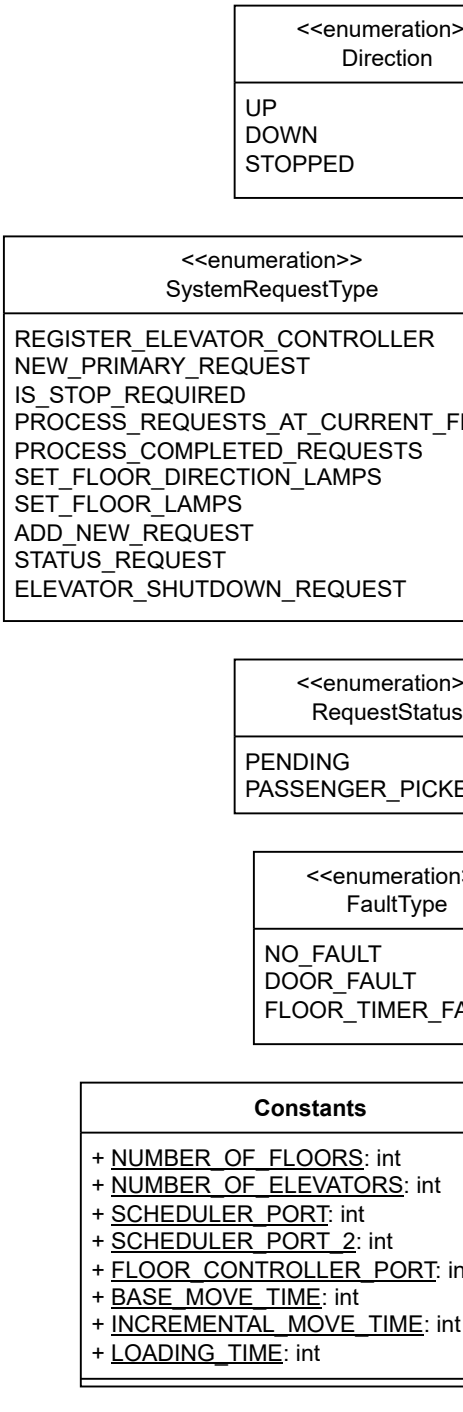
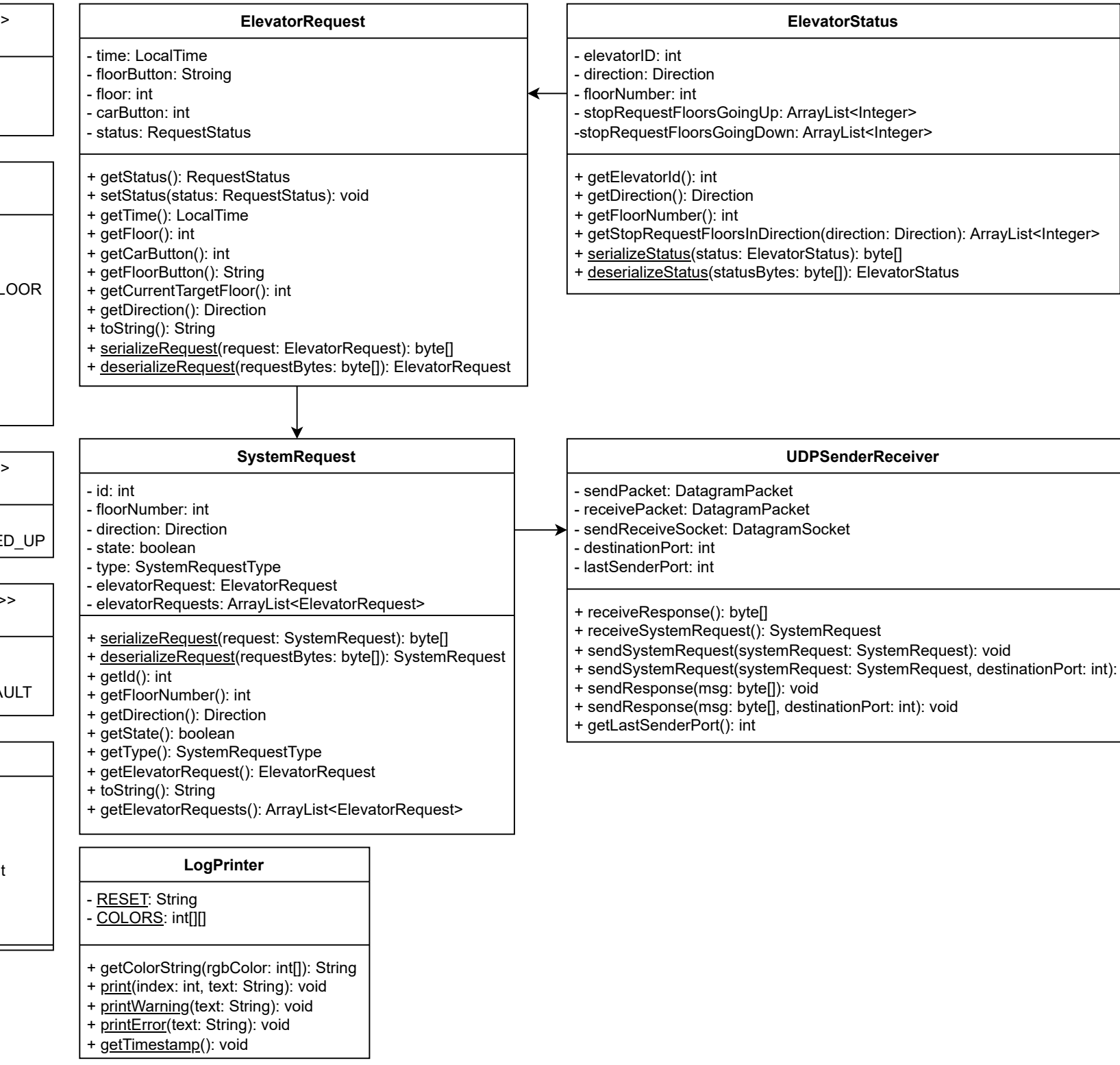
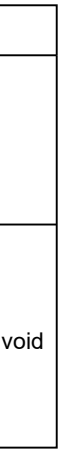
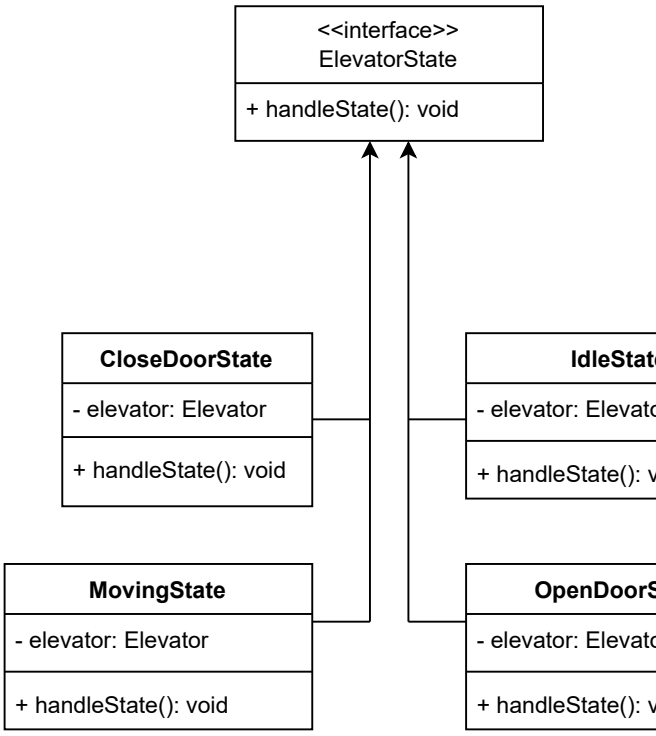
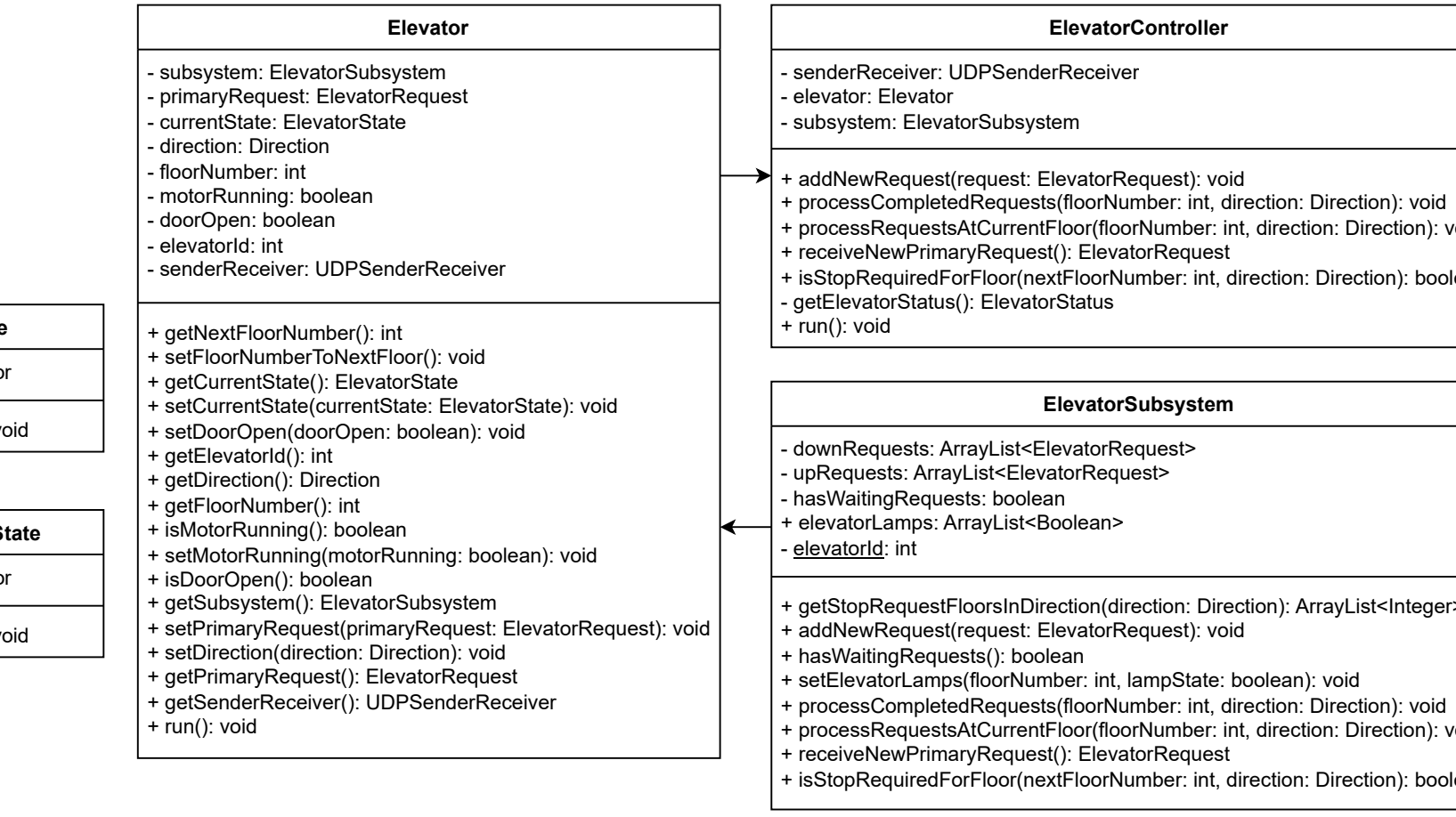

<<enumeration>>
Direction
UP
DOWN
STOPPED
<<enumeration>>
SystemRequestType
REGISTER_ELEVATOR_CONTROLLER
NEW_PRIMARY_REQUEST
IS_STOP_REQUIRED
PROCESS_REQUESTS_AT_CURRENT_FL
PROCESS_COMPLETED_REQUESTS
SET_FLOOR_DIRECTION_LAMPS
SET_FLOOR_LAMPS
ADD_NEW_REQUEST
STATUS_REQUEST
ELEVATOR_SHUTDOWN_REQUEST
<<enumeration>>
RequestStatus
PENDING
PASSENGER_PICKE
<<enumeration
FaultType
NO_FAULT
DOOR_FAULT
FLOOR_TIMER_FA
Constants
+ NUMBER_OF_FLOORS: int
+ NUMBER_OF_ELEVATORS: int
+ SCHEDULER_PORT: int
+ SCHEDULER_PORT_2: int
+ FLOOR_CONTROLLER_PORT: in
+ BASE_MOVE_TIME: int
+ INCREMENTAL_MOVE_TIME: int
+ LOADING_TIME: int


ElevatorRequest
- time: LocalTime
- floorButton: Stroing
- floor: int
- carButton: int
- status: RequestStatus
+ getStatus(): RequestStatus
+ setStatus(status: RequestStatus): void
+ getTime(): LocalTime
+ getFloor(): int
+ getCarButton(): int
+ getFloorButton(): String
+ getCurrentTargetFloor(): int
+ getDirection(): Direction
+ toString(): String
+ serializeRequest(request: ElevatorRequest): byte[]
+ deserializeRequest(requestBytes: byte[]): ElevatorRequest
ElevatorStatus
- elevatorID: int
- direction: Direction
- floorNumber: int
- stopRequestFloorsGoingUp: ArrayList<Integer>
-stopRequestFloorsGoingDown: ArrayList<Integer>
+ getElevatorId(): int
+ getDirection(): Direction
+ getFloorNumber(): int
+ getStopRequestFloorsInDirection(direction: Direction): ArrayList<Integer>
+ serializeStatus(status: ElevatorStatus): byte[]
+ deserializeStatus(statusBytes: byte[]): ElevatorStatus
SystemRequest
- id: int
- floorNumber: int
- direction: Direction
- state: boolean
- type: SystemRequestType
- elevatorRequest: ElevatorRequest
- elevatorRequests: ArrayList<ElevatorRequest>
+ serializeRequest(request: SystemRequest): byte[]
+ deserializeRequest(requestBytes: byte[]): SystemRequest
+ getId(): int
+ getFloorNumber(): int
+ getDirection(): Direction
+ getState(): boolean
+ getType(): SystemRequestType
+ getElevatorRequest(): ElevatorRequest
+ toString(): String
+ getElevatorRequests(): ArrayList<ElevatorRequest>
UDPSenderReceiver
- sendPacket: DatagramPacket
- receivePacket: DatagramPacket
- sendReceiveSocket: DatagramSocket
- destinationPort: int
- lastSenderPort: int
+ receiveResponse(): byte[]
+ receiveSystemRequest(): SystemRequest
+ sendSystemRequest(systemRequest: SystemRequest): void
+ sendSystemRequest(systemRequest: SystemRequest, destinationPort: int):
+ sendResponse(msg: byte[]): void
+ sendResponse(msg: byte[], destinationPort: int): void
+ getLastSenderPort(): int
LogPrinter
- RESET: String
- COLORS: int[][]
+ getColorString(rgbColor: int[]): String
+ print(index: int, text: String): void
+ printWarning(text: String): void
+ printError(text: String): void
+ getTimestamp(): void


void


<<interface>>
ElevatorState
+ handleState(): void
CloseDoorState
- elevator: Elevator
+ handleState(): void
MovingState
- elevator: Elevator
+ handleState(): void


Elevator
- subsystem: ElevatorSubsystem
- primaryRequest: ElevatorRequest
- currentState: ElevatorState
- direction: Direction
- floorNumber: int
- motorRunning: boolean
- doorOpen: boolean
- elevatorId: int
- senderReceiver: UDPSenderReceiver
+ getNextFloorNumber(): int
+ setFloorNumberToNextFloor(): void
+ getCurrentState(): ElevatorState
+ setCurrentState(currentState: ElevatorState): void
+ setDoorOpen(doorOpen: boolean): void
+ getElevatorId(): int
+ 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

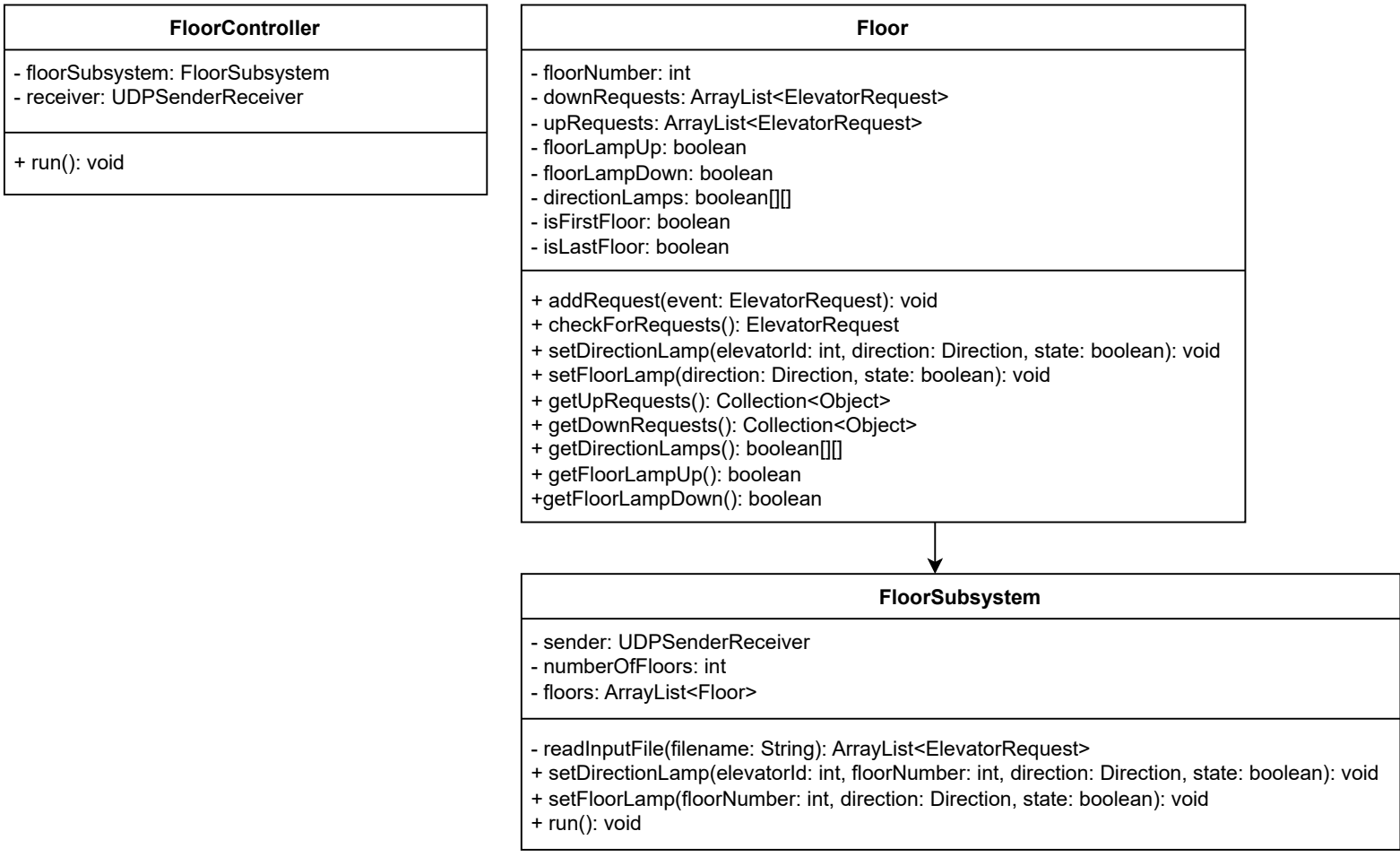
oid

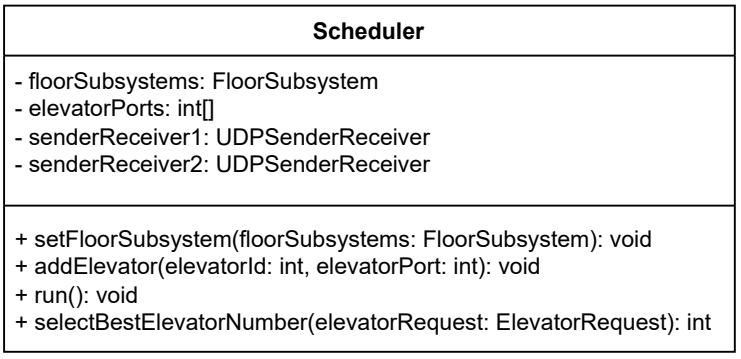
ean

>

oid

ean


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


Scheduler
- floorSubsystems: FloorSubsystem
- elevatorPorts: int[]
- senderReceiver1: UDPSenderReceiver
- senderReceiver2: UDPSenderReceiver
+ setFloorSubsystem(floorSubsystems: FloorSubsystem): void
+ addElevator(elevatorId: int, elevatorPort: int): void
+ run(): void
+ selectBestElevatorNumber(elevatorRequest: ElevatorRequest): int