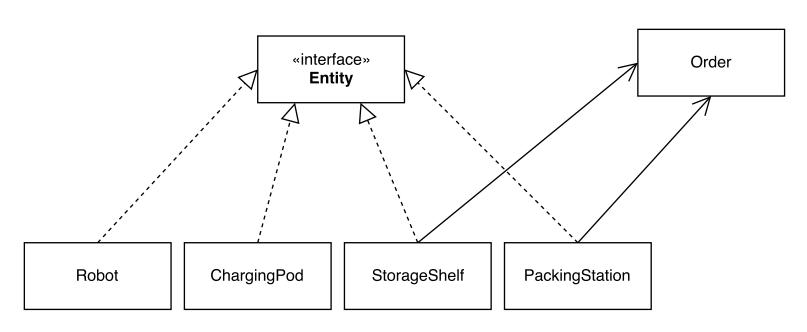
Overview



Entity UML <<Interface>> **Entity** Location: Abstract + generateID(): void + getID(): String + compare(r: Robot): Robot + getLocation(): Location? **PackingStation Robot** - completed: Boolean - safetyMargin: int - uid: String - batteryLevel: int - lastNum: int ChargingPod StorageShelf - orderstatus: Boolean - chargeRate: int - isCompleted(): Boolean - uid: String - uid: String - uid: String - resetCompleted(): void - lastNum: int - lastNum: int - lastNum: int - nextOrder(): Order getBatteryLevel(): int - packing(): void - charge(): int - decreaseBatteryLevel(): void - dispatch(): void - orderDecision(): Boolean

- needsCharging(): Boolean

- move(): void

- pickUpItems(): void

- dropOrder(): void

+ getRobotX(): int

+ getRobotY(): int

+ getShelfX(): int

+ getShelfY(): int

+ getPackingX(): int

+ getPackingY(): int

Robot Subsystem UML

Robot

- safetyMargin: int
- batteryLevel: int
- orderstatus: Boolean
- uid: String
- lastNum: int
- getBatteryLevel(): int
- decreaseBatteryLevel(): void
- orderDecision(): Boolean
- needsCharging(): Boolean
- move(): void
- pickUpItems(): void
- dropOrder(): void
- + getRobotX(): int
- + getRobotY(): int
- + getShelfX(): int
- + getShelfY(): int
- + getPackingX(): int
- + getPackingY(): int

PathFindingStrategy

- + aStarAlgo(): void
- + executeAStar(): void

CostEstimationStrategy

- startPoint: Point
- endPonit: Point
- + distanceCalculator(): double
- + totalDistanceEstimator(): double

Order

- assignedOrders: List<String>

- unassignedOrders: List<String>

- completedOrders: List<String>

- reader: Scanner

+ show(): void

+ addToAssigned(): void

+ removeFromAssigned(): void

+ addToUnassigned(): void

+ removeFromUnassigned(): void

+ isCompleted(): void