

Work Package

No	Work Package	Time Interval
1	Selection and Implementation of SLAM Algorithm and Processing LIDAR Data. This work package involves selecting an appropriate SLAM algorithm and implementing it based on the data obtained from LIDAR sensors.	(February-March)
2	Selection and Implementation of Path Planning Algorithm. In this work package, an efficient path planning algorithm is chosen and implemented to guide the robot's movement.	(February-March)
3	Designing a Controller for Robot Control. This work package focuses on designing a controller that enables the robot to be controlled effectively and accurately.	(March-April)
4	Implementation of SLAM and Path Planning Algorithms in a Simulation Environment. In this work package, the SLAM and Path Planning algorithms are applied and tested within a simulated environment.	(April-May)
5	Modification of Algorithms based on Robot Kinematic Equations and Real-time Execution on a Robot. This work package involves modifying the algorithms to incorporate the robot's kinematic equations and implementing them in real-time on an actual robot.	(May-June)

Risk Management

No	Risks	B Plan
1	Incompatibility of the SLAM algorithm with the operating environment of the robot.	Utilizing a new and more suitable algorithm for the environment.
2	Inability of the Path Planning algorithm to determine the optimal path.	Calculating the optimal path using an algorithm chosen based on the processing power.
3	Incompatibility between the robot and the Single Board Computer (SBC).	Implementing a Single Board Computer (SBC) that is compatible with the robot.