Butler-Gazebo

ButlerDemo

+ myButler:tButler
+ lclMap:LocalMap
+ currentOrder::Order

+ startButlerDemo(Order:currentOrder)
+ initLocalMap()

Order

+ currentOrder: butlerOrderMsg
+ orderFlag: bool

+ getOrderFlag():bool
+ processOrder(butlerOrderMsg)
+ getOrder():butlerOrderMsg

Butler

+ currentLocation : int*
+ currentVelocity : int*
+ pickUpLocation: int*
- dropOffLocation: int*
+ homeLocation: int*
+ loadObject: string
+ currentOrder:butlerOrderMsg

+ initButler(Order) void
+ setOrder(): int*
+ getCurrentLocation() : int*
+ getCurrentVelocity() : int*
+ getOptimalPath(currentLocation,
destinationLocation)
+ keepMovingForward()
+ changeDirection
+ hasReachedDst():bool
+ setGazeboObjectHandlerActoin(string)

LocalMap

+ currentMap:nodeHandler
+ mapServer:

+ initLocalMap()
+ getMapMetadata():nav_msgs::MapMetaData
+ getLocalMap():nav_msgs::OccupancyGrid

Navigation

+ currentLocation: int*
+ destination: int*
+ laserScanHandler: nodeHandler
- obstaclePresent: bool`

+ isObstaclePresent(): bool
- isDestinationReached(currentLocation,
destination): bool
- move(): void
+ pathPlanning(currentLocation,destination)
+ turn(): void
- laserCallBack(): void

GazeboObjHandler

+ stationCount: int
+ obstacleCount: int
+ mapFIle
+ loadObject: string

+ loadMap(mapFile):void
+ deleteObject(loadObject,
stationLocation):void
+ respawnObject(loadObject,
stationLocation):void