GEBZE TECHNICAL UNIVERSITY

ARDUINO PROJECT REPORT

GROUP 4

Thirst for Rise - Group 4 Arduino Project

Introduction

The "Thirst for Rise" Arduino project is an engaging multiplayer game designed to challenge players' reaction time and strategic thinking. The game is implemented on an Arduino platform using buttons as input devices, and the gameplay involves players attempting to press the correct button to claim a number.

Objective

The primary goal of the project is to create an interactive and entertaining game that fosters healthy competition among players. The project aims to showcase the capabilities of Arduino microcontrollers and enhance the participants' programming skills.

Hardware Setup

The project utilizes four buttons connected to digital pins 2 to 5 with INPUT_PULLUP mode, ensuring a stable input signal. The game also employs a serial connection for communication with the computer.

```
1  void setup() {
2    pinMode(2,INPUT_PULLUP);
3    pinMode(3,INPUT_PULLUP);
4    pinMode(4,INPUT_PULLUP);
5    pinMode(5,INPUT_PULLUP);
6    Serial.begin(9600);
7  }
8
```

Game Logic

Player Initialization

At the beginning of the game, players are prompted to enter their names via the Serial Monitor. The entered names are then stored in variables (oyuncu1, oyuncu2, oyuncu3, oyuncu4).

```
106   Serial.print("Oyuncu1 için isim giriniz(4-8 karakter): ");
107   while (!Serial.available()) {}
108   oyuncu1 = Serial.readStringUntil('\n');
109   Serial.println(oyuncu1);
110
```

Game Flow

The game consists of 10 rounds, each represented by the variable oyun_dongusu. In each round, players take turns to press a button corresponding to a specific number. The “game” function handles the core logic, determining which player successfully pressed the correct button.

Scoring

Players are awarded points based on the number they successfully claim. The scoring system is displayed on the Serial Monitor after each round.

Game Termination

The game concludes after 10 rounds, and the final scores are presented on the Serial Monitor.

Conclusion

The "Thirst for Rise" Arduino project combines hardware and software components to create an interactive and entertaining multiplayer game. The project not only provides an enjoyable experience for players but also demonstrates the capabilities of Arduino in real-world applications. The project showcases teamwork, problem-solving skills, and a practical application of programming concepts.

You can watch our demo video with this link :
https://youtu.be/_i17DXQaAj8?si=WyNWt35bL8rN6iKP

Participants

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