

PROJECT SUMMARY

The title of our project is Electro Quest. Electro quest is an integration of game stations into one system. Electro Quest consists of four subsystems. They are Central subsystem, Reaction Game subsystem, Physical Game subsystem and Code Breaker subsystem.

The central subsystem monitors the other three subsystems in the system. The central subsystem is responsible for the communication and feedback between the other three subsystems. The central subsystem contains features such as player identification, difficulty selection, score keeping and the hall of fame. The central subsystem keeps track of the start and the end of other subsystems. Scores are sent through parallel ports to the central subsystem at the end of each game and displayed before the next game begins.

The reaction subsystem is a game played by 2 players. In this game, the accuracy and the response time of the players are evaluated. When the specific colour of the LED is lit, the player is to press the push button corresponding to the label of the colour. Points are scored for better accuracy and less response time.

The physical subsystem is a game played by 2 players where they challenge each other to rotate the arm of a dynamo in the fastest speed as possible and maintain that speed till the game ends. The voltage is sampled every second and the sampled voltage is checked against one of the five specified range. Each range carries a different point weightage. The points are accumulated until the period of 20 seconds finishes.

The last subsystem is the code-breaker subsystem. The players are the code makers and code-breakers. Each player takes turn to set the codes and then once the code is set, they take turns to break each other's code. This game has a negative point system. Points are computed based on the number of rounds the players take to break the code.

