2D Shooter Game in WebGL

Overview

This is a 2D shooter game developed using **WebGL** where the player controls a shooter at the bottom of the screen. The player can shoot projectiles at falling blocks, and the game keeps track of the player's score, health (lives), and level.

The game features:

- A scoring system.
- Increasing difficulty with new levels.
- Simple audio for shooting and block destruction.

Features

- **Fast-Paced Shooter**: Shoot projectiles by clicking anywhere on the canvas to destroy falling blocks.
- **Controls**-Use keyboard left-arrow key for moving left and right arrow key for moving right.
- **Score and Levels**: The score increases as you destroy blocks. The level increases as the score reaches certain milestones, making the game progressively more challenging.
- **Audio Feedback**: Sounds for shooting and destroying blocks add to the game experience.
- **Shaders**: The game leverages vertex and fragment shaders for rendering textures.

How to Run the Game

Requirements

- A modern web browser that supports **WebGL** (Google Chrome, Firefox, etc.).
- No installation is required; the game can be run locally from the HTML file.

Steps to Run the Game

1. **Clone or Download** the project repository.
   - If using Git, clone the repository:

     ```
     bash
     Copy code
     git clone https://github.com/Harsh03004/Shooter-Game
     ```

   - Or download the project as a ZIP file and extract it.
2. **Place Files**:
   Ensure the following files are in the project directory:
   - `index.html` – The main HTML file.
   - `main.js` – The game logic written in JavaScript.
   - `style.css` – The styling for the game interface.
   - `shoot.mp3` and `block-destroy.mp3` – Audio files for sound effects.
   - `block1.jpg`, `block2.jpg`, `block3.jpg` -Textures for the blocks falling
   - `gun.jpeg` -Texture for the Shooter
3. **Run the Game**:
   Open the
   `index.html` file in a web browser. You can do this by double-clicking on the file or by opening it manually from your browser's file menu.

   If you're working with a local server setup (optional but recommended for best results):
   - Run a local HTTP server in the directory (e.g., using Python or Node.js):
     - Using Python 3:

       ```
       bash
       Copy code
       python -m http.server 8000
       ```

     - Using Node.js:

       ```
       bash
       Copy code
       ```

```
npx http-server
```

- Open your browser and navigate to `http://localhost:8000` (or whichever port you chose).

4. **Play the Game**:
   - Click inside the game canvas to shoot projectiles.
   - Avoid letting the blocks hit your shooter at the bottom of the screen.
   - Monitor your health, score, and level at the top of the screen.

Controls

- **Mouse Click**: Shoot projectiles towards the falling blocks.
- **Canvas Interaction**: Your mouse click coordinates are used to calculate the direction of your projectiles.

Additional Features

- **Level Progression**: The game automatically increases in difficulty as you score more points. New levels introduce more blocks or faster falling speeds.
- **Sound Effects**: Audio effects are implemented for shooting and block destruction to enhance gameplay.

Assets Used

- **Images**:
  - `life.png`: Represents the player's health with a heart icon.
- **Audio**:
  - `shoot.mp3`: Played when the player shoots.
  - `block-destroy.mp3`: Played when a block is destroyed.

Future Improvements

- Add more levels with different block types and mechanics.
- Implement power-ups or special abilities.

- Optimize the game for mobile devices and improve responsiveness.

Repository Link-

https://github.com/Harsh03004/Shooter-Game

Note- The Demonstration Video included does not have audio and run the game in the same way that was done in the video