Final Project | Program schematic

main()

- create & connect **Intersections and Streets**
- add **Street** and target **Intersection** to **Vehicles**
- simulate **Intersections**
- simulate **Vehicles**
- visualize **TrafficObjects**

Intersection::processVehicleQueue()

- check for **Vehicles** in queue
- check for blockage in **Intersection**
- block **Intersection** for other **Vehicles**
- permit entry to first **Vehicle** in queue
- remove entering **Vehicle** from queue

Vehicle::drive()

- init stop watch
- compute time difference to stop watch
- update **Vehicle** position on **Street**
- check if **Vehicle** has reached end of **Street**
- request entry of **Vehicle** into target **Intersection**
- wait until entry has been granted by **Intersection**
- **Vehicle** picks destination and crosses **Intersection**
- reset stop watch

Intersection::addVehicleToQueue()

- add **Vehicle** to **WaitingQueue**
- wait until **Vehicle** may enter **Intersection**
- wait until **TrafficLight** is green

TrafficLight::cycleThroughPhases()

- init stop watch
- compute time difference to stop watch
- toggle between red and green
- send update message to queue
- reset stop watch