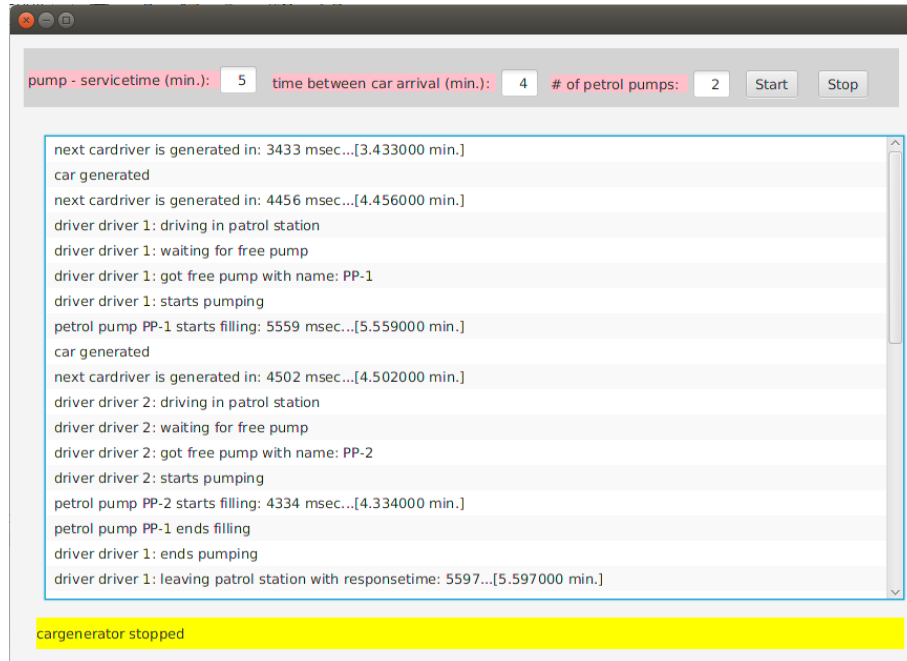


## Overview

Simulation of a Petrol – Station

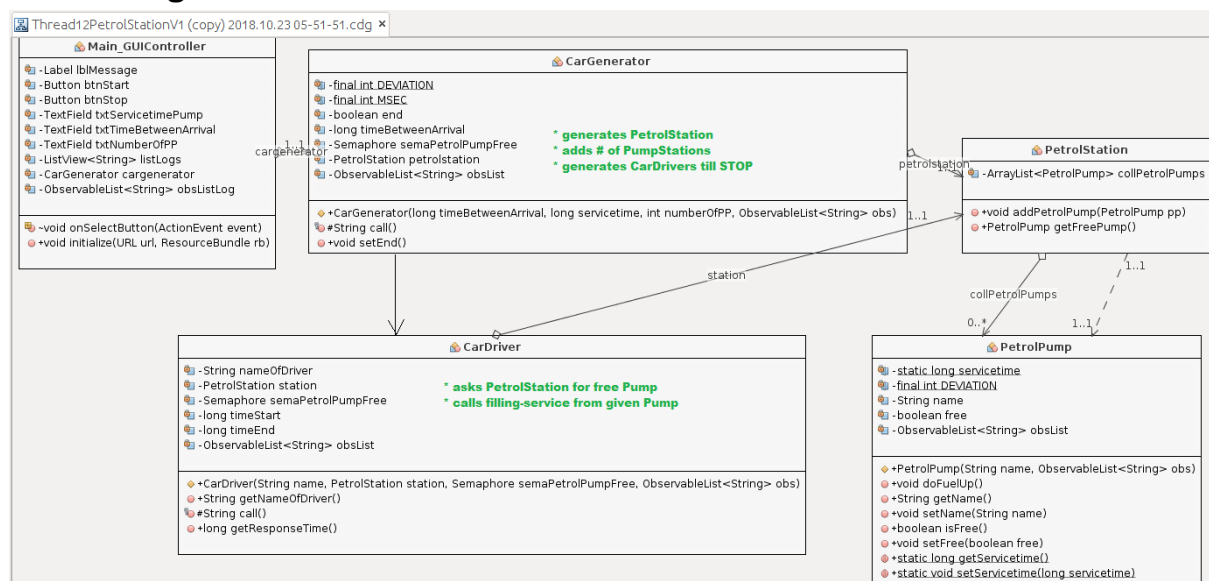
## User's View



## Station – Workflow

- new car enters petrol station after a given “time between next car”.
- car asks for service on a free petrol pump
- free pump is assigned and filling lasts a given “servicetime”
- car leaves station and displays total time in station (= “response time”)

## Class Diagram



## Hint for Developers

- Make protocol displayed on console; last step assign output to observable list
- time-conversion: 1 minute in real → 1000 msec in simulation
- random servicetime: given servicetime +/- 20%
- random time between arrival: given time +/- 20%
- response-time:= total service time + total queuing time (eg. waiting for free pump)

## Hint for Testers

- if servicetime equals time-between-arrivals AND 1 service station
- then responsetime increases rapidly (do the math in queueing-calculations (NVS))

```
pump - servicetime (min.): 5 time between car arrival (min.): 5 # of petrol pumps: 1 Start Stop

petrol pump PP-1 starts filling: 5481 msec...[5.481000 min.]
car generated
next cardriver is generated in: 5242 msec...[5.242000 min.]
driver driver 31: driving in patrol station
driver driver 31: waiting for free pump
petrol pump PP-1 ends filling
driver driver 30: ends pumping
driver driver 30: ***** leaving patrol station with responsetime: 10913...[10.913000 min.]
driver driver 31: got free pump with name: PP-1
driver driver 31: starts pumping
petrol pump PP-1 starts filling: 4006 msec...[4.006000 min.]
car generated
driver driver 32: driving in patrol station
driver driver 32: waiting for free pump
petrol pump PP-1 ends filling
driver driver 31: ends pumping
driver driver 32: got free pump with name: PP-1
driver driver 31: ***** leaving patrol station with responsetime: 9013...[9.013000 min.]

cargenerator stopped
```