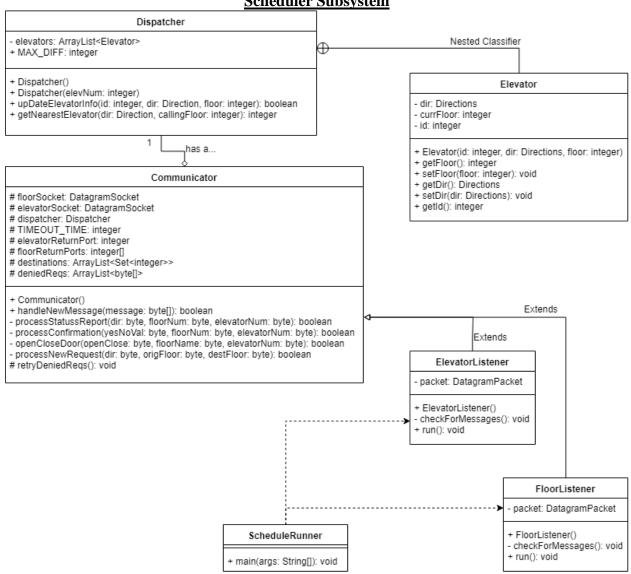
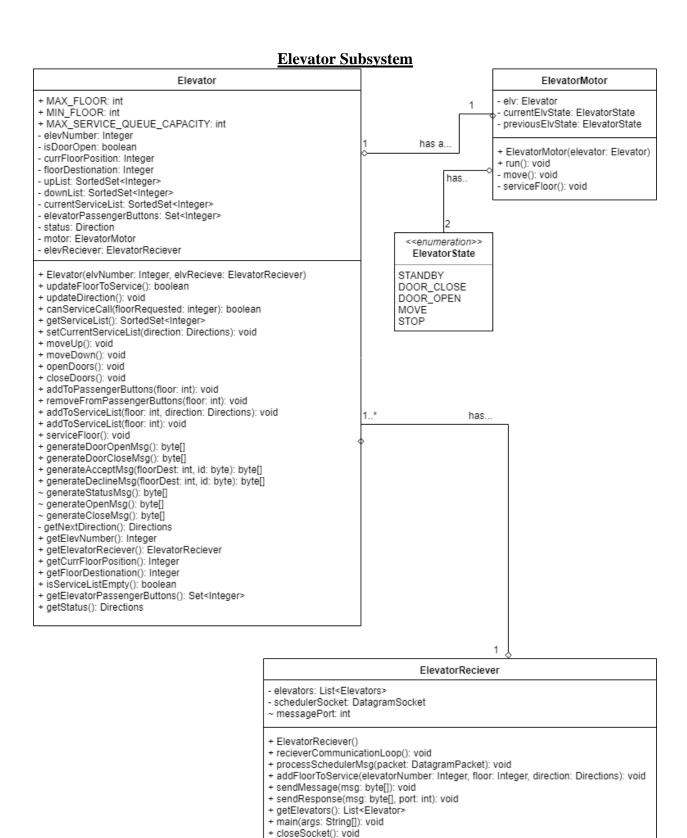
# **Scheduler Subsystem**





## Floor Subsystem

Floor System floors: List<Floors> systemFile: SystemFile has. que: Queue<Message> datagramSocket: DatagramSocket STARTING\_HOUR: int - STARTING MINUTE: int Floor + FloorSystem() - level: int + main(args: String[]): void - isUpButtonPressed: boolean + startFloorSchedule(): void isDownButtonPressed: boolean + schedulerCommunicationLoop(): void - floorDestinationButtonPressed: List<Integer> + getFloorObjectiveByLevel(floorLevel: int): Floor elevatorsAtFloor: List<ElevatorForFloor> + getFloors(): List<Floor> + printOutFloorInformation(floor: Floor, action: String): void + getQue(): Queue<Message> + Floor(level: int) + addFloorButtonPressed(floor: int): void + removeFloorButtonPressed(floor: int): void + getFloorDestinationButtonPressed(): List<Integer> + openDoor(): void + closeDoor(): void + getLevel(): int + isDoorOpen(): boolean + isUpButtonPressed(): boolean has.. + setUpButtonPressed(isUpButtonPressed: boolean): void + isDownButtonPressed(): boolean + setDownButtonPressed(isDownButtonPressed: boolean): void + isUpDirectionLampOn(): boolean + setUpDirectionLamp(isUpDirectionLampOn: boolean): void + isDownDirectionLampOn(): boolean + setDownDirectionLampOne(isDownDirectionLampOn: boolean): void + setLevel(level: int): void + getElevatorsAtFloor(): List<ElevatorForFloor> + setElevatorsAtFloor(elevatorsAtFloor: List<ElevatorForFloor>): void ELevatorForFloor index: int

- isDoorOpen: boolean
- isUpDirectionLampOn: boolean
- isDownDirectionLampOn: boolean
- + ElevatorForFloor(index: int)
- + isDoorOpen(): boolean
- + setDoorOpen(isDoorOpen: boolean): void
- + isUpDirectionLampOn(): boolean
- + setUpDirectionLampOn(isUpDirectionLampOn: boolean): void + isDownDirectionLampOn(): boolean
- + setDownDirectionLampOn(isDownDirectionLampOn: boolean): void
- + getIndex(): int
- + setIndex(index: int): void

### Constants

- + 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
- + 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()

### Resources

#### <<enumeration>> Directions

UP DOWN STANDBY

- + isOpposite(dir1: Directions, dir2: 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
- 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