**Simultaneous Localization ِِِAnd Mapping (SLAM)**

Abstract: Localization and Mapping are very important as recently both are used in different fields, Navigation, Exploration, Finding Objects and Some Commercial purposes.

Target: The target of this project is to make a small robot that moves autonomously in place or room and comes out of the place after exploration the place and drawing a map of that place.

Description:

* A small robot or an RC car is going to be used and some sensors and possibly cameras are going to be implemented on this robot.
* The Robot will move autonomously with a certain algorithm to explore a place.
* According to the found obstacles the robot will decide its next move to explore unexplored place.
* After exploring the whole place the robot will come out and Draw a map for the explored place.
* If the place is to big the robot will timeout after a certain duration and it will draw a map of the already explored place.