ASTROMANIAC

Team mates:

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Contributions:

Chinmay Parekh - Created game window,managed player movement,randomized spawning of enemies, collision detection and made file-based leaderboard system .

Pavan Thanay Muthyala - Randomized spawning of enemies and meteors, managed animations,generalizing of code,background movement.

Tejdeep Gutta - Made the GameObject, spritesheets, generaliztion of code, rendering of animations, Display of score, text display and keyboard input in front window .

Yash Mogal - Made the transition between different windows, displaying text and image on the windows and added background music to the game.

Pratham Dandale -

Abstract:

Created a one player game using sdl libraries along with the implementation of object oriented programming in c++. Game is supposed to have a player character, obstacles, score board, animations, music, collisions and highscore display. The game must be played by keyboard keys.

About the game:

Astro-Maniac is a single-player endless-running space game. In which, the player controls the Spaceship at the bottom of the screen, which can move horizontally. Various obstacles (Alien, UFO, Asteroids, and Meteoroids) will be approaching the Spaceship. If any of the objects touch the Spaceship the player loses the game. This game becomes challenging as our mind has developed muscle memory of D as Right move and A as left move as it is opposite in the game, which eventually boosts up human senses and reacting and thinking capability of the player. The randomised generation of the obstacles makes player unable to predict the future spawning of the obstacles.

Instructions to play the game:

Press SPACE BAR to start the game.

Press ‘A’ to move right and ‘D’ to move left.

If player touches any obstacle then the game ends.

The player must also collect the fuel packets, if he misses 3 consecutive fuels then the player dies.

The score is dependent on the amount of time the player survives in the game.

Press SPACE BAR while playing the game only if you want to exit from the game

Requirements:

Instructions for installing SDL2: For Windows: Go to the SDL2 website and head to the download page. Under Development Libraries choose SDL2-devel- [VERSION NUMBER] -VC.zip. Unzip and you will see several folders with the names docs, include, and lib. include contains the header files which we will be needing soon. Create a simple C++ VS project and copy/move the include directory in your project folder. Same thing with lib. Now in lib there exists two folders: x64 and x86. In x86 contains the 32-bit version of the library whereas in x64 contains the 64-bit version

For Linux (Ubuntu): Enter the following command in terminal: sudo apt-get install libsdl2-dev

For installing other libraries run the following command: sudo apt-get install libsdl2-image-dev sudo apt-get install libsdl2-ttf-dev

References:

<https://lazyfoo.net/tutorials/SDL/index.php>

<https://www.youtube.com/channel/UCAM9ZPgEIdeHAsmG50wqL1g>

<https://gigi.nullneuron.net/gigilabs/displaying-text-in-sdl2-with-sdl_ttf/>