**Milestone-3**

**BDD Scenarios**

TEAM - 3

**US 3.1**

As a behaviour developer I want the robot to be able to follow the wall So that the robot can deal with getting lost when navigating in long corridors

**Safe range** (collision) | **distance** (detecting wall)

**0.2**  | **0.7**

**Scenario 3.1.1 - Aligning to wall**

**(Positive slope: rotates right, negative slope: moves left, perpendicular, any)**

Expected Behaviour:

Given: The robot is initialised

When: Wall is in view of the robot, when the safe range, distance threshold is reached

Then: Robot reports longest wall with slope

And: The robot moves to align its longer side with the wall

Achieved Behaviour:

Given: The robot is initialised

When: Wall is in view of the robot, when the safe range, distance threshold is reached

Then: Robot reports longest wall with slope

And: The robot moves to align its longer side with the wall

**Scenario 3.1.2 - Corner Alignment**

**3.1.2.1 Corner Alignment - Pointing towards corner**

Expected Behaviour:

Given: The robot is initialised.

When: Corner is in view of the robot when the safe range, distance threshold is reached

Then: Robot reports longest wall with slope

And: The robot moves to align its longer side with the wall

Achieved Behaviour:

Given: The robot is initialised and is already parallel to one wall.

When: Corner is in view of the robot when the safe range, distance threshold is reached

Then: Robot reports longest wall with slope

And: The robot moves to align its longer side with the wall

**3.1.2.2 - Corner Alignment - Already parallel to one wall**

Expected Behaviour:

Given: The robot is initialised and is already parallel to one wall.

When: Corner is in view of the robot when the safe range, distance threshold is reached

Then: Robot reports perpendicular wall with slope

And: The robot moves to align to perpendicular wall

Achieved Behaviour:

Given: The robot is initialised and is already parallel to one wall.

When: Corner is in view of the robot when the safe range, distance threshold is reached

Then: Robot reports longest wall with slope

And: The robot moves to align its longer side with the wall

**Scenario 3.1.3 - Robot Already Aligned - Slope is 0, it won't move**

Expected Behaviour:

Given: Robot is initialised

When: Parallel wall is in view of the robot

Then: Robot reports slope zero

And: Robot will not move

Achieved Behaviour:

Given: Robot is initialised

When: Parallel wall is in view of the robot

Then: Robot reports slope zero

And: Robot will not move

**Scenario 3.1.4 - No Wall found (milestone - 4)**

Expected Behaviour:

Given: The robot is initialised

When: Wall is not in view of the robot

Then: Robot reports out of bound value

And: The robot rotates in either of two directions in search of wall.

Achieved Behaviour:

Given: The robot is initialised

When: Wall is not in view of the robot

Then: Robot reports no lines from online detection

And: yet to implement

**Scenario 3.1.5 - Detects Glass Door ( won’t consider as wall/obstacle )**

Expected Behaviour:

Given: Robot is initialised

When: Glass door is in view of the robot

Then: Robot reports line from the online detection

And: The robot aligns to the glass door

Achieved Behaviour:

Given: Robot is initialised

When: Glass door is in view of the robot

Then: Robot reports no line from the online detection

And: The robot tries to move through considering no wall/avoidance

**Scenario 3.1.6 - Detects Pillar (considers as obstacle)**

Expected Behaviour:

Given: Robot is initialised

When: Pillar is in view of the robot

Then: Robot reports no wall

And: The robot is not aligned to pillar

Achieved Behaviour:

Given: Robot is initialised

When: Pillar is in view of the robot

Then: Robot reports no wall

And: The robot is not aligned to pillar considers it as collision avoidance