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Follow the line – Concept plan

The project topic we chose is a “Follow the line” -robot. We chose this topic because it sounds interesting, and it is easy to implement in a simulated environment without a physical robot. We are planning to simulate this robot with the Webots application.

The functionalities that we want to include are:

- **Line detection**: the robot will be equipped with sensors that can detect and follow the line on the floor.
- **Independence and decision making**: the robot can follow the line with the help of sensors and without human intervention.
- **Robustness**: the robot should be capable of following lines with different shapes, twists and turns.
- **Speed and accuracy**: we want to focus on achieving both speed and accuracy in line following for efficient and optimal performance.

We aim to demonstrate a fully functional line-following robot that can navigate a predefined path accurately in a simulated environment. To make this project a little more complex we are adding twists and turns to the path. In this project we will be highlighting important factors that are commonly associated with “follow the line” robots.

We believe the project is feasible for development since it will be implemented in a simulated environment. The project's concept is achievable for beginners while allowing room for advanced participants to innovate and push the boundaries of what their robots can do.