Project Proposal

Digital Logic Design

Submitted By:

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22-CS-071

Submitted to:

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Title: Tic Tac Toe Game using Digital Logic Design

Team Members:

Our team consists of four members:

- Abdul Ahad, 22-CS-071
- Muhammad Zain Ali, 22-CS-015
- Muhammad Afzal, 22-CS-035
- Faisal Khan, 22-CS-039

Introduction:

We're excited to present our project, which is a game of Tic Tac Toe using Digital Logic Design concepts. This classic game is loved by people of all ages, and we wanted to create our own version using digital circuits. The game will be played by two players, and each player's move will be indicated by their respective LEDs. We'll be using a 3 by 3 grid of input pins to form the board, and each of these pins can be 0 or 1, indicating which player has that cell in the board. The game will detect who has won and light up the corresponding LED.

Objectives:

Our objectives for this project are:

- To design and implement a Tic Tac Toe Game using Digital Logic Design concepts.
- To use logic gates and other components to complete the circuit.
- To develop a working prototype that can be demonstrated.

Methodology:

To complete the project, we'll be following these steps:

- We'll start by designing the circuit diagram using a tool called Logisim.
- We'll then implement the circuit diagram using digital logic design concepts.
- We'll test the circuit to ensure that it's functioning correctly.
- Next, we'll build a prototype of the game using the circuit.
- Finally, we'll demonstrate the game and present our results.

Expected Outcomes:

We're hoping to achieve the following outcomes:

- A fully functional Tic Tac Toe Game using Digital Logic Design.
- A prototype of the game that can be demonstrated.
- A report documenting the project's design, implementation, and outcomes.
- A presentation showcasing the Tic Tac Toe Game and its features.

Conclusion:

This project is a great opportunity for us to apply the digital logic design concepts we've learned in class to a real-world problem. We're excited to work together as a team to design and implement a Tic Tac Toe Game that can be played by two players and that can detect who has won. Through this project, we'll develop our skills in digital logic design, circuit implementation, and project management. We hope to create a fun and engaging game that others can enjoy playing as well.