LawnMower

- path to waypoints : string
- home : move base msgs::MoveBaseGoal
- actionClient : MoveBaseClient
- current goal : vector<double>
- flag: string
- paused index : int
- pause flag: bool
- pause flag: bool
- + dummy pos : vector<vector<double>>
- + success flags : vector<bool>
- + mow(string): void
- + start(const std msgs::String::ConstPtr&): void
- + e stop(const std msgs::String::ConstPtr&) : void
- + pause(const std msgs::String::ConstPtr&) : void
- + resume(const std msgs::String::ConstPtr&) : void
- + setIndex(int) : bool
- + getIndex(void): int



NavigationUtils

- goal position : vector<double>
- success status : bool
- emergency stop: bool
- + setDesiredPose(MoveBaseGoal&, vector<double>, Quaternion&): void
- + sendGoal(MoveBaseGoal&, SimpleActionClient<move base msgs::MoveBaseAction>&): void
- + convertToQuaternion(double): Quaternion
- + checkGoalReach(SimpleActionClient < move base msgs::MoveBaseAction>&): bool
- + emergencyStop(SimpleActionClient<move base msgs::MoveBaseAction>&): bool
- + getPointsFromFile(string): vector<vector<double>>
- + returnToHome(MoveBaseGoal&, SimpleActionClient<move base msgs::MoveBaseAction>&): bool

Note:

Defining the custom datatypes:

- 1. MoveBaseGoal is of type move_base_msgs from move_base package
- 2. Quaternion is of type geometry msgs
- 3. SimpleActionClient <move_base_msgs::MoveBaseAction> is part of the acitionlib package