

ME179P W23 - INTRODUCTION TO ROBOTICS: PLANNING AND KINEMATICS

PROGRAMMING PROJECT 1

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Welcome to the first programming project of ME179P!

1. WHAT IS THIS PROJECT?

The programming project 1 is a *mandatory* programming assignment, requiring you to implement your first motion planning algorithm.

1.1. What do I need for this project? Solution to both Programming assignment 1 and 2 is needed.

1.2. How do I submit my project? You need to submit two parts: your code, and a report.

For the code, please use [Gradescope](#) (Python3 submission) or [MATLAB Grader](#) (MATLAB submission), as usual.

For the report, please use [Gradescope](#). The Gradescope template is on the [course website](#). Please check the project deadline on the course website.

1.3. What should a sample output look like? Something like Fig 1.

1.4. Can I use whatever package I want? As usual, symbolic computation and autodifferentiation packages/toolboxes are not allowed (they would be extremely slow and inefficient).

Anyway, `numpy` and `matplotlib` should suffice in Python3.

In MATLAB, no additional package should be needed.

1.5. My solution times out on Gradescope/MATLAB Grader. There should be more than enough computation available. The reference solution passes all tests in about 10 seconds.

Make sure you have not introduced infinite loops, or induced other weird scenarios. If it is driving you crazy, feel free to email the TA/ask him questions during his office hours.

Good luck with you project!

Date: January 27, 2023.

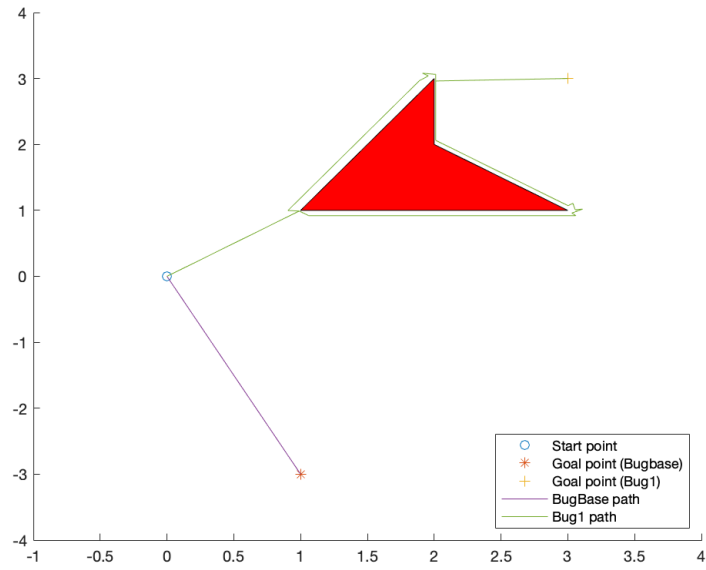


FIGURE 1. Sample output you should get in the precheck.

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