EKLAVYA 2020  
micromouse

-maze solving micromouse

short line

# Team Members

1. Dushant
2. mithlesh
3. Mann
4. harsh

# Project Details:

# We will be making a robot i.e called Micromouse, which can get to the centre of a maze in the shortest possible time. A micromouse essentially comprises a drive motor or motors to move it. It will be a three wheels bot with two wheels connected to a motor and one ball caster wheel. sensors to detect the presence or absence of maze walls(position will be at front and side of bot). sensors or control logic to oversee the action of the rest and keep the vehicle 'on track' or to solve the maze.

Maze Specifications:

1)The maze shall comprise 16 x 16 the maze shall be 5 cm high and 1.2 cm thick. Passageways between theThe outside wall shall enclose the entire maze.The sides of the maze shall be white, and the top of the walls shall be red. The floor is consistently black. Parts from different mazes may be used.

2)The start of the maze shall be located at one of the four corners. The starting square shalon three sides. The starting square orientation shall be such that when the`north', outside maze walls are on the `west' and `south'. At the centre opening which is composed of 4 unit squares. Small square posts, each 12 mm x 12 mm x 50 mm high, at the four corners of each unit are called lattice points. The maze shall be constituted such that there is at least one wall touching each lattice point, except for the destination square.

3)Gaps between the walls of adjacent squares shall not be greater than 1 mm.

4)we have to build aMicromouse, which can get to the centre of a maze in the shortest possible time.

### 

### *Github Link*:

### *Documentation Link*:

## Procedure and Deadlines

Tip: Finishing beforehand will be welcomed but not the other way round :)

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| Allocated Time | Task |
| 27May- 8May | Task 1:  Learning coppelia  Tip: Better if all the team members are working on same versions |
| 8-10 june | Task 2:  Making bot model in coppelia |
| 11-20 june | Task 3:  Writing code for maze solving |
| 21 - 25 june | Task 4:  Testing on bot and error handling ( in simulation)  Tip: Select the software keeping in mind the further tasks |
| 26 - 5 june | Task 5:  Finalizing of simulation part |
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# General Tips:

1. **Stick** to the deadlines
2. Code yourself - (At Least understand the code)
3. Keep your code as clean as possible (This will help other readers as well as you to understand the code later) -
   1. Give meaningful variable name (c = a + b → result = number1 + number2)
   2. Comment your code while writing
   3. DRY - Don’t Repeat Yourself (Use functions, classes for keeping code readable and short)
4. We landed on moon using computer which was 100,000 times slower than latest iphone. Nothing is impossible in electronics unless you try. Follow good YouTube channels/ reddit Communities for reference.

Youtube channels: Electroboom, Greatscott!, Andreas Spiess

Reddit communities: r/arduino, r/electronics and r/esp32

1. Use Github for collaboration
2. **Enter** your daily work without fail
3. Follow the format for writing updates
4. Whenever stuck or feeling useless talk to your mentor
5. *Never Give Up!!*

# Updates:

Tip: Expect you to write your daily work in a nice manner :)

## **PHASE N - (**Task**)**

## Date Month Year:

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| Member Name:   |  | | --- | | 1. Done this 2. Done that   Resources referred: |   Member Name:   |  | | --- | | 1. Done this 2. Done that   Resources referred: |   Common OR Most Useful Resources:   1. [Topic Covered](http://sra.vjti.info/) (Change the link name to the name of the topic)   Mentor Remarks (If any): |

## **PHASE 1 - (**Task 1**)**

## 25th May 2020:

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## 26th May 2020:

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## 27th May 2020:

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## **PHASE 2 - (**Task 2**)**

## 28th May 2020:

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## 29th May 2020:

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## **PHASE 3 - (**Task 3**)**

## 30th May 2020:

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## 31st May 2020:

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## 1st June 2020:

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## 3rd June 2020:

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## **PHASE 4 - (**Task 4**)**

## 4th June 2020:

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## 5th June 2020:

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## **PHASE 5 - (**Task 5**)**

## 6th June 2020:

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## **PHASE 6 - (**Task 6**)**

## 7th June 2020:

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## 8th June 2020:

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## **PHASE 7 - (**Task 7**)**

## 9th June 2020:

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## 10th June 2020:

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## 11th June 2020:

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## **PHASE 8 - (**Task 8**)**

## 12th June 2020:

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## 13th June 2020:

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## 14th June 2020:

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## 15th June 2020:

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## 16th June 2020:

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## **PHASE 9 - (**Task 9**)**

## 17th June 2020:

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## 18th June 2020:

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## 19th June 2020:

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## 20th June 2020:

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## 21st June 2020:

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# short dash