

## Default Program 3: Smooth Line Following - Arduino

Time required: 120 minutes

Please read all the directions carefully before beginning the assignment.

1. Comment your code as shown in the tutorials and other code examples.
2. Follow all directions carefully and accurately.
3. Think of the directions as minimum requirements.

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### Understanding

Demonstrate understanding of:

**line follower**

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### Assignment

1. Start the Arduino IDE. Open **DefaultProgram2** and save it as **DefaultProgram3**.
2. Add the **SmoothLineFollowing** program to the mBot default program in Arduino.  
You should be able to copy and paste some of the code.

**NOTE:** Remove the led calls from the **SmoothLineFollowing** function, these interfere with the ability to change modes.

3. Modify the **Movement.h** file if necessary.
4. Complete and test the program with the requirements listed.

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### Requirements

- Button A: Remote Control
- Button B: Smart Obstacle Avoidance
- Button C: Smooth Line Following

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### Assignment Submission

- **All students** → Attach finished programs to the assignment in Blackboard.
- **In class assignment submission** → Demonstrate in person.

- **Online submission** → A link to a YouTube video recording showing the assignment placed in the submission area in BlackBoard.