PROJECT SPECIFICATION

# Create a Line Follower Robot

Reference
R = Require Improvements
M = Meeting Expectation
E = Exceed Expectation

## Documentations

| Specifications | Result | | | Comments |
|---|---|---|---|---|
| | R | M | E | |
| The project report is self-explanatory. Any supplementary materials, charts and graphs should be referenced clearly. The flow of the project should be logical and easy to follow. | ☒ | ☐ | ☐ | The project report is neat, but some parts are missing enough details. Those will be discussed below. |
| The project report should at least document 1 critical decision/design in both hardware and software parts. | ☒ | ☐ | ☐ | Hardware decision is clear and explained how you are limited by the Thymio robot default design. However, the software decision part lack explanation. For example, you may consider further explained why your decision can shorten the program. |

## Output Usage

| Specifications | Result | | | Comments |
|---|---|---|---|---|
| | R | M | E | |
| The robot should make use of at least 2 sensors. The two sensors could be of same type or different types but they should have different purpose instead of just act as fail-safe purpose. | ☒ | ☐ | ☐ | From your program, seems only one sensor is used. If you only need 1 sensor to accomplish the task, you should consider if you can make use another sensor to achieve additional goal. |
| The robot should make use of at least 1 output devices. Examples are motor for movements, light or buzzer for debug and testing purpose. | ☐ | ☒ | ☐ | Great job! |

## Software Design

| Specifications | Result | | | Comments |
|---|---|---|---|---|
| | R | M | E | |
| The software of the robot should make use of loops, and if-else control flow. | ☐ | ☒ | ☐ | Although your program didn't make use of if-then-else, you used a very intelligent way to track the black line. So, no changes are required, great work! |
| The algorithm is described clear and understandable. The logic flow can be easily followed. Graphs or flow chart are used when suitable. | ☒ | ☐ | ☐ | In general, the algorithm description is understandable, you should add description on how to initialize the black line light reflection value. You may also consider add a flow chart to demonstrate the program flow for easier understanding. |
| The software should be easy to understand by fresh eyes, including well-defined variable or sensor names. | ☐ | ☒ | ☐ | Good work on this part. |

## Entertainment and Theme Setting

| Specifications | Result | | | Comments |
|---|---|---|---|---|
| | R | M | E | |
| The program should structure in a way that is easy to be adjusted. For example, when the robot is moved to a dark or sunny position, it can be adjusted conveniently and function properly. | ☒ | ☐ | ☐ | The speed is extracted as a constant which is a good decision. Please also consider moving the black line reflection value (200) as a variable so you can adjust it easily when you test the robot in a different environment. |