Project Name

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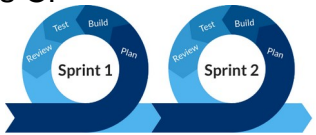
Objective

- Develop an robotic ‘chase’ module for swarm robots
- The designed project should develop an algorithm and simulation to surround and capture a robot attempting to escape

Design Practices

- Agile iterative process
- Pair programming + design keeper
- Test driven development using Google tests, rostest, and lcov coverage reports
- Continuous integration through Travis CI



Approach

- Turtlebot robots will be use for both the swarm and escaping robot
- Project will be designed in ROS 2 with ROS 1 bridge
- ROS node will publish escaping robots coordinates
- Chasing robots will have subscriber nodes and will have unique paths based on the received published coordinates
- Simulations will be done in Gazebo environment

ROS

Deliverables

- GitHub repository with source files, test files, and coverage report
- Detailed readme file
- UML class and activity diagrams
- 5-min presentation including a simulation demo