For my project, I decided to use 2 semaphores:

static Semaphore spaceInElevator = new Semaphore(7, true);

static Semaphore Elevator = new Semaphore(1, true);

static Semaphore spaceInElevator = new Semaphore(7, true);

Is the Semaphore I used to keep track of the number of people I had on the elevator at a time, hence why it is set to 7 originally.

static Semaphore Elevator = new Semaphore(1, true);

Is the Semaphore I used to keep track of weather I had the elevator full or not so I could know when to release the spaceInElevator Semaphore. I have it set to only 1, because we were only using one elevator in this simulation.

PSEUDOCODE:

My project has 3 main classes

Public static void main(String[] args)

Public static class Elevator

Public static class Riders

Public static void main(String[] args)

{

//initialize and start all threads here

//use for loop to initialize individual rider threads

//use different for loop to start each rider thread

}

Public static class Elevator implements Runnable

{

@Override

Public void run()

{

//try-catch statement must surround while loop

while(true)

{

//get the elevator Semaphore acquired here to show elevator if full

//check to see if simulation is done

//if spaceInElevator Semaphore has 7 available permits, go back down to

//1st floor because elevator is empty

//if it has 0 available permits, deliever riders to destination floors.

}

}

}