 6.
    *** Client id=4 departed. Freechairs = 1. Hair cut? true. Trials? 4. Clients departed: 21 ***
    Client id=14 begins hair cut of 19.82 minutes.
    Barber begins hair cut of 19.82 minutes. ClientId: 14 Freechairs = 1 Cut? false.
Client id= 22 arrives again. Client id=22 seats and waits. Freechairs = 0. Trials: 4.
    Client id=14 ends hair cut of 19.82 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 7.
    *** Client id=14 departed. Freechairs = 1. Hair cut? true. Trials? 4. Clients departed: 22 ***
    Client id=24 begins hair cut of 22.52 minutes.
    Barber begins hair cut of 22.52 minutes. ClientId: 24 Freechairs = 1 Cut? false.
    Client id=24 ends hair cut of 22.52 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 8.
    *** Client id=24 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 23 ***
    Client id=23 begins hair cut of 28.64 minutes.
    Barber begins hair cut of 28.64 minutes. ClientId: 23 Freechairs = 2 Cut? false.
    Client id=23 ends hair cut of 28.64 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
    *** Client id=23 departed. Freechairs = 3. Hair cut? true. Trials? 3. Clients departed: 24 ***
    Client id=22 begins hair cut of 25.62 minutes.
    Barber begins hair cut of 25.62 minutes. ClientId: 22 Freechairs = 3 Cut? false.
    Client id=22 ends hair cut of 25.62 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 10.
    *** Client id=22 departed. Freechairs = 4. Hair cut? true. Trials? 4. Clients departed: 25 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 4.
    *** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.   Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.   Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.   Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.   Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.   Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.  Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.  Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.  Client id: 15 finished => thread joined.
Client id: 16 finished => thread joined.  Client id: 17 finished => thread joined.
Client id: 18 finished => thread joined.  Client id: 19 finished => thread joined.
Client id: 20 finished => thread joined.  Client id: 21 finished => thread joined.
Client id: 22 finished => thread joined.  Client id: 23 finished => thread joined.
Client id: 24 finished => thread joined.

    ****                               ****
*****
***                               Barber Saloon Simulation 7                               ***
```

## Simulation Results for [BarberSaloon3.java](#)

```
***          Parameters          (panel of configuration)          ***

nClients=      16,      the nr total of clients
nChairs=       4,      the nr total of chairs (=> barber chair included).
minTimeHairCut= 15.0,   the minimum fixed time for hair cut (minutes).
variableTimeCut= 15.0,  for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0, for max time between hair cuts (minutes).
maxTimeBetweenClients= 5.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins= 120,  the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 4, the nr total of attempts to cut hair per client.

***          Begin Simulation Barber Saloon (Sleeping Barber)          ***

Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 15.25 minutes. ClientId: 0 Freechairs = 3 Cut? false.
Client id=0 begins hair cut of 15.25 minutes.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 2. Trials: 1.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 1. Trials: 1.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 0. Trials: 1.
Client id= 4 arrives. Saloon full. Client id=4 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 5 arrives. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 6 arrives. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 1.

Barber begins hair cut of 15.25 minutes. ClientId: 0 Freechairs = 0 Cut? false.
Client id=0 ends hair cut of 15.25 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 1.
*** Client id=0 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 1 ***

Client id=1 begins hair cut of 16.5 minutes.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 0. Trials: 1.
Client id= 8 arrives. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 9 arrives. Saloon full. Client id=9 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 10 arrives. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 9 arrives again. Saloon full. Client id=9 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 11 arrives. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 2.

Barber begins hair cut of 16.5 minutes. ClientId: 1 Freechairs = 0 Cut? false.
Client id= 12 arrives. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 1.

Client id=1 ends hair cut of 16.5 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 2.
*** Client id=1 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 2 ***

Client id= 4 arrives again. Client id=4 seats and waits. Freechairs = 0. Trials: 2.
Client id=2 begins hair cut of 27.47 minutes.
Client id= 13 arrives. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 14 arrives. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 2.

Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 15 arrives. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 9 arrives again. Saloon full. Client id=9 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 10 arrives again. Saloon full. Client id=10 comes maybe later. Freechairs = 0. Trials: 4.

*** Client id=10 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 3 ***

Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 3.

Client id= 14 arrives again. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 2.
```

## Simulation Results for [BarberSaloon3.java](#)

```
Barber begins hair cut of 27.47 minutes. ClientId: 2 Freechairs = 0 Cut? false.
Client id= 12 arrives again. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 9 arrives again. Saloon full. Client id=9 comes maybe later. Freechairs = 0. Trials: 4.
*** Client id=9 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 4 ***
Client id= 11 arrives again. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 5 arrives again. Saloon full. Client id=5 comes maybe later. Freechairs = 0. Trials: 4.
*** Client id=5 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 5 ***
Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 6 arrives again. Saloon full. Client id=6 comes maybe later. Freechairs = 0. Trials: 4.
*** Client id=6 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 6 ***
Client id= 11 arrives again. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 3.
Client id=2 ends hair cut of 27.47 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 3.
*** Client id=2 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 7 ***
Client id=3 begins hair cut of 25.2 minutes.
Client id= 13 arrives again. Client id=13 seats and waits. Freechairs = 0. Trials: 4.
Client id= 14 arrives again. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 15 arrives again. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 12 arrives again. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 8 arrives again. Saloon full. Client id=8 comes maybe later. Freechairs = 0. Trials: 4.
*** Client id=8 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 8 ***
Barber begins hair cut of 25.2 minutes. ClientId: 3 Freechairs = 0 Cut? false.
Client id= 11 arrives again. Saloon full. Client id=11 comes maybe later. Freechairs = 0. Trials: 4.
*** Client id=11 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 9 ***
Client id= 15 arrives again. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 3.
Client id= 12 arrives again. Saloon full. Client id=12 comes maybe later. Freechairs = 0. Trials: 4.
*** Client id=12 departed. Freechairs = 0. Hair cut? false. Trials? 4. Clients departed: 10 ***
Client id=3 ends hair cut of 25.2 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 4.
*** Client id=3 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 11 ***
Client id=7 begins hair cut of 19.0 minutes.
Client id= 14 arrives again. Client id=14 seats and waits. Freechairs = 0. Trials: 4.
Barber begins hair cut of 19.0 minutes. ClientId: 7 Freechairs = 0 Cut? false.
Client id=7 ends hair cut of 19.0 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 5.
*** Client id=7 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 12 ***
Client id=4 begins hair cut of 17.88 minutes.
Client id= 15 arrives again. Client id=15 seats and waits. Freechairs = 0. Trials: 4.
Barber begins hair cut of 17.88 minutes. ClientId: 4 Freechairs = 0 Cut? false.
Client id=4 ends hair cut of 17.88 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 6.
*** Client id=4 departed. Freechairs = 1. Hair cut? true. Trials? 2. Clients departed: 13 ***
Client id=13 begins hair cut of 16.06 minutes.
Barber begins hair cut of 16.06 minutes. ClientId: 13 Freechairs = 1 Cut? false.
Client id=13 ends hair cut of 16.06 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 7.
*** Client id=13 departed. Freechairs = 2. Hair cut? true. Trials? 4. Clients departed: 14 ***
Client id=14 begins hair cut of 21.74 minutes.
Barber begins hair cut of 21.74 minutes. ClientId: 14 Freechairs = 2 Cut? false.
Client id=14 ends hair cut of 21.74 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 8.
*** Client id=14 departed. Freechairs = 3. Hair cut? true. Trials? 4. Clients departed: 15 ***
Client id=15 begins hair cut of 21.53 minutes.
Client id=15 ends hair cut of 21.53 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 9.
*** Client id=15 departed. Freechairs = 4. Hair cut? true. Trials? 4. Clients departed: 16 ***

*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined. Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined. Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined. Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined. Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined. Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined. Client id: 11 finished => thread joined.
```



```
Client id: 12 finished => thread joined.      Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.      Client id: 15 finished => thread joined.
```

\*\*\*\*\*

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## Simulation Results for [BarberSaloon3.java](#)

```
Client id=8 begins hair cut of 26.23 minutes.
Client id= 12 arrives again. Client id=12 seats and waits. Freechairs = 0. Trials: 2.
Client id= 13 arrives. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 1.

Client id= 14 arrives. Saloon full. Client id=14 comes maybe later. Freechairs = 0. Trials: 1.

Barber begins hair cut of 26.23 minutes. ClientId: 8 Freechairs = 0 Cut? false.
Client id= 15 arrives. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 1.

Client id=8 ends hair cut of 26.23 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 9.
*** Client id=8 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 9 ***

Client id= 14 arrives again. Client id=14 seats and waits. Freechairs = 0. Trials: 2.
Client id=9 begins hair cut of 20.18 minutes.
Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 2.
Client id= 13 arrives again. Saloon full. Client id=13 comes maybe later. Freechairs = 0. Trials: 3.

*** Client id=13 departed. Freechairs = 0. Hair cut? false. Trials? 3. Clients departed: 10 ***

Client id= 15 arrives again. Saloon full. Client id=15 comes maybe later. Freechairs = 0. Trials: 2.

Barber begins hair cut of 20.18 minutes. ClientId: 9 Freechairs = 0 Cut? false.
Client id=9 ends hair cut of 20.18 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 10.
*** Client id=9 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 11 ***

Client id=10 begins hair cut of 29.57 minutes.
Client id= 15 arrives again. Client id=15 seats and waits. Freechairs = 0. Trials: 3.
Barber begins hair cut of 29.57 minutes. ClientId: 10 Freechairs = 0 Cut? false.
Client id=10 ends hair cut of 29.57 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 12 ***

Client id=11 begins hair cut of 17.42 minutes.
Client id=11 ends hair cut of 17.42 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 2. Hair cut? true. Trials? 2. Clients departed: 13 ***

Client id=12 begins hair cut of 21.02 minutes.
Barber begins hair cut of 21.02 minutes. ClientId: 12 Freechairs = 2 Cut? false.
Client id=12 ends hair cut of 21.02 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 3. Hair cut? true. Trials? 2. Clients departed: 14 ***

Barber begins hair cut of 22.05 minutes. ClientId: 14 Freechairs = 3 Cut? false.
Client id=14 begins hair cut of 22.05 minutes.
Barber begins hair cut of 22.05 minutes. ClientId: 14 Freechairs = 3 Cut? false.
Client id=14 ends hair cut of 22.05 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 14.
*** Client id=14 departed. Freechairs = 4. Hair cut? true. Trials? 2. Clients departed: 15 ***

Client id=15 begins hair cut of 27.52 minutes.
Client id=15 ends hair cut of 27.52 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 15.
*** Client id=15 departed. Freechairs = 5. Hair cut? true. Trials? 3. Clients departed: 16 ***

*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined. Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined. Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined. Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined. Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined. Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined. Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined. Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined. Client id: 15 finished => thread joined.

**** End Simulation ****

*****

*** Barber Saloon Simulation 9 ***

*** Parameters (panel of configuration) ***

nClients= 16, the nr total of clients
nChairs= 3, the nr total of chairs (=> barber chair included).
minTimeHairCut= 15.0, the minimum fixed time for hair cut (minutes).
variableTimeCut= 15.0, for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0, for max time between hair cuts (minutes).
maxTimeBetweenClients= 45.0, for max arrival time between 2 clients (minutes).
pauseBeforeJoins= 120, the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 5, the nr total of attempts to cut hair per client.

*** Begin Simulation Barber Saloon (Sleeping Barber) ***
```

## Simulation Results for [BarberSaloon3.java](#)

```
>>>> Barber maybe sleeps... saloon calm... Free chairs were 3.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 2. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.07 minutes...
    Barber begins hair cut of 23.21 minutes. ClientId: 0 Freechairs = 2 Cut? false.
    Client id=0 begins hair cut of 23.21 minutes.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 1. Trials: 1.
    Barber begins hair cut of 23.21 minutes. ClientId: 0 Freechairs = 1 Cut? false.
    Client id=0 ends hair cut of 23.21 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 1.
    *** Client id=0 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 1 ***

    Client id=1 begins hair cut of 24.22 minutes.
    Client id=1 ends hair cut of 24.22 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 2.
    *** Client id=1 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 2 ***

Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 2. Trials: 1.
    Barber begins hair cut of 17.82 minutes. ClientId: 2 Freechairs = 2 Cut? false.
    Client id=2 begins hair cut of 17.82 minutes.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 1. Trials: 1.
    Client id=2 ends hair cut of 17.82 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 3.
    *** Client id=2 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 3 ***

    Barber begins hair cut of 15.53 minutes. ClientId: 3 Freechairs = 2 Cut? false.
    Client id=3 begins hair cut of 15.53 minutes.
Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 1. Trials: 1.
    Barber begins hair cut of 15.53 minutes. ClientId: 3 Freechairs = 1 Cut? false.
    Client id=3 ends hair cut of 15.53 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 4.
    *** Client id=3 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 4 ***

    Client id=4 begins hair cut of 19.2 minutes.
    Client id=4 ends hair cut of 19.2 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 5.
    *** Client id=4 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 5 ***

Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 2. Trials: 1.
    Barber begins hair cut of 28.32 minutes. ClientId: 5 Freechairs = 2 Cut? false.
    Client id=5 begins hair cut of 28.32 minutes.
Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 1. Trials: 1.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 0. Trials: 1.
    Barber begins hair cut of 28.32 minutes. ClientId: 5 Freechairs = 0 Cut? false.
    Client id=5 ends hair cut of 28.32 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 6.
    *** Client id=5 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 6 ***

    Client id=6 begins hair cut of 15.58 minutes.
    Client id=6 ends hair cut of 15.58 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 7.
    *** Client id=6 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 7 ***

    Client id=7 begins hair cut of 22.24 minutes.
    Barber begins hair cut of 22.24 minutes. ClientId: 7 Freechairs = 2 Cut? false.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 1. Trials: 1.
    Client id=7 ends hair cut of 22.24 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 8.
    *** Client id=7 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 8 ***

    Client id=8 begins hair cut of 20.28 minutes.
    Barber begins hair cut of 20.28 minutes. ClientId: 8 Freechairs = 2 Cut? false.
    Client id=8 ends hair cut of 20.28 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 9.
    *** Client id=8 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 9 ***

Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 2. Trials: 1.
    Client id=9 begins hair cut of 24.23 minutes.
    Barber begins hair cut of 24.23 minutes. ClientId: 9 Freechairs = 2 Cut? false.
    Client id=9 ends hair cut of 24.23 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 10.
    *** Client id=9 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 10 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 3.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 2. Trials: 1.
    Barber begins hair cut of 28.11 minutes. ClientId: 10 Freechairs = 2 Cut? false.
    Client id=10 begins hair cut of 28.11 minutes.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 1. Trials: 1.
    Client id=10 ends hair cut of 28.11 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 11.
    *** Client id=10 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 11 ***

    Client id=11 begins hair cut of 20.13 minutes.
    Barber begins hair cut of 20.13 minutes. ClientId: 11 Freechairs = 2 Cut? false.
    Client id=11 ends hair cut of 20.13 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 12.
    *** Client id=11 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 3.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 2. Trials: 1.
    Barber begins hair cut of 27.97 minutes. ClientId: 12 Freechairs = 2 Cut? false.
    Client id=12 begins hair cut of 27.97 minutes.
Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 1. Trials: 1.
Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 0. Trials: 1.
    Client id=12 ends hair cut of 27.97 minutes. Now: Freechairs = 1. Now: Nr Hair Cuts Done = 13.
    *** Client id=12 departed. Freechairs = 1. Hair cut? true. Trials? 1. Clients departed: 13 ***
```

## Simulation Results for [BarberSaloon3.java](#)

```
Client id=13 begins hair cut of 26.12 minutes.
Barber begins hair cut of 26.12 minutes. ClientId: 13 Freechairs = 1 Cut? false.
Client id=13 ends hair cut of 26.12 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 14 ***

Client id=14 begins hair cut of 17.53 minutes.
Barber begins hair cut of 17.53 minutes. ClientId: 14 Freechairs = 2 Cut? false.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 1. Trials: 1.
Client id=14 ends hair cut of 17.53 minutes. Now: Freechairs = 2. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 2. Hair cut? true. Trials? 1. Clients departed: 15 ***

Client id=15 begins hair cut of 28.69 minutes.
Barber begins hair cut of 28.69 minutes. ClientId: 15 Freechairs = 2 Cut? false.
Client id=15 ends hair cut of 28.69 minutes. Now: Freechairs = 3. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 3. Hair cut? true. Trials? 1. Clients departed: 16 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 3.
*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.

****                      End Simulation                      ****

*****

***                      Barber Saloon Simulation 10          ***

***                      Parameters          (panel of configuration)          ***

nClients=          16,          the nr total of clients
nChairs=           5,          the nr total of chairs (=> barber chair included).
minTimeHairCut=    15.0,        the minimum fixed time for hair cut (minutes).
variableTimeCut=   15.0,        for max variable time in hair cut (minutes).
maxTimeBetweenCuts= 1.0,        for max time between hair cuts (minutes).
maxTimeBetweenClients= 120.0,   for max arrival time between 2 clients (minutes).
pauseBeforeJoins=  120,        the pause main thread do before doing final joins (minutes).
MaxClientAttemptsToCutHair= 3,   the nr total of attempts to cut hair per client.

***                      Begin Simulation Barber Saloon (Sleeping Barber)      ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 0 arrives. Client id=0 seats and waits. Freechairs = 4. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.13 minutes...
Barber begins hair cut of 27.7 minutes. ClientId: 0 Freechairs = 4 Cut? false.
Client id=0 begins hair cut of 27.7 minutes.
Client id= 1 arrives. Client id=1 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 27.7 minutes. ClientId: 0 Freechairs = 3 Cut? false.
Client id=0 ends hair cut of 27.7 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 1.
*** Client id=0 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 1 ***

Client id=1 begins hair cut of 25.72 minutes.
Client id=1 ends hair cut of 25.72 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 2.
*** Client id=1 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 2 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 2 arrives. Client id=2 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 19.91 minutes. ClientId: 2 Freechairs = 4 Cut? false.
Client id=2 begins hair cut of 19.91 minutes.
Client id=2 ends hair cut of 19.91 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 3.
*** Client id=2 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 3 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 3 arrives. Client id=3 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 17.64 minutes. ClientId: 3 Freechairs = 4 Cut? false.
Client id=3 begins hair cut of 17.64 minutes.
Client id=3 ends hair cut of 17.64 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 4.
*** Client id=3 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 4 ***

Client id= 4 arrives. Client id=4 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 22.36 minutes. ClientId: 4 Freechairs = 4 Cut? false.
Client id=4 begins hair cut of 22.36 minutes.
Client id=4 ends hair cut of 22.36 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 5.
*** Client id=4 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 5 ***

Client id= 5 arrives. Client id=5 seats and waits. Freechairs = 4. Trials: 1.
```

## Simulation Results for [BarberSaloon3.java](#)

```
Barber begins hair cut of 25.33 minutes. ClientId: 5 Freechairs = 4 Cut? false.
Client id=5 begins hair cut of 25.33 minutes.
Client id=5 ends hair cut of 25.33 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 6.
*** Client id=5 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 6 ***

Client id= 6 arrives. Client id=6 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 24.49 minutes. ClientId: 6 Freechairs = 4 Cut? false.
Client id=6 begins hair cut of 24.49 minutes.
Client id=6 ends hair cut of 24.49 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 7.
*** Client id=6 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 7 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 7 arrives. Client id=7 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 23.57 minutes. ClientId: 7 Freechairs = 4 Cut? false.
Client id=7 begins hair cut of 23.57 minutes.
Client id= 8 arrives. Client id=8 seats and waits. Freechairs = 3. Trials: 1.
Client id=7 ends hair cut of 23.57 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 8.
*** Client id=7 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 8 ***

Barber begins hair cut of 20.27 minutes. ClientId: 8 Freechairs = 4 Cut? false.
Client id=8 begins hair cut of 20.27 minutes.
Client id=8 ends hair cut of 20.27 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 9.
*** Client id=8 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 9 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 9 arrives. Client id=9 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 25.24 minutes. ClientId: 9 Freechairs = 4 Cut? false.
Client id=9 begins hair cut of 25.24 minutes.
Client id=9 ends hair cut of 25.24 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 10.
*** Client id=9 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 10 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 10 arrives. Client id=10 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 24.39 minutes. ClientId: 10 Freechairs = 4 Cut? false.
Client id=10 begins hair cut of 24.39 minutes.
Client id= 11 arrives. Client id=11 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 24.39 minutes. ClientId: 10 Freechairs = 3 Cut? false.
Client id=10 ends hair cut of 24.39 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 11.
*** Client id=10 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 11 ***

Client id=11 begins hair cut of 22.36 minutes.
Client id=11 ends hair cut of 22.36 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 12.
*** Client id=11 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 12 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
Client id= 12 arrives. Client id=12 seats and waits. Freechairs = 4. Trials: 1.
>>>> Barber Ready, but Client not Ready. + Barber sleeps/pauses 0.04 minutes...
Client id=12 begins hair cut of 23.13 minutes.
Client id=12 ends hair cut of 23.13 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 13.
*** Client id=12 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 13 ***

Client id= 13 arrives. Client id=13 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 22.91 minutes. ClientId: 13 Freechairs = 4 Cut? false.
Client id=13 begins hair cut of 22.91 minutes.
Client id=13 ends hair cut of 22.91 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 14.
*** Client id=13 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 14 ***

Client id= 14 arrives. Client id=14 seats and waits. Freechairs = 4. Trials: 1.
Barber begins hair cut of 22.32 minutes. ClientId: 14 Freechairs = 4 Cut? false.
Client id=14 begins hair cut of 22.32 minutes.
Client id= 15 arrives. Client id=15 seats and waits. Freechairs = 3. Trials: 1.
Barber begins hair cut of 22.32 minutes. ClientId: 14 Freechairs = 3 Cut? false.
Client id=14 ends hair cut of 22.32 minutes. Now: Freechairs = 4. Now: Nr Hair Cuts Done = 15.
*** Client id=14 departed. Freechairs = 4. Hair cut? true. Trials? 1. Clients departed: 15 ***

Client id=15 begins hair cut of 19.1 minutes.
Client id=15 ends hair cut of 19.1 minutes. Now: Freechairs = 5. Now: Nr Hair Cuts Done = 16.
*** Client id=15 departed. Freechairs = 5. Hair cut? true. Trials? 1. Clients departed: 16 ***

>>>> Barber maybe sleeps... saloon calm... Free chairs were 5.
*** Summary of Clients (threads) finished (joined) ***

Client id: 0 finished => thread joined.      Client id: 1 finished => thread joined.
Client id: 2 finished => thread joined.      Client id: 3 finished => thread joined.
Client id: 4 finished => thread joined.      Client id: 5 finished => thread joined.
Client id: 6 finished => thread joined.      Client id: 7 finished => thread joined.
Client id: 8 finished => thread joined.      Client id: 9 finished => thread joined.
Client id: 10 finished => thread joined.     Client id: 11 finished => thread joined.
Client id: 12 finished => thread joined.     Client id: 13 finished => thread joined.
Client id: 14 finished => thread joined.     Client id: 15 finished => thread joined.
```

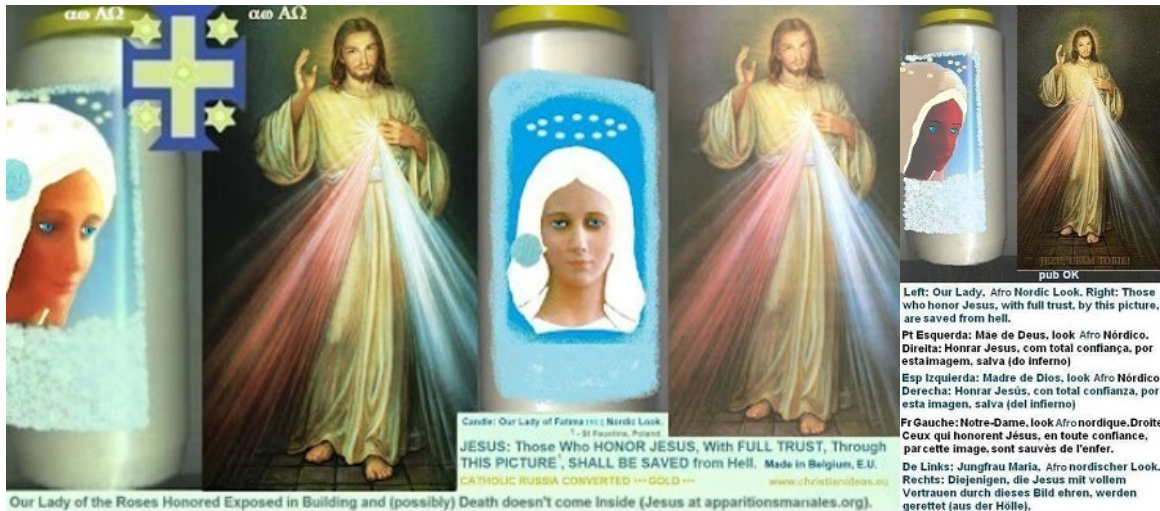
\*\*\*\* End Simulation \*\*\*\*

\*\*\*\*\*



K regards Web : <http://www.christianideas.eu> **Cath Russia Converted Ideas, made in Belgium**  
**Our Lady Of the Roses Honored Exposed and Death (possibly) Doesn't Come Inside**

Traduction Chrome Google instructions en top de page **THOSE WHO HONOR JESUS WITH FULL TRUST THROUGH THIS PICTURE** (Jesus St Faustina with rays blue red) **SHALL BE SAVED** (from Hell). (image available [www.christianideas.eu](http://www.christianideas.eu) , if not visible)



Over <http://www.christianideas.eu/#about>:

- **DISCERNMENT** Criteria e.g. **true faith catho conservative non naive: risk sect new age in Rome=> the Apocalypse... => better to be in state of grace go to confession asap after Benedict XVI**
- 
- **Risk of Great Famine => news from heaven +- serious to e.g. Enoch, G Lomax, L de Maria, J Leary...**
- 
- **Ideas (pro God) to (try) to resist Great Famine:**
  - [St Onofre with a Crumb of Bread](#)
  - [Blessed grapes L Maria + S Damiano](#)
- 
- **MODERN LIES unmasked**
- (Lies of Darwinism, Fake Dates...): **History + demographics since 2000BC unmask fake dates. Hominids were hybrids which existed before great Flood**, confirms Jesus at [oldapparitionsmariales.org](http://oldapparitionsmariales.org) ... proactive Darwinism: ~mouse evolves=>bat=>vampire, thus ancestor man/whale etc goes to=>Batman=>Dracula within same ~million years...
- 
- **DANGER OF APOCalypse after Benedict XVI => St Malachy prophecy:**
- **CHIP 666 IN BODY, WW3, risk vaccins Pest Grippe with 666 smart particles /changing DNA RNA , throw virus (by plane) to kill vaccinated, "good" apoc new age sect, THE GLOBAL EMPIRE SOCIALIST COMMUNIST OF ANTICHRIST... => lots of apoc prophecy at [www.tldm.org](http://www.tldm.org) (for scenario Russia not converted)**

- 
- [ICON OF AUTOMATIC ETERNAL SALVATION](#) (also here above)
- **THOSE WHO TRUST 100% IN JESUS through THIS PICTURE SHALL BE SAVED**  
(a Jesus of St Faustina with rays blue red)
- 
- [PROTECTIONS against EVIL](#)
- but some suffering needed, sorry!
- 
- [IMMORTALITY SUGGESTION](#)
- **TO PRAY GOD FOR ETERNAL SALVATION OF THOSE WHO NEED IT MOST,**  
'only' **CALMS DANGERS FOR LIFE.**
- 
- [GLBT + Modern Sex BEHAVIOURS UNHEALTHY, even KILL \(+ideas\)](#)
- [Communism of genders attracts pests... Vaccin Papilloma protects only 70%... it's possible to attack underconscious, e.g., via discrete sorcery...](#)
- 
- [2+ BILLION MURDERS SINCE ~1960](#)
- [ABORTION horrors... it attracts pests...](#)
- 
- [IDEAS AGAINST AGING & GRIPPE/Pest](#)
- **Fast & prayer (good against evil => Medjugorje) until it calms...(discreet fast & prayer or in solidarity group, prayer style (attentive daily) rosary or 7 sorrows... some food may help: avoid white sugars (fruits honey better if sweet food needed), but 1/8 glass whisky or vodka (=> let it act few minutes at the throat...), 1/5 glass vinager, 2 cloves raw good garlic mixed e.g. in salad to help counter pest... + immortality suggestion in dramatic cases to calm a bit and in place of dying win forces to pray a rosary /7sorrows... + details links above below**
- **VACCINATED RISK TO DIE WITHIN 5 YEARS WITHOUT FORMULAS PRO GOD**(see above; formulas from news from heaven maybe work?)
- 
- [IDEAS FOR A BETTER LOOK \(Ladies & Veil\)](#)
- **How FAKE PUBS BRUNETTE & Erotica ARE KILLING CATHOLIC MARRIAGE FOR LIFE: Sarah x Agar...** (because of unhappy husband: too few beautiful ladies to choose... sos esthetics... correlations 30 years to detect trends: lady educating children in micro appart feels so happy as husband with lady with not cared esthetics... eats white sugared stuff=> brunette Xerazade look puts husbands away...) **Esthetic care is to have heart for husband.** [Comparative Tables](#) at section '[Our Lady of Fatima deserves better look](#)'
- 
- 
- [MODERN WOMAN IDEOLOGY UNMASKED](#)
- Demographic fall in West (+ Russia)... statistics (1950 or) 1970-2021: Germany x India...
- 
- [LINKS TO some HEAVEN NEWS](#)

## Simulation Results for [BarberSaloon3.java](#)

- 
- Censured on [Twitter: @ ChristianIdeas](#)
- 
- **BLOCKED AGAIN on Facebook (?)** (before: <https://www.facebook.com/christian.ideas> Last Comments/infos)
- 
- Possible: *T shirts Posters “Songs” Christian Ideas and/or Russia Converted Catholic* (‘made in Belgium’) ...
- 
- [School](#) (e.g. Maths: exercises, complements to Wikipedia...)

### If You Want to Defend Good,

[PROTECTIONS against EVIL](#) (+ take cross) Recommended

([IMMORTALITY SUGGESTION](#) at 1st Sign of Danger,

[CONTRACT WITH GOD \(ICON AUTOMATIC SALVATION THROUGH DIVINE MERCY\)](#),  
(picture above, right), daily [7 sorrows of Mary small prayer](#)

[Daily Rosary](#) , daily [crusade prayer 140](#) **against FEARS**, [daily crusade prayer 33](#), to be in state or go to confession cath priest asap etc.

+ details at [www.christianideas.eu](http://www.christianideas.eu) short prayers also below )

I try to pray for protection all pro God of planet until 00:00h, to try to desinfect, but it's better to complement it with 24h protective prayer, e.g., attentive rosary or (easier/shorter) 7 sorrows (here below).

It seems protection from God up to 00:00h for you and your dear ones, praying this small prayer Cr prayer 33 from [the Seal of the Living God](#) (better download it also)

**“O my God, my loving Father, I accept with love and gratitude Your Divine Seal of Protection.**

**Your Divinity encompasses my body and soul for eternity.**

**I bow in humble thanksgiving and offer my deep love and loyalty to You, my beloved Father.**

**I beg You to protect me and my loved ones with this special Seal and I pledge**

my life to Your service forever and ever. I love You, dear Father. I console You in these times, dear Father.

I offer You the Body, Blood, Soul and Divinity of Your dearly beloved Son, in atonement for the sins of the world and for the salvation of all Your children. Amen."

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THE SEVEN SORROWS of Mary short prayer protection for 24h (1 hail mary with each meditation/sorrow), the sorrows:

1.The prophecy of Simeon: Jesus would be polemic and thoughts of Mary public

2. The flight into Egypt, to protect baby God from king Herode

3. Child Jesus lost during 3 days (temple Jerusalem).

4. Way of the Cross.

5. Death of Jesus in cross.

6. Descent of the Body of Jesus from the Cross.

7. The burial of Jesus.

The Hail Mary:

"Hail Mary, full of grace, the Lord is with thee:

blessed art thou amongst women and blessed is the fruit of thy womb, Jesus.

Simulation Results for [BarberSaloon3.java](#)

Holy Mary, Mother of God, pray for us sinners now and at the hour of our death.

Amen." ( Sources: <http://www.olrl.org/pray/> + [www.tldm.org](http://www.tldm.org) )