PROJECT REPORT

C++ COURSE PROJECT – GROUP 1

Group Memebers

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Commands to Run the Game

Open the folder **SDL_CPP_-Game-main** in the terminal and use the following commands.

- **`cd src`**

- **`make`**

- **`./output`**

The **output** file generated is the game and is now ready to start.

Introduction

The project is called Zombie Shooter. It is a 2D shooter genre game done in C++ by utlilizing SDL and SDL_Image libraries. The player plays the last cyborg standing between the endless troves of zombies and the last of humanity. The Cyborg can move horizontally accross the map in all four directions and shoot down the zombies but has to prevent from falling into the grasp of the zombies as a single scratch is all it takes for him to be infected.

The Working of the Game

- The **GameObject** class is the base class for the Zombies and the Cyborg, it takes in the texture and renders it accordingly.

- The Cyborg is represented by the **Shooter** class and his working his done by the **KeyboardController** which allows the player to control his movement accross the map and **ShooterActions** class takes care of the rendering for those actions , for example, when he is running or shooting.

- The zombies are spawned on the right end of the screen and move on thier own , i.e., are controlled by the system to move accross the screen , thier rendering is done by **ZombieActions**.

- The **Audio** class takes care of the sounds made while shooting, by the zombies etc.

- The **Button** and the **Mouse** class are for the interaction of the user with the game software with mouse.

- There is also an include makefile which updates the output.

- The SDL libraries allow for the rendering of the game as a whole. It loads the textures onto the rendered background.

- A **Play the Game** button will appear on the screen and clicking on that button will start the game.

- The game window will have the score of the player and will also have the buttons to **Restart** and **Exit** the game.

- After the shooter gets killed, a **Leaderboard** will be displayed which will contain the top 5 scores of the game. Also a file named as **Topscores.txt** will be generated which will have the content displayed in the leaderboard.
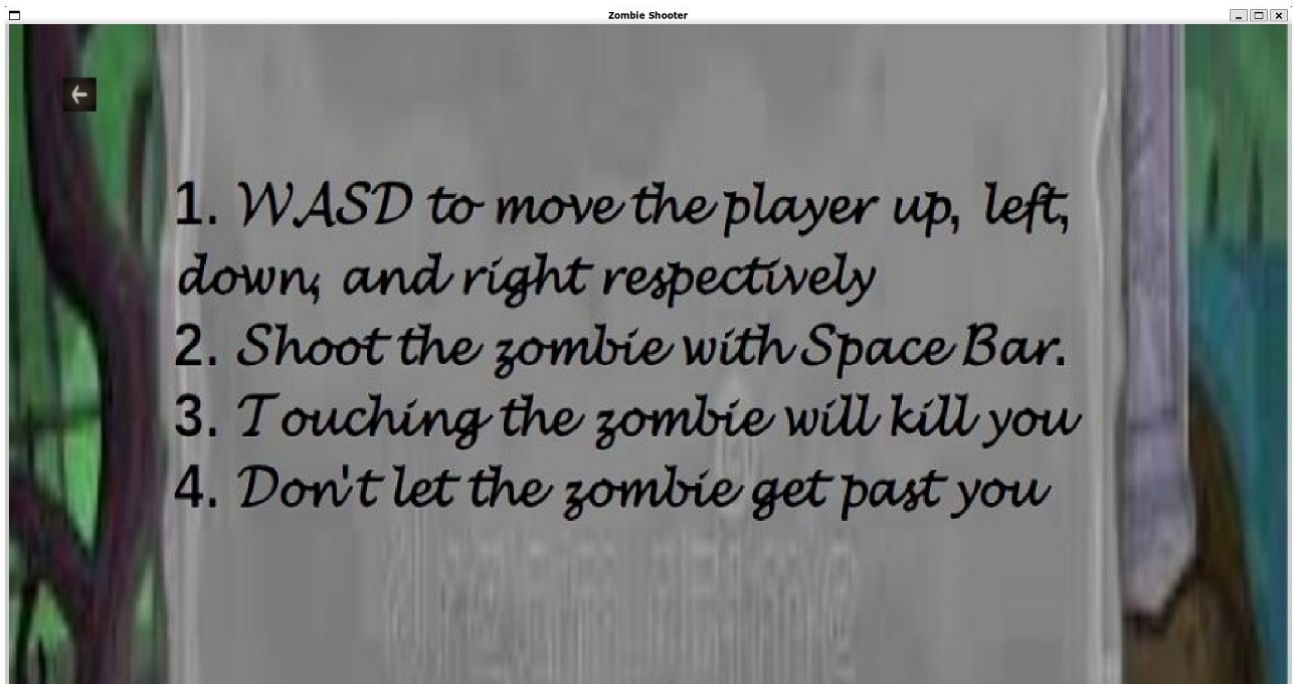
Instructions to Play the Game

- WASD to move the player up, left, down, and right respectively.

- Shoot the zombie with Space Bar.

- Touching the zombie will kill you.

- Don't let the zombie get past you and reach the other end of the screen.
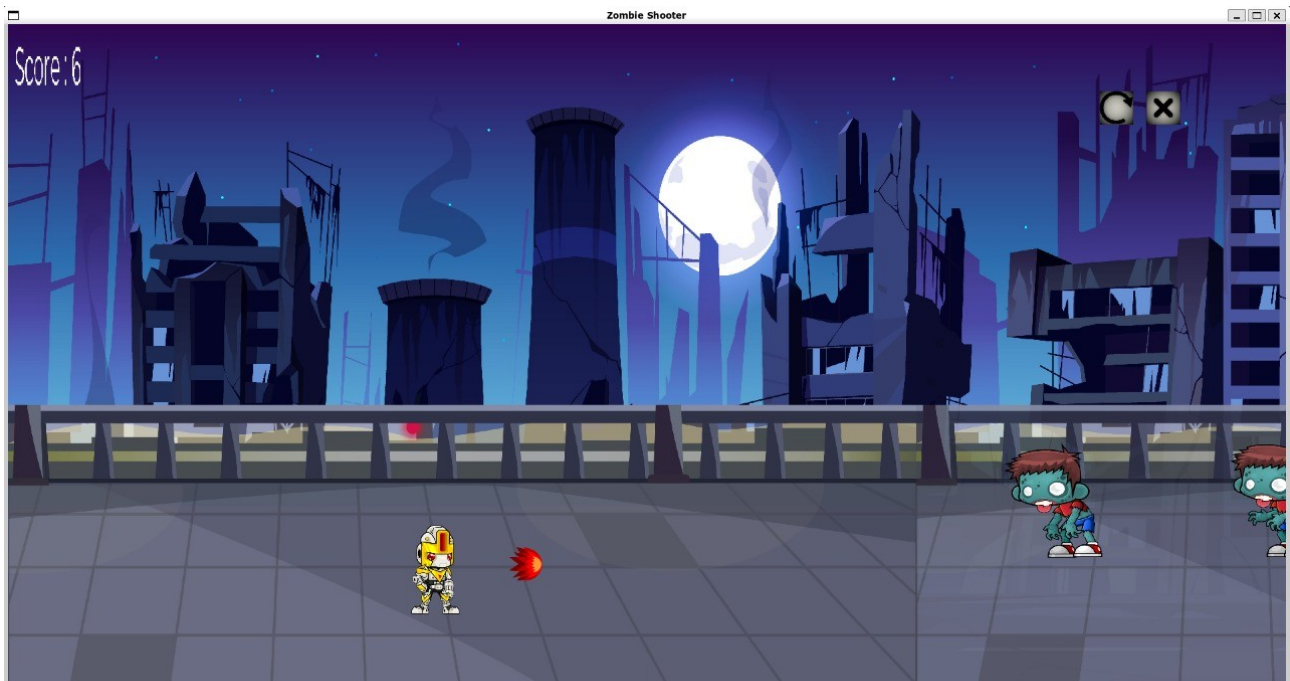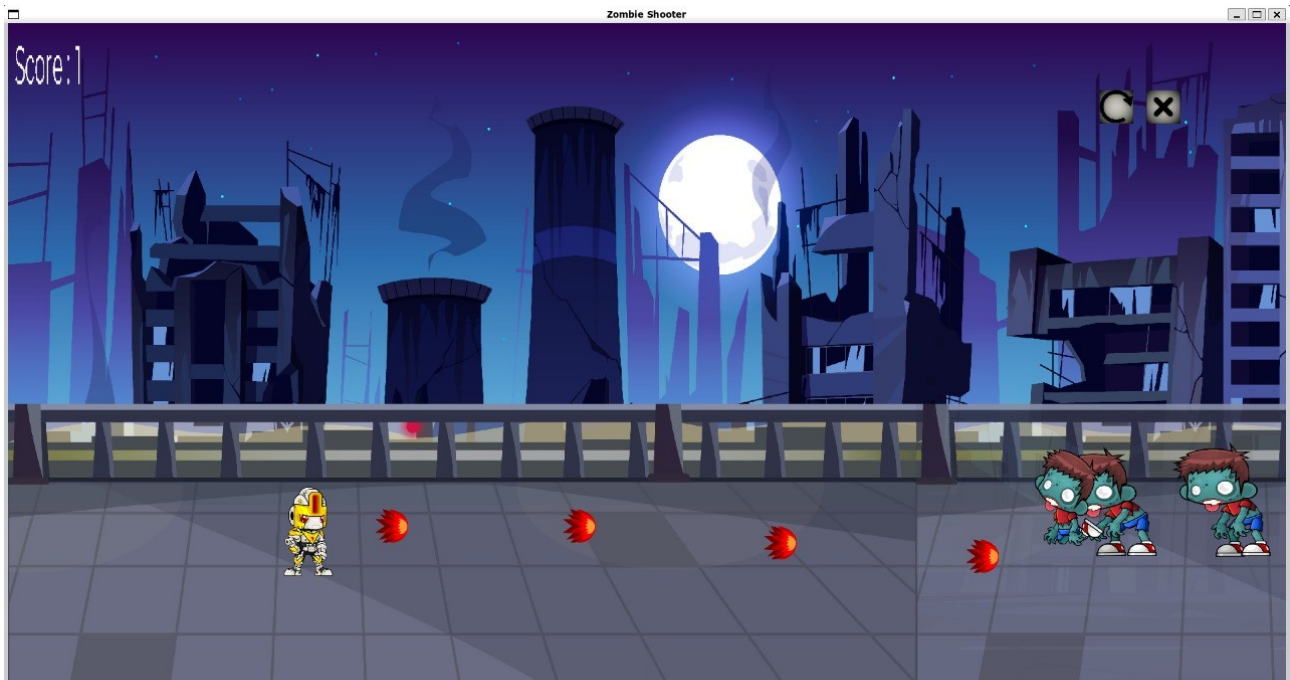
Screenshots of the Game

The Homepage

The Instruction Window

The Gamewindow

The Leaderboard

Player Contributions

1. **Pushkar Pawar** – Worked with the animations which includes all the player movements, the shooter and the enemies, and the firing also

2. **Manas Agrawal** – Worked with the audio effects in the game and the scoreboard displayed.

3. **Bhuvan & Bhavjyot** – Worked for the frontend, making the necessary buttons (start game, exit, newgame, instructions, leaderboard)

4. **Srinivas & Manish** – Worked with the collisions and did the necessary bug fixes in the game.

GitHub Link

https://github.com/pushkarpawar15/SDL_CPP_-Game

Citations

All the images used in this game as background and as animations have been taken from https://www.freepik.com/vectors/city'>City