<<enumeration>
Direction

UP DOWN STOPPED

<<enumeration>>
SystemRequestType

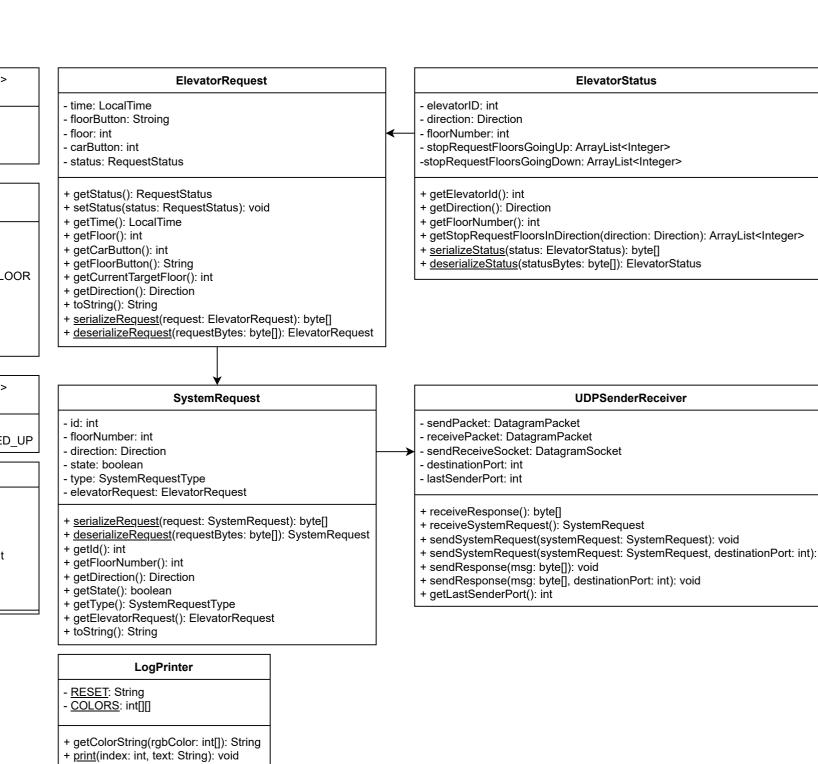
REGISTER_ELEVATOR_CONTROLLER
NEW_PRIMARY_REQUEST
IS_STOP_REQUIRED
PROCESS_REQUESTS_AT_CURRENT_F
PROCESS_COMPLETED_REQUESTS
SET_FLOOR_DIRECTION_LAMPS
SET_FLOOR_LAMPS
ADD_NEW_REQUEST
STATUS_REQUEST

<enumeration>
RequestStatus

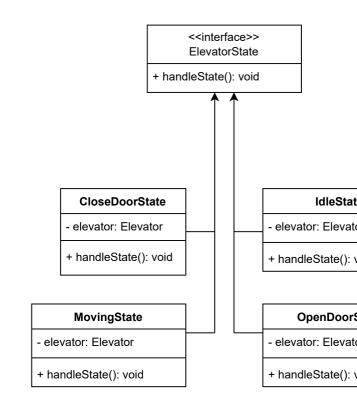
PENDING PASSENGER_PICKE

Constants

- + NUMBER OF FLOORS: int
- + NUMBER OF ELEVATORS: int
- + SCHEDULER_PORT: int
- + SCHEDULER PORT 2: int
- + FLOOR CONTROLLER PORT: ir
- + BASE MOVE TIME: int
- + INCREMENTAL MOVE TIME: int
- + LOADING TIME: int



void



Elevator

- subsystem: ElevatorSubsystem- primaryRequest: ElevatorRequest

- currentState: ElevatorState

direction: DirectionfloorNumber: int

- motorRunning: boolean - doorOpen: boolean

- elevatorld: int

- senderReceiver: UDPSenderReceiver

+ getNextFloorNumber(): int

+ setFloorNumberToNextFloor(): void + getCurrentState(): ElevatorState

+ setCurrentState(currentState: ElevatorState): void

+ setDoorOpen(doorOpen: boolean): void

+ getElevatorId(): int

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+ getDirection(): Direction

+ getFloorNumber(): int

+ isMotorRunning(): boolean

+ setMotorRunning(motorRunning: boolean): void

+ isDoorOpen(): boolean

+ getSubsystem(): ElevatorSubsystem

+ setPrimaryRequest(primaryRequest: ElevatorRequest): void

+ setDirection(direction: Direction): void

+ getPrimaryRequest(): ElevatorRequest

+ getSenderReceiver(): UDPSenderReceiver

+ run(): void

ElevatorController

- senderReceiver: UDPSenderReceiver

- elevator: Elevator

- subsystem: ElevatorSubsystem

+ addNewRequest(request: ElevatorRequest): void

+ processCompletedRequests(floorNumber: int, direction: Direction): void

+ processRequestsAtCurrentFloor(floorNumber: int, direction: Direction): v

+ receiveNewPrimaryRequest(): ElevatorRequest

+ isStopRequiredForFloor(nextFloorNumber: int, direction: Direction): bool

- getElevatorStatus(): ElevatorStatus

+ run(): void

ElevatorSubsystem

- downRequests: ArrayList<ElevatorRequest>

- upRequests: ArrayList<ElevatorRequest>

- hasWaitingRequests: boolean

+ elevatorLamps: ArrayList<Boolean>

elevatorId: int

+ getStopRequestFloorsInDirection(direction: Direction): ArrayList<Integer

+ addNewRequest(request: ElevatorRequest): void

+ hasWaitingRequests(): boolean

+ setElevatorLamps(floorNumber: int, lampState: boolean): void

+ processCompletedRequests(floorNumber: int, direction: Direction): void

+ processRequestsAtCurrentFloor(floorNumber: int, direction: Direction): v

+ receiveNewPrimaryRequest(): ElevatorRequest

+ isStopRequiredForFloor(nextFloorNumber: int, direction: Direction): bool

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FloorController

- floorSubsystem: FloorSubsystem
- receiver: UDPSenderReceiver
- + run(): void

Floor

- floorNumber: int
- downRequests: ArrayList<ElevatorRequest>
- upRequests: ArrayList<ElevatorRequest>
- floorLampUp: boolean
- floorLampDown: boolean
- directionLamps: boolean[][]
- isFirstFloor: boolean
- isLastFloor: boolean
- + addRequest(event: ElevatorRequest): void
- + checkForRequests(): ElevatorRequest
- + setDirectionLamp(elevatorId: int, direction: Direction, state: boolean): void
- + setFloorLamp(direction: Direction, state: boolean): void
- + getUpRequests(): Collection<Object>
- + getDownRequests(): Collection<Object>
- + getDirectionLamps(): boolean[][]
- + getFloorLampUp(): boolean
- +getFloorLampDown(): boolean

FloorSubsystem

- sender: UDPSenderReceiver
- numberOfFloors: int
- floors: ArrayList<Floor>
- readInputFile(filename: String): ArrayList<ElevatorRequest>
- + setDirectionLamp(elevatorId: int, floorNumber: int, direction: Direction, state: boolean): void
- + setFloorLamp(floorNumber: int, direction: Direction, state: boolean): void
- + run(): void