DLD Lab

Project Proposal

Project Title: "Line Following Robot"

BSCS - 01 Section - B

Project Team Members:-

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Presented to: Madam Warda Saeed

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Problem Statement:-

In recent years there is a major development in the field of robotics that intrigued new and better concepts for robotics automation.

Our project focusses on the development of a type of locomotive robot which drives fully autonomous given that there is a predetermined path marked with a line that needs to be followed. These types of robots are commonly known as "Line Following Robots".
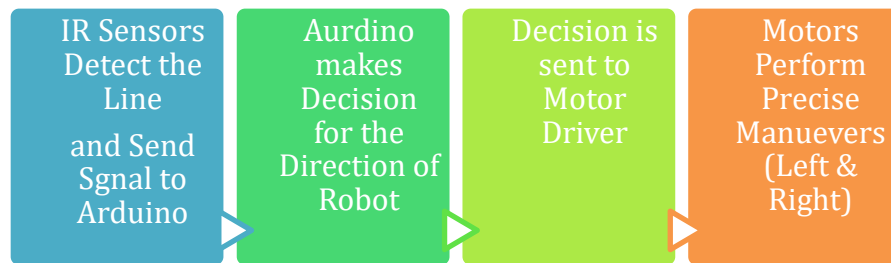
A Line Follower Robot is an automated guided vehicle, which follow a visual line embedded on the floor or ceiling. Usually, the visual line is the path in which the line follower robot goes, and it will be a black line on a white surface, but the other way (white line on a black surface) is also possible.

We wanted to make this project because it will be our first step in the field of robotics also it will provide the knowledge, we need for developing prototypes for industrial applications.

Components:-

1. Arduino UNO R3
2. L293D Motor Driver
3. Geared Motors
4. Robot Car Chassis
5. IR Sensor Modules
6. Connecting Wires
7. Power supply
8. Battery Connector
9. Battery Holder

Block Diagram:-

| IR Sensors Detect the Line and Send Sgnal to Arduino | Aurdino makes Decision for the Direction of Robot | Decision is sent to Motor Driver | Motors Perform Precise Manuevers (Left & Right) |

Work Distribution:-

Muhammad Mobeen	Hamaad Ali	Muhammad Shamaas
1. Project Supervising 2. Hardware Implementations 3. Circuit Design	1. Software Implementations 2. Theoretical Implications	1. Components Sourcing 2. Logic Designing

Project Timeline:-

Till 14th April: All the components required will be sourced.

15th April – 20th April: Project Building and Testing.

20th April – 28th April: Compilation of project report.

Last week of May: Project Submission.