

Problem Set 1

Li Xingxuan 1002189

Cohort Exercise 1.2:

1. Train:
 - a. `checkDestination(junction_point, train)`: To check whether the train has reached its destination.
 - b. `changeTrack(train, track_a, track_b)`: Change the train from `track_a` to `track_b`
 - c. `stopTrain(junction_point, train)`: If emergency happens, stop the train at the nearest junction point.
2. Track:
 - a. `isFull(track, direction)`: To check whether the track is occupied by another train.

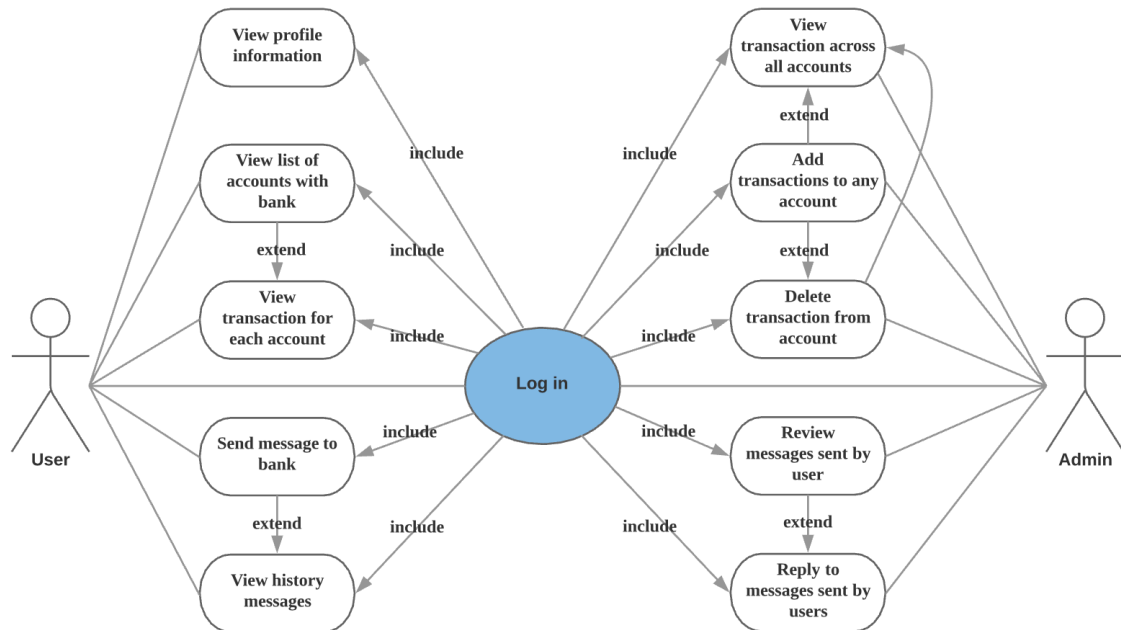
Cohort Exercise 1.3:

1. Train:
 - a. `checkDestination(junction_point, train)`: To check whether the train has reached its destination.
 - b. `changeTrack(train, track_a, track_b)`: Change the train from `track_a` to `track_b`
 - c. `stopTrain(junction_point, train)`: If emergency happens, stop the train at the nearest junction point.
 - d. `checkGuage(train, track)`: To check whether the train fits the guage of the track.
 - e. `trackNarraw(train, junction_point_a, junction_point_b)`: Narraow guage trains cannot run longer than the distance between two junction points.
2. Track:
 - a. `isFull(track, direction)`: To check whether the track is occupied by another train.

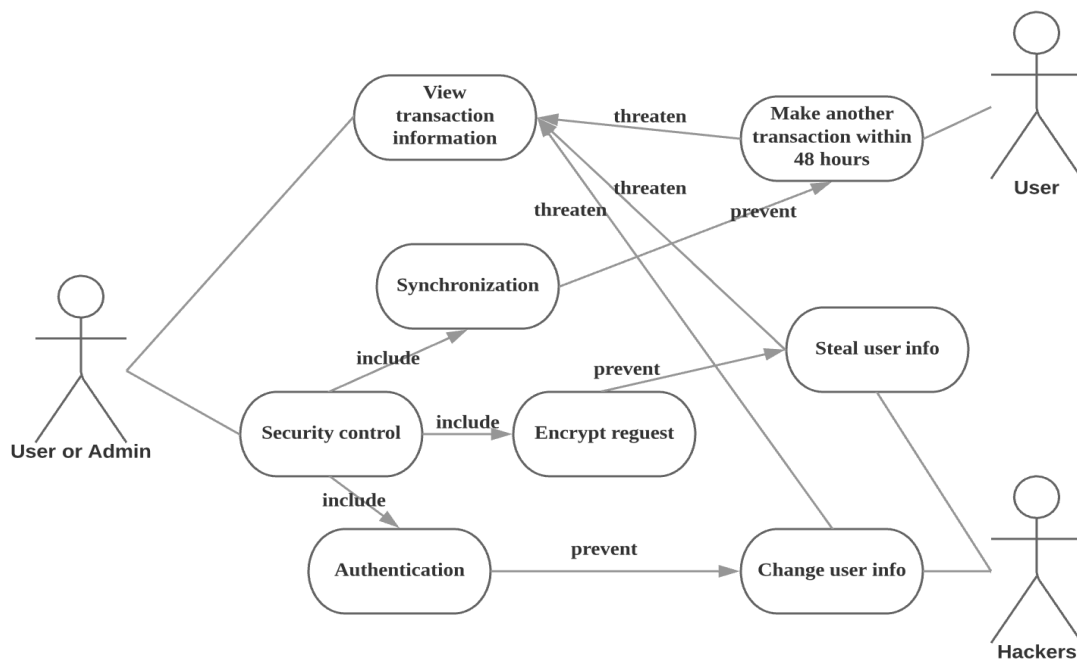
Cohort Exercise 2:

1. The code is in the attached folder.

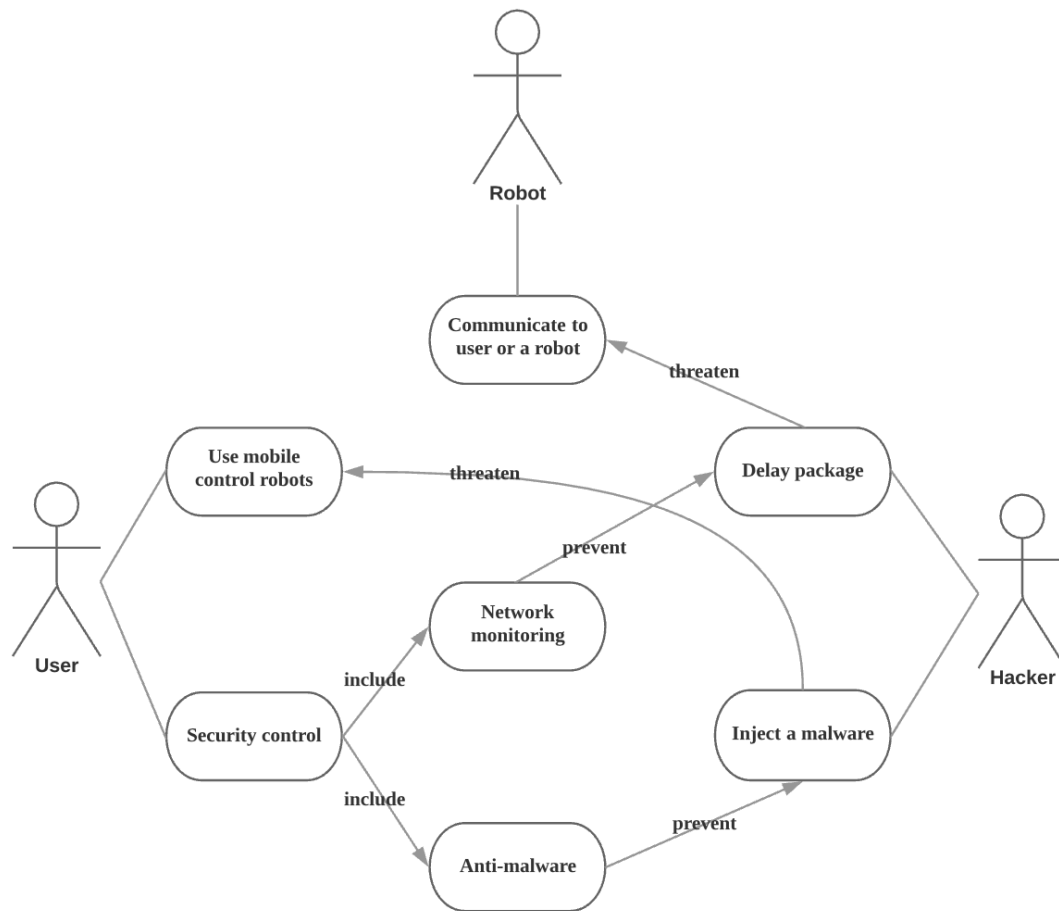
Cohort Exercise 4:



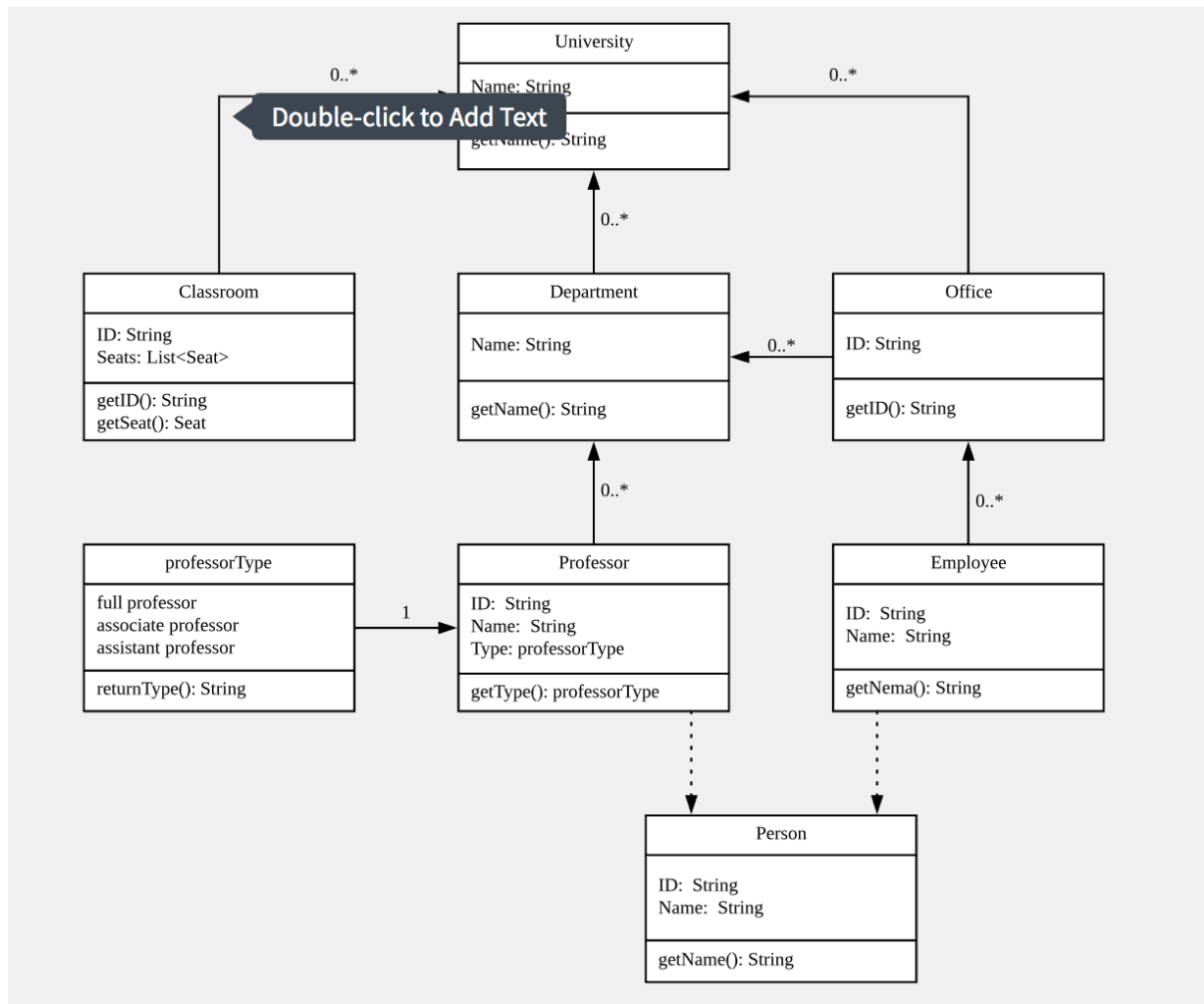
Cohort Exercise 5:



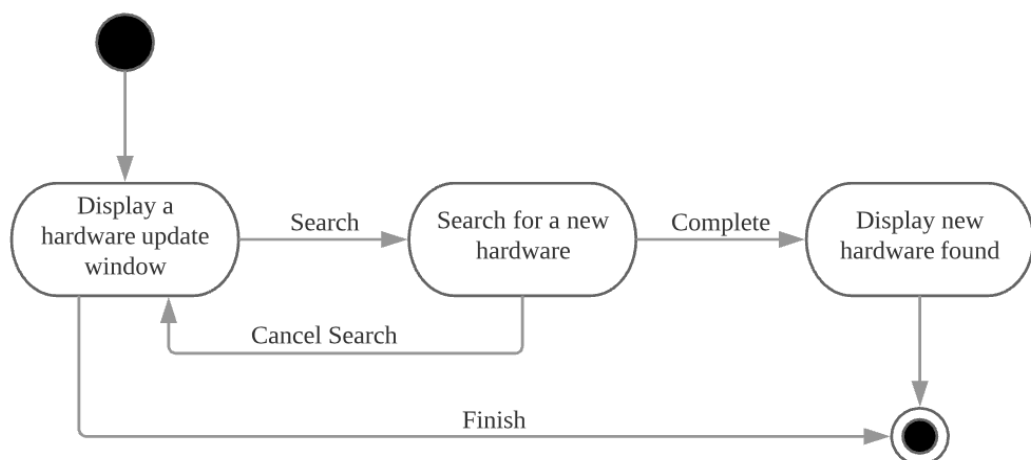
Cohort Exercise 6:



Cohort Exercise 7:



Cohort Exercise 8:



Cohort Exercise 9:

