Write up: Home Service Robot

1. External Packages
   - amcl for localization which subscribes to get the map and the odometry to localize the robot as it moves.
   - turtlebot_teleop to navigate the robot using the keyboard
   - gmapping for mapping which subscribes to get the laser scan measurements and the odometry to build a map as the robot is moving
   - turtlebot_rviz_launchers to visualize the turtlebot in rviz
   - turtlebot_gazebo to view the turtlebot in a custom world file in gazebo.
   - move_base to navigate the robot autonomously to a 2D goal position.
2. Implemented Packages
   - pick_objects to send a goal destination to move_base, wait for a feedback from move_base and eventually send a pickup request message to pick or drop an object.
   - add_markers to display markers on rviz and handle pickup request messages whether to pick up or to drop off an object.
3. Script file (*add_markers.sh*)

   The add_markers node will not work as expected because the file *add_markers.cpp* has been tweaked to handle the request/response pattern from pick_objects node to add_markers_node.