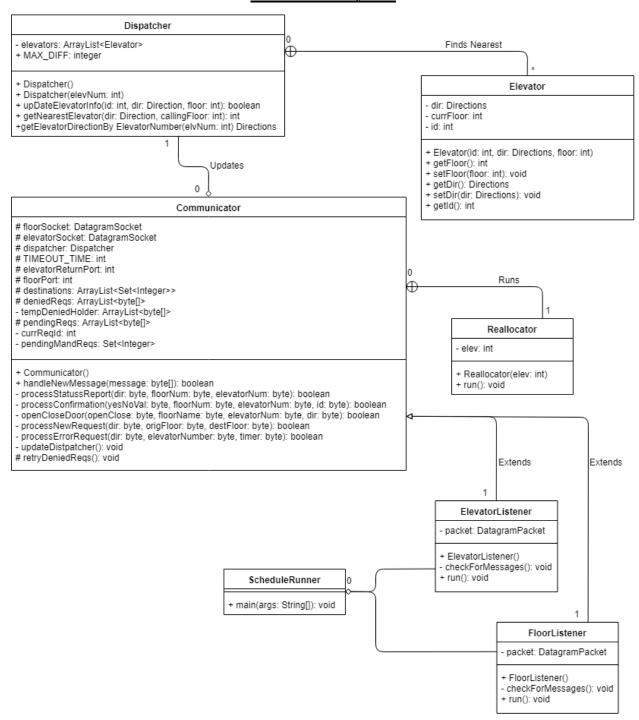
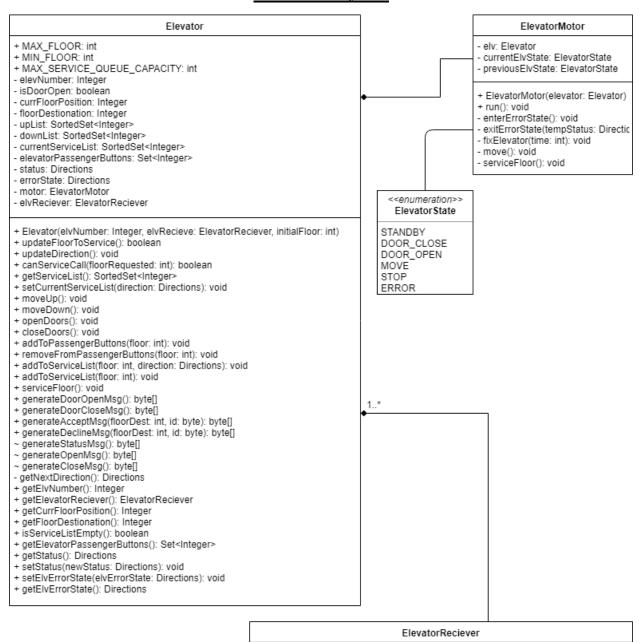
## **Scheduler Subsystem**

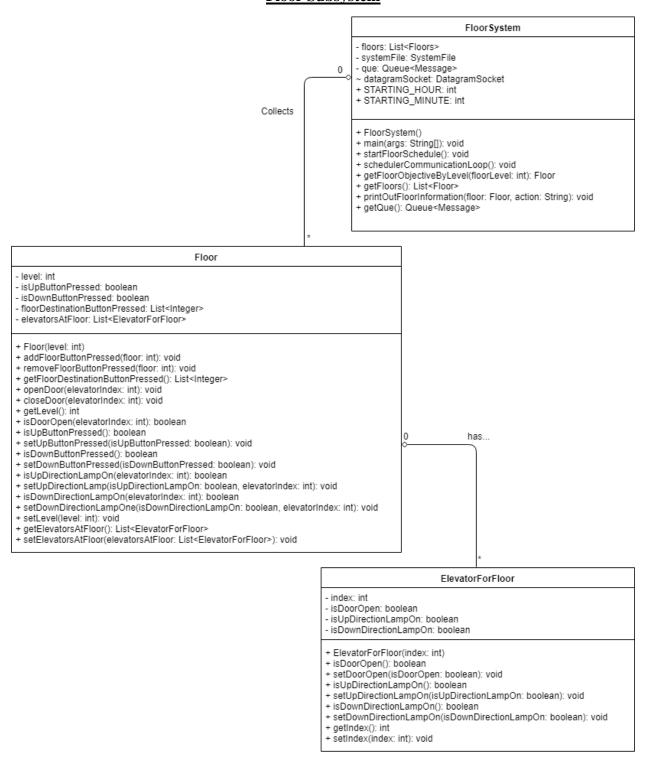


## **Elevator Subsystem**



- elevators: List<Elevators>
- schedulerSocket: DatagramSocket
- ~ messagePort: int
- + ElevatorReciever()
- + recieverCommunicationLoop(): void
- + processSchedulerMsg(packet: DatagramPacket): void
- + addFloorToService(elevatorNumber: Integer, floor: Integer, direction: Directions): void
- + addFloorToService(elevatorNumber: Integer, floor: Integer): void
- + sendMessage(msg: byte[]): void
- + sendResponse(msg: byte[], port: int): void
- $\hbox{-} \ setError(elevatorNumber: Integer, errorType: Directions): void$
- + getElevators(): List<Elevator>
- + main(args: String[]): void
- + closeSocket(): void

# Floor Subsystem



#### Resources

#### + ELEVATOR\_PORT: int + FLOOR\_PORT: int + MESSAGE\_LENGTH: int

- + NUMBER\_OF\_ELEVATORS: int
- + LOWEST\_FLOOR: int + HIGHEST\_FLOOR: int
- + NUMBER\_OF\_FLOORS: int
- + ELEVATOR\_TRAVEL\_SPEED\_MS: int

Constants

- + ELEVATOR\_STOP\_TIME: int
- + SCHED\_IP\_ADDRESS: String
- + FLOOR\_SYS\_IP\_ADDRESS: String
- + ELEVATOR SYS IP ADDRESS: String
- + FORMATTER: SimpleDateFormat
- + ERROR: byte
- + NEW\_REQUEST\_FROM\_FLOOR: byte
- + REQUEST RECEIVED: byte
- + OPEN\_CLOSE\_DOOR: byte
- + NEW\_ELEVATOR\_DESTINATION: byte
- + ELEVATOR\_INFO\_REQUEST: byte
- + CONFIRM VOL DESTINATION: byte
- + STATUS\_REPORT: byte
- + YES: byte
- + NO: byte
- + OPEN: byte
- + CLOSE: byte
- + MANDATORY: byte
- + VOLUNTARY: byte
- Constants()

#### <<enumeration>> Directions

UP DOWN STANDBY ERROR\_DEFAULT ERROR\_DOOR ERROR\_MOVE

- + isOpposite(dir1: Directions, dir2: Directions): boolean
- + IsInError(Directions): boolean
- + getDirByInt(val: int): Directions
- + getIntByDir(dir: Directions): int

#### Message

- time: LocalTime
- startingFloor: int
- direction: Directions
- destinationFloor: int
- messageQueue: Queue<Message>
- ELEMENTS\_IN\_MESSAGE: int
- + Message(time: LocalTime, startingFloor: int, direction: Direction, destinationFloor: int)
- + getTime(): LocalTime
- + getStartingFloor(): int
- + getDirection(): Directions
- + getDestinationFloor(): int
- + getMessageQueue(): Queue<Message>
- + toString(): String

### SystemFile

- + FILEPATH: String
- + FILENAME1: String
- + FILENAME2: String + FILENAME3: String
- filename: String
- + SystemFile(filename: String)
- validateFloorRange(floor: int): boolean
- + readValidateAndCreatMessages(): void
- validateLine(lineInfo: String): boolean
- readFile(): ArrayList<String>
- + testReadFile(): ArrayList<String>
- + testValidateLine(lineInfo: String): boolean