Use case

Main scenario:

1. Person calls elevator
2. Call button light enables
3. Elevator moves to passenger's floor
4. Elevator stops
5. Call button light disable
6. Elevator opens doors for 3 seconds
7. Passenger enters
8. Passenger chooses floor
9. Panel light enable
10. Doors close
11. Elevator moves to desired floor
12. Elevator displays floor light according to position
13. Elevator stops
14. Panel light disable
15. Elevator opens doors for 3 seconds
16. Passenger exits

Other scenarios:

8a. Passenger presses emergency brake.

1. Elevator stops.
2. All orders are deleted.
3. If at floor, elevator opens doors immediately and stays open for 3 seconds.

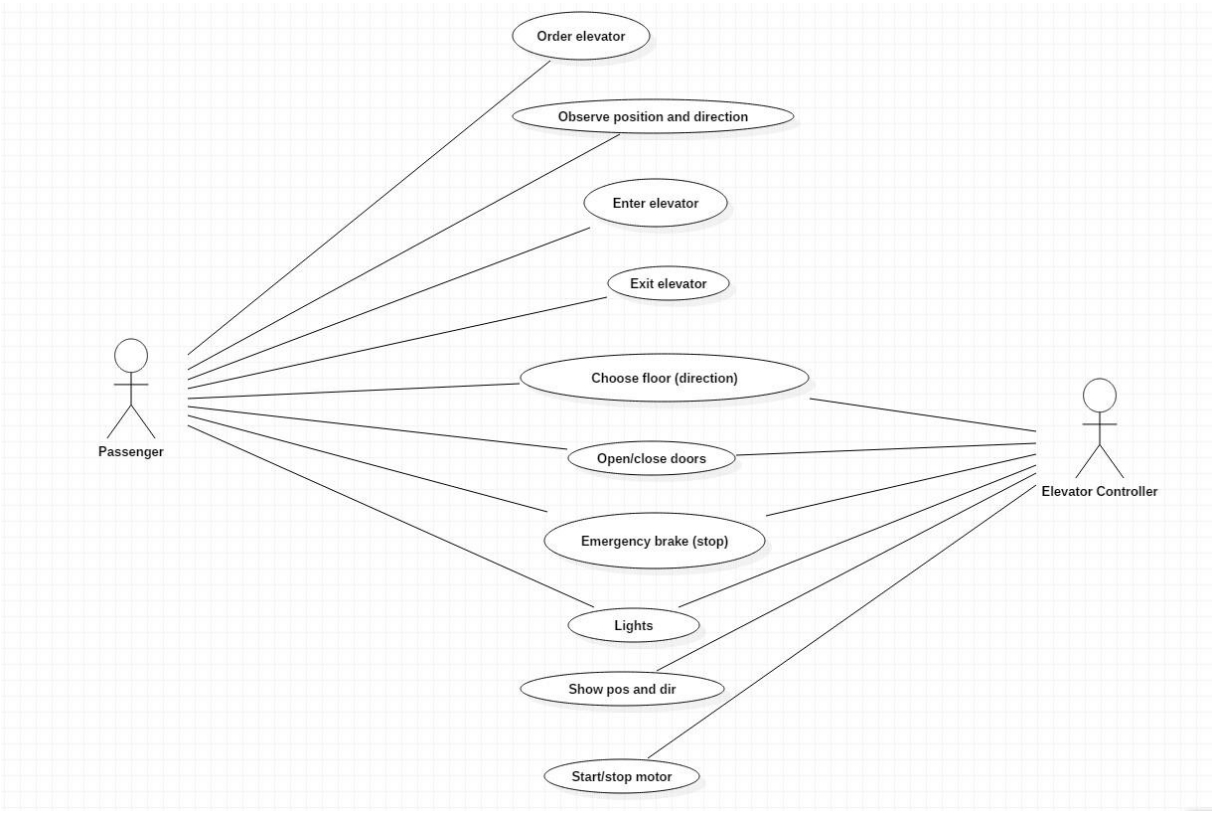
2a. Elevator already on correct floor. Skip to MSS 6.

8a. Chooses the floor the elevator is already on. Skip to MSS 15.

Precondition:

1. The elevator must be in a defined state.

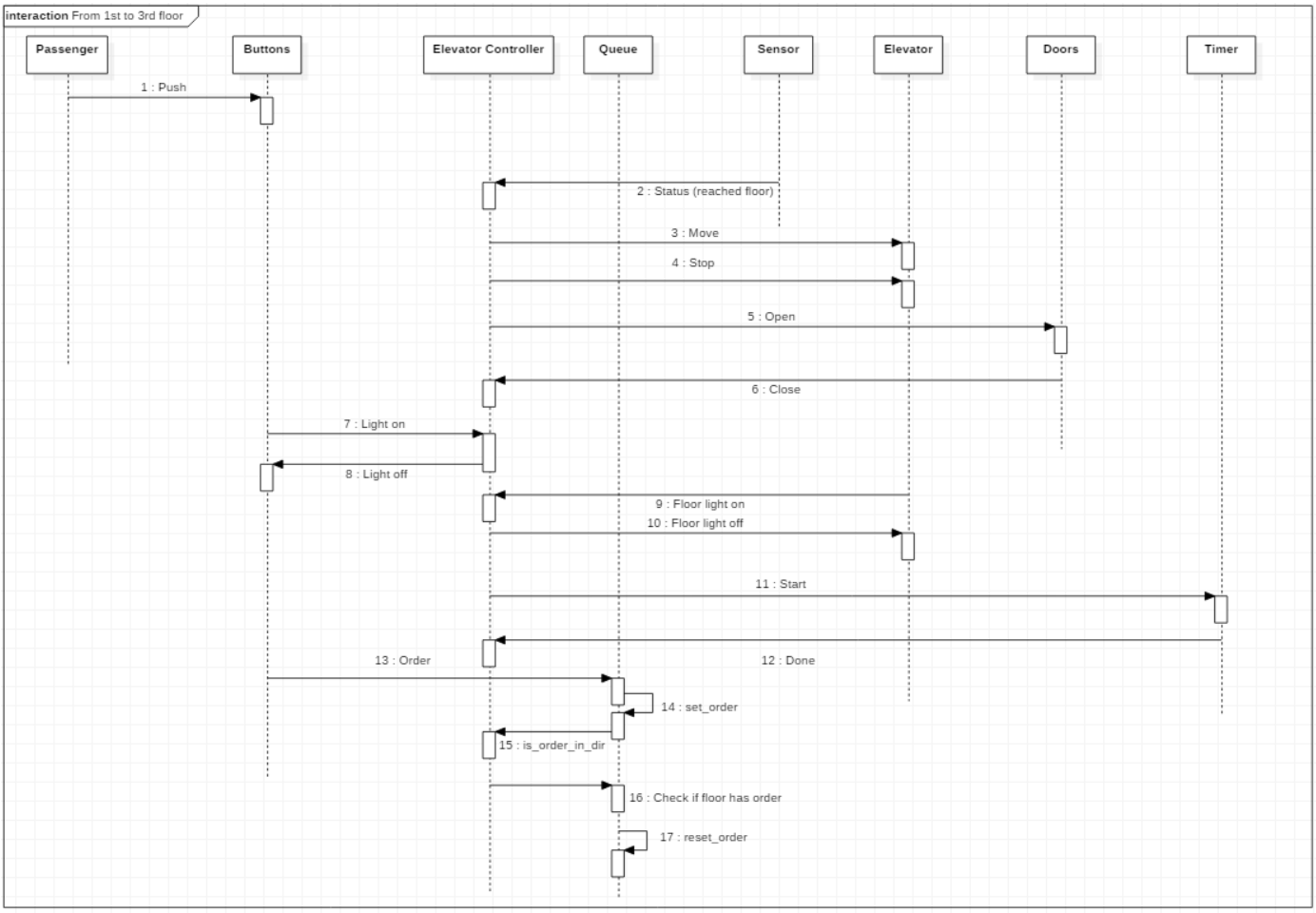
We assume that only one person interacts with the system during the main scenario.


Order elevator
Observe position and direction
Enter elevator
Exit elevator
Choose floor (direction)
Open/close doors
Emergency brake (stop)
Lights
Show pos and dir
Start/stop motor
Passenger
Elevator Controller

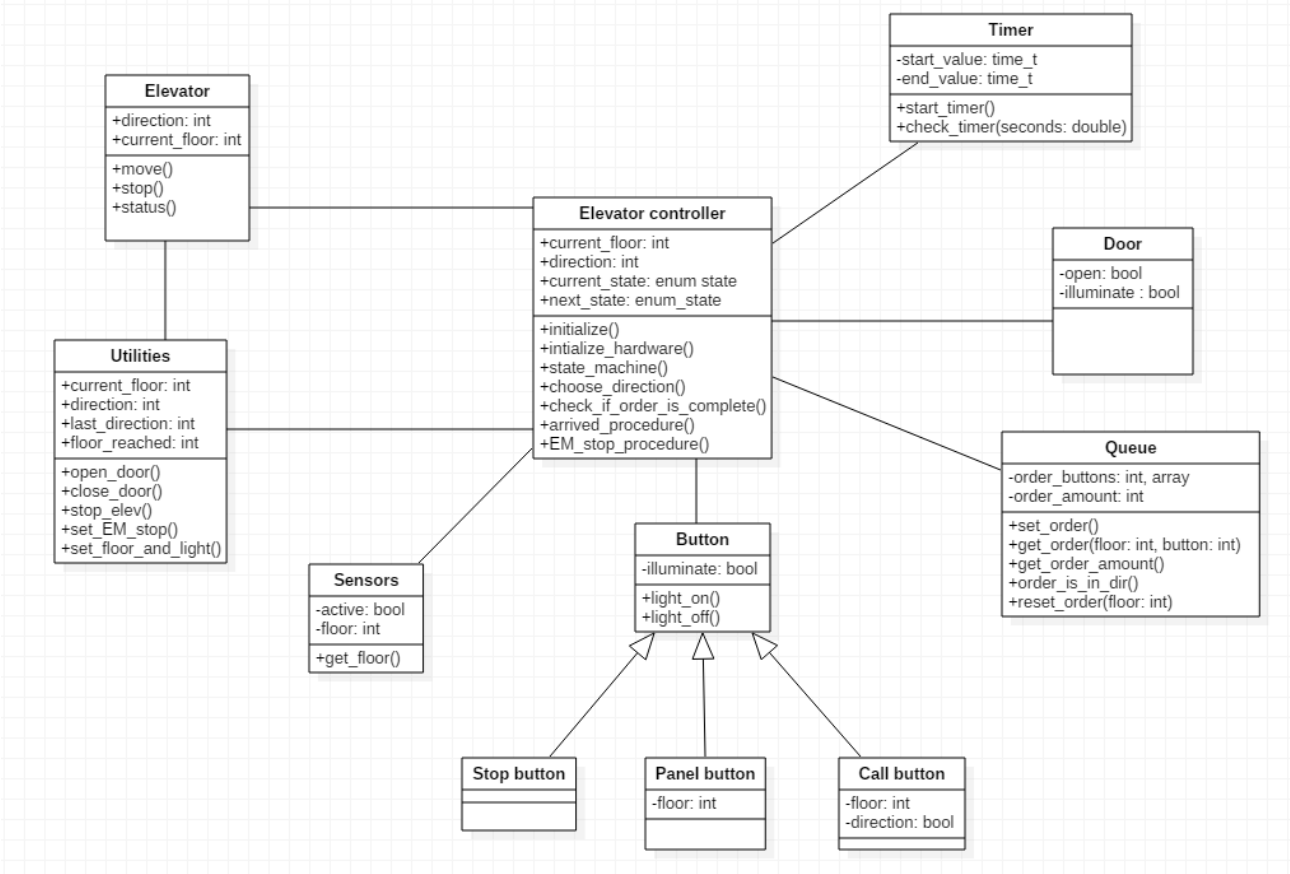
Sequence diagram

Sequence: From 1st to 3rd floor

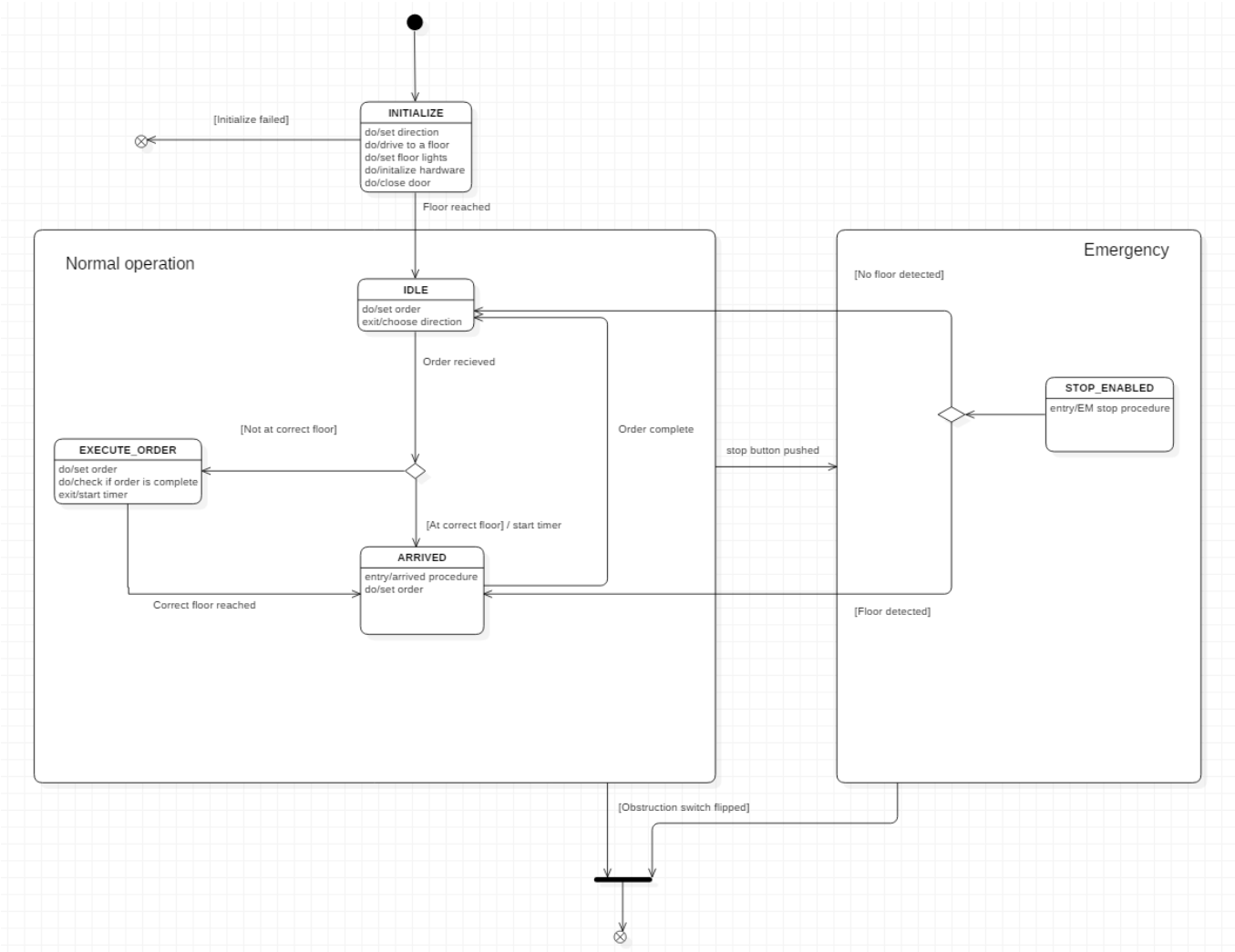
- The elevator is empty and standing still at the second floor. The doors are open.
- A person orders the elevator to the 1st floor. The person wants transport upwards.
- When the elevator arrives, the person orders transport to the 3rd floor.
- The Sequence ends when the elevator is standing still at the 3rd with the doors open.
- We assume that no other person interact with the system during the sequence.



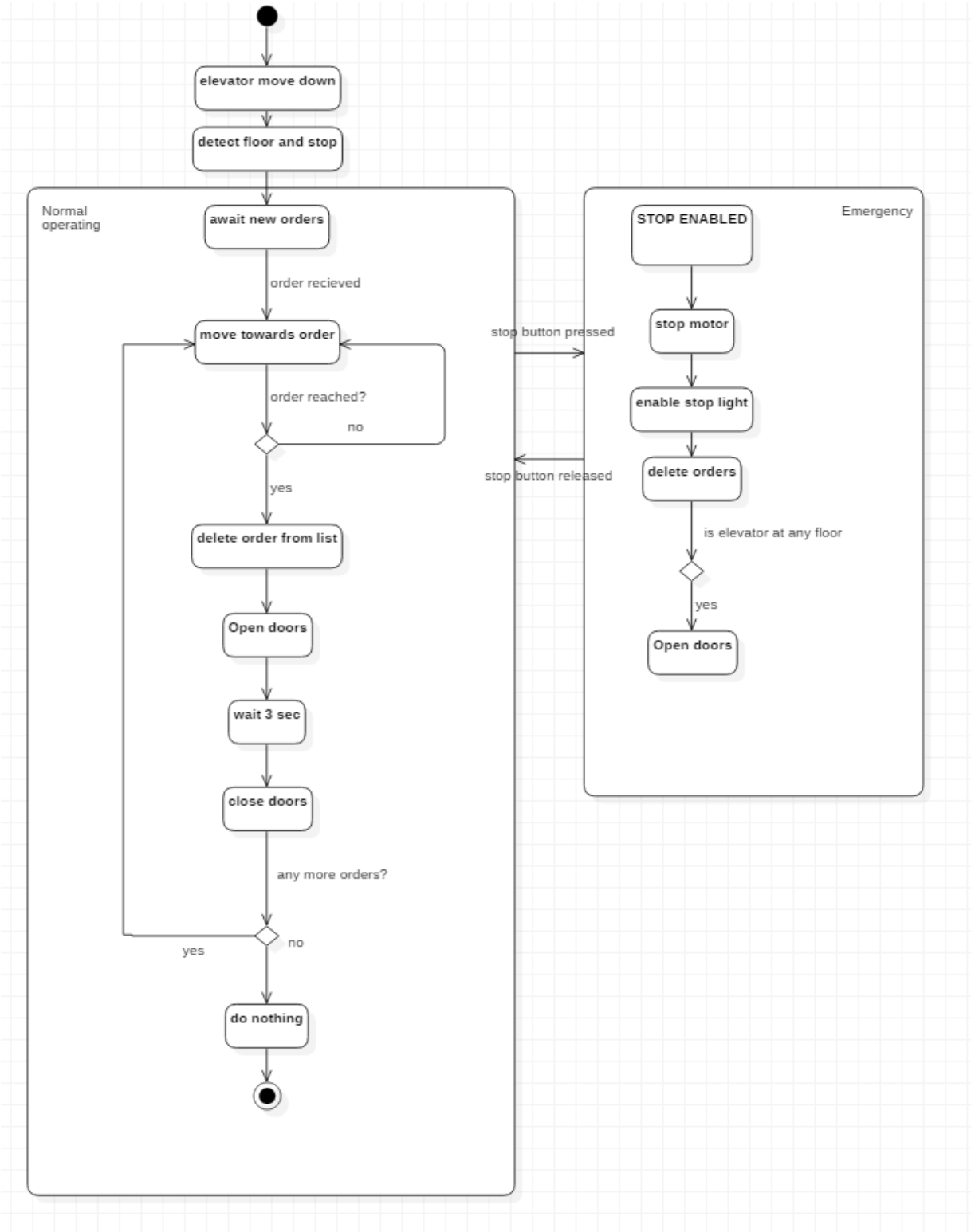
Class diagram



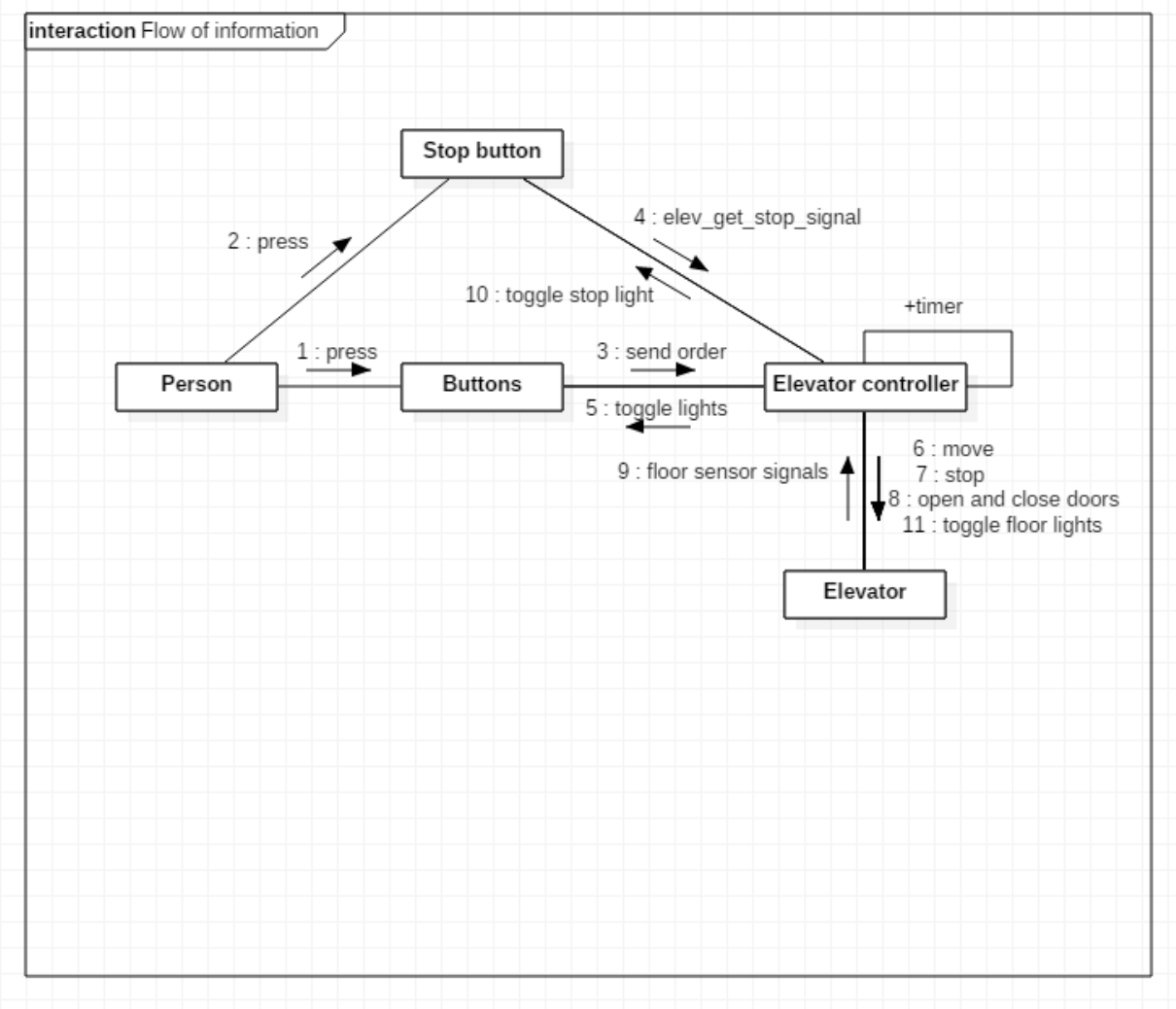
State machine diagram



Activity Diagram



Communication Diagram



Timing diagram