## **Robot Subsystem UML**

## Robot

- safetyMargin: int
- batteryLevel: int
- orderstatus: Boolean
- uid: String
- lastNum: int
- robotX: int
- robotY: int
- chargingX: int
- chargingY: int
- packingX: int
- packingY: int
- storageX: int
- storageY: 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