

DEPARTMENT OF CSE and IT



A project report on
“SQUIDGAME - REDLIGHT/GREENLIGHT Game”

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DECLARATION

I, **Sohan Patidar**, a student of “**Bachelor of Technology**” in “**Madhav Institute of Technology and Science**”, Gwalior (M.P.) hereby informed that the work presented in this dissertation entitled “**SQUIDGAME - REDLIGHT/GREENLIGHT Game**” is the outcome of my own work, is bonafide and correct to the best of my knowledge and this work has been carried out taking care of Engineering Ethics. The work presented does not infringe any patented work and has not been submitted to any other University or anywhere else for the award of any degree or any professional diploma.

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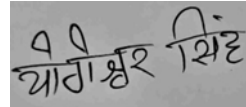


Certificate

The undersigned certify that they have read and recommended to the Department of Computer Science Engineering and Information Technology for acceptance, a project report entitled **“SQUIDGAME - REDLIGHT / GREENLIGHT Game”** submitted by **Sohan Patidar (0901IT191058)** and **Ishita Saxena (0901IT191028)** in partial fulfillment for the degree of Bachelor of Technology in Information Technology.



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OBJECTIVE

Aim of this project is to create an interesting fun loving computer game by using Three.js.

Idea of the Project

This project is basically developed for the entertainment and fun purpose. It is designed after the game played in famous Korean web – series “Squid Game”.

The series revolves around a contest where 456 players, all of whom are in deep financial debt, risk their lives to play a series of deadly children's games for the chance to win a ₩45.6 billion prize. The title of the series draws from a similarly named Korean children's game. The web series includes six Korean children’s game; 1. Red Light, Green Light, 2. Honeycomb, 3. Tug of war, 4. Marble, 5. Glass Bridge, 6. Squid game.

Our project focuses on the very first game “Redlight – Greenlight” which can be played by two players(in our project).

INTRODUCTION

The project is designed after a very popular tv series with aim to develop an easy, simple and enjoyable game for all people by using Three.js.

The game consists of three things; A doll, A track and the players (represented by sphere). The terms Greenlight and Redlight refers to some situation of the game. Redlight means doll is looking towards the player and Greenlight means doll is looking away. In the game, player have to cross the track from one side to another. Player can move only when there is Greenlight, if player moves only a little bit in Redlight, he/she loss the game.

REQUIREMENTS

Hardware:-

- System : Multimedia PC
- Processor : Pentium 4 or above
- Memory : 512MB RAM
- Hard Disk : 80GB or above
- Keyboard : 104 standards
- Monitor : SVGA

Software:-

- Frontend : HTML, CSS
- Backend : JavaScript, Three.js

What is Three.js?

Three.js is an open source JavaScript library that is used to display the graphics, 3D and 2D objects on the web browser. It uses WebGL API behind the scene. Three.js allow you to use your GPU(Graphics Processing Unit) to render the Graphics and 3D objects on a canvas in the web browser. Since we are using JavaScript so we can also interact with other HTML elements. Three.js was released by Ricardo Cabello in April 2010.

Three.js allows the creation of graphical processing unit (GPU)-accelerated 3D animations using the JavaScript language as part of a website without relying on proprietary browser plugins.This is possible due to the advent of **WebGL**.

WebGL:- **WebGL** (Short for **Web Graphics Library**) is a JavaScript API for rendering interactive 2D and 3D graphics within any compatible web browser without the use of plug-ins.

Working of Project

How we created the game?

Creation of game took place in three parts.

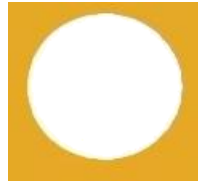
- Creation of Track.
- Creation of Player.
- Creation of Doll

Creation of Track :- Track is the path which player have to cross from one side to another side. It is created with the help of cubes only, two cubes are placed on the end sides of the track at some specific inclination and some are placed between them.



Creation of cube in three.js can be done easily with the help of Box geometry class.

Creation of Player :- Player in the game is represented by the sphere which can be created easily with the help of Sphere geometry class provided by three.js.



Creation of Doll :- Creation of doll can be done by using different geometry classes of Three.js.

Source for doll creation :- <https://sketchfab.com/3d-models/squid-game-giant-doll-7afd49dd07714651a6afa1fc4aac8576>



How to play the game?

The game “Greenlight – Redlight” is a two player game in which player have to cross the track in given time. Player can start their movements after “Go!!” instruction appears on the display. In beginning doll is placed in such way that it is looking towards the players. Players are allocated with their special keys for movement which are :- “Up Arrow” and “W”.

Players have to cross the track before the specific time which is shown in the form of progress bar on the game display. If player get caught moving during Redlight then the player will be eliminated from the game and the player who remained will continue the game. The player who will cross the track without moving a little bit during Redlight will win the game and if no player cross the track before progress bar expires then both loses the game.

Bibliography

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