README

Group_15

Overview :

The main agenda of the project was to create a graphical game using SDL(system direct layer) for presentation of games which were made using it and further enabling the user to access the code and interact with them .

Team Members:-

1.Krushikar Reddy -IMT2020043

2. Ujjwal Agarwal -IMT2020128

3. Leela Vamsi Krishna -IMT2020111

4. Akhil Tavva -IMT2020124

5. Anwit Damale -IMT2020532

System Requirements :

1. Any operating system (Windows or Linux preferred)
2. PC with keyboard (for commands)
3. IDE (Visual Studio or VIM preferred)
4. SDL 2.0(SET UP has to be done)
6. Any web browser (Preferred Google Chrome or Mozilla Firefox)
7. As a minimum requirement, we recommend (as per SDL):
   - Intel or compatible CPU-based computer with 8 GB RAM and a screen resolution of 1024x768.
   - Intel or compatible CPU-based computer 8 GB RAM
   - A screen resolution of 1024 x 768 pixels

Contributor list and contributions

It was a wonderful joint effort to learn all together, to help each other with our codes and at a glance divided the project into different :

Anwit - Adding background music, creation and animation of the bird, eagle, coins Images.

Vamsi - Leaderboard and README

Akhil - Creating the main page and adding play,leaderboard,keyboard name and exit buttons.

Ujjwal - All collisions and linking of all other's code (by using oops) to make it clear and in proper structured way.(Assisted a bit by Krushikar)

Krushikar - Implementing all the derived class objects in the main game and writing the Makefile part.

Demonstrations :

User interaction:-

Inputs are taken by player in to control the movement implementation .

Upward arrow key-To increase altitude.

Right arrow key-Bird maintains its altitude

(Note: Should not touch upward surface)

Music:-

For background music we have used the SDL_mixer 2.0.

Then we load the music in the instances we create.

Then we call the function Mix_PlayMusic() as and when we want to play that music in the background .

Commands to install SDL2 :-

“sudo apt-get install libsdl2-2.0" - get the library installed system-wide, and all sorts of other useful dependencies

"sudo apt-get install libsdl2-dev" will install everything necessary to build programs that use SDL.

Commands to install font and texture things was “sudo apt install libSDL2_ttf.h “.

Fly birdee..

The aim of the project was to create some games using the SDL in C++. The basic idea of the game is for the player to use control keys to escape from houses(objects) and eagles. The

game shall go on until the player touches any of these two and it should not touch the upper surface part.

Game Features:

- Entire game runs in a loop which has been set using some delay() Function SDL_ticks,SDL_delay()
- Movement of all objects done using Change of x position of the object and then rendering it to presenting on screen
- Random characters rolls on the surface of window:
  - ➔ 1 out of 3 characters (houses) are chosen randomly to come over the surface using randint().
  - ➔ Each character moves to the left but has specific characteristics:

Coin: Player has to collect them to score .

Houses: Player has to dodge from colliding from them to continue playing

- ➔ Speed of characters is a function of the time and hence increases As time passes.
- ➔ The score increases by 5 as bird collects coin.
- ➔ Collision detection is implemented by using a user-defined collision function to check for distance between two objects.

- ➔ If a collision occurs between bird and either of houses or eagles the game ends there and the score is displayed.
- ➔ If the player is unable to dock the character and touches the character.The game ends displaying the score.

Instructions to run the game :

1. Run the command “make” in the terminal.

2. Now run the command “./game” in the terminal.

3. A window will appear, in which we can can enter our name and then click “PLAY”, and the game starts.

Resources and Links:

1. https://lazyfoo.net/tutorials/SDL/index.php

2. http://wiki.libsdl.org/Tutorials

3. https://www.youtube.com/watch?v=k-m0q_uVnno&list=TLPQMDIwMT

4. https://www.youtube.com/watch?v=YB2MbgDsLaA

5. https://www.youtube.com/watch?v=0TlVpiQbFiE

6. https://pixabay.com/music/search/theme/background%20music/

7. https://image.online-convert.com/convert/gif-to-png

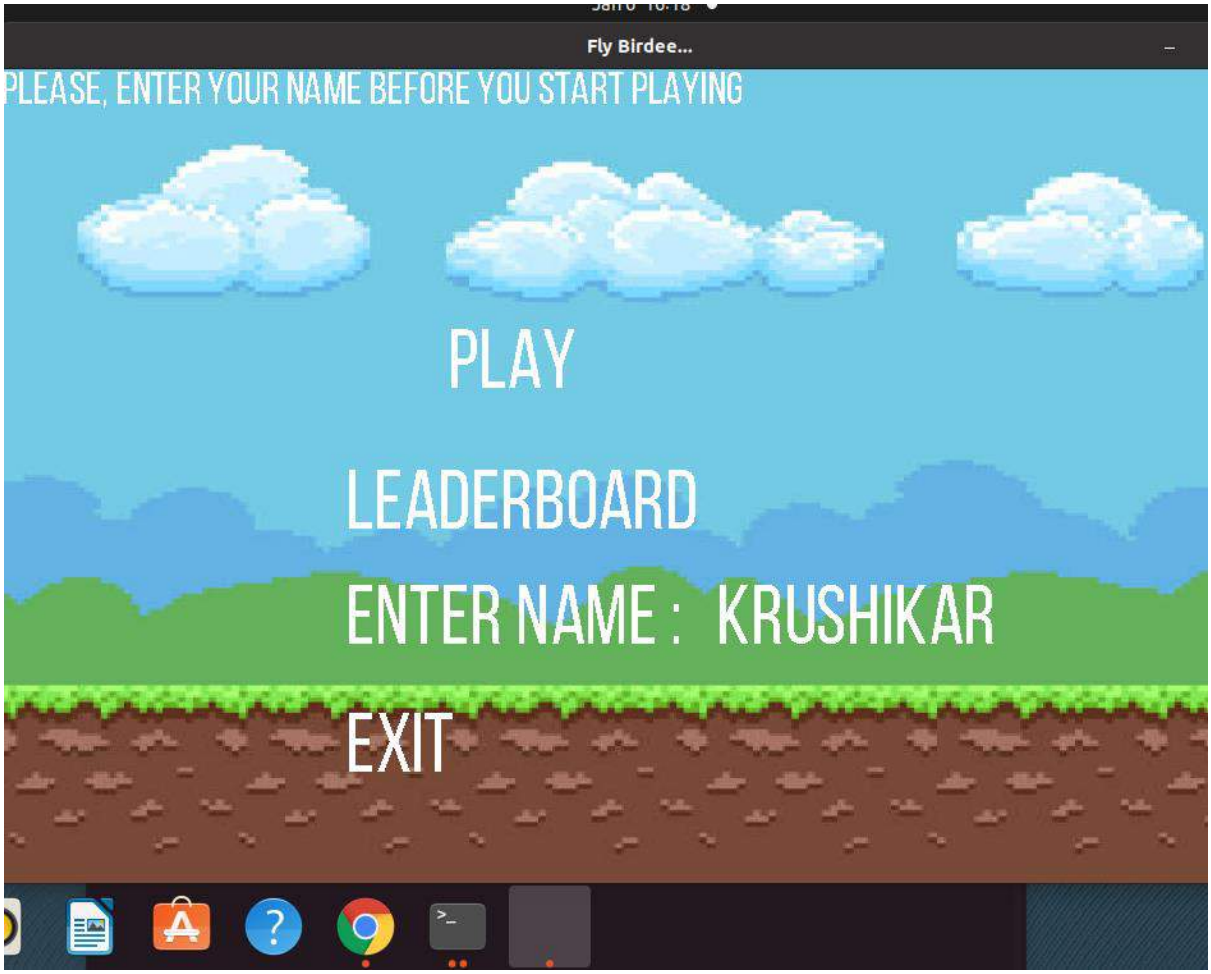
8. https://www.remove.bg/upload

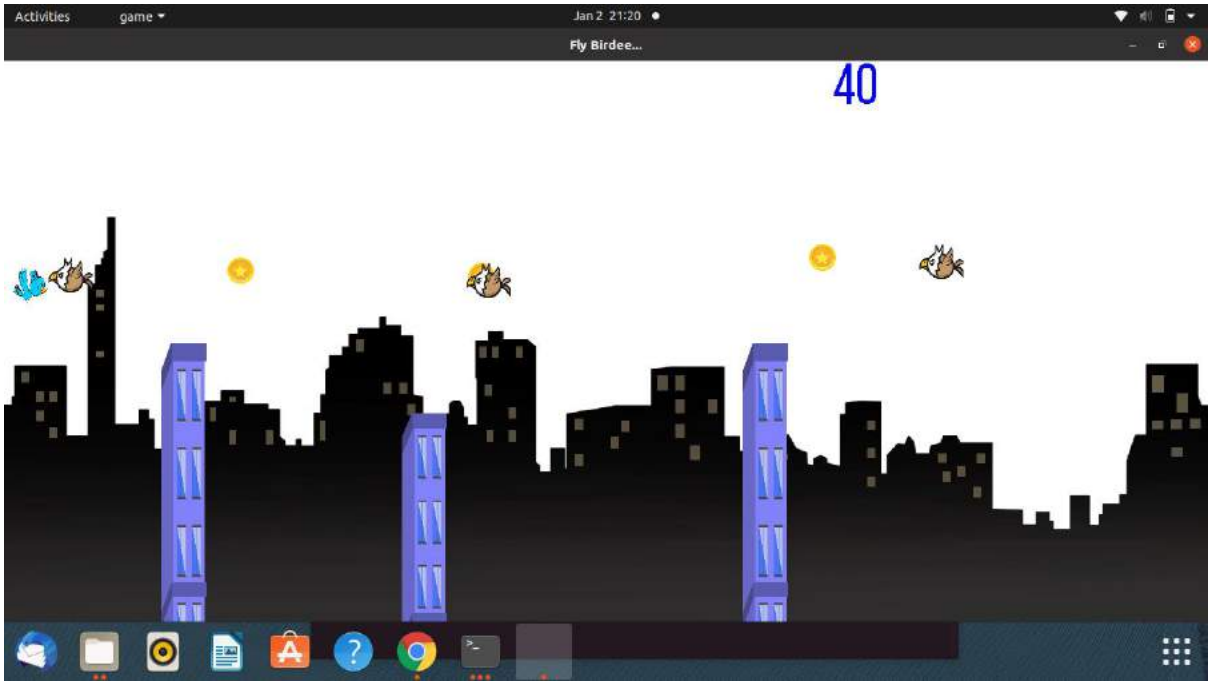
9. https://resizeimage.net/

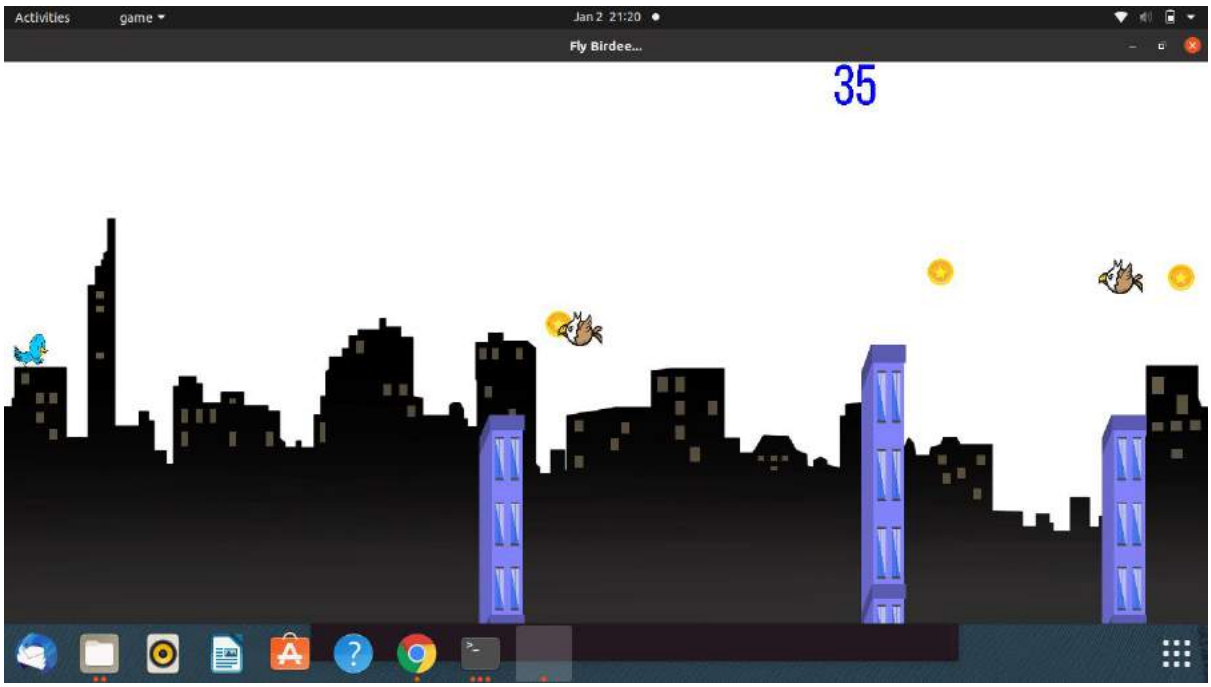
10.3D models Microsoft word .

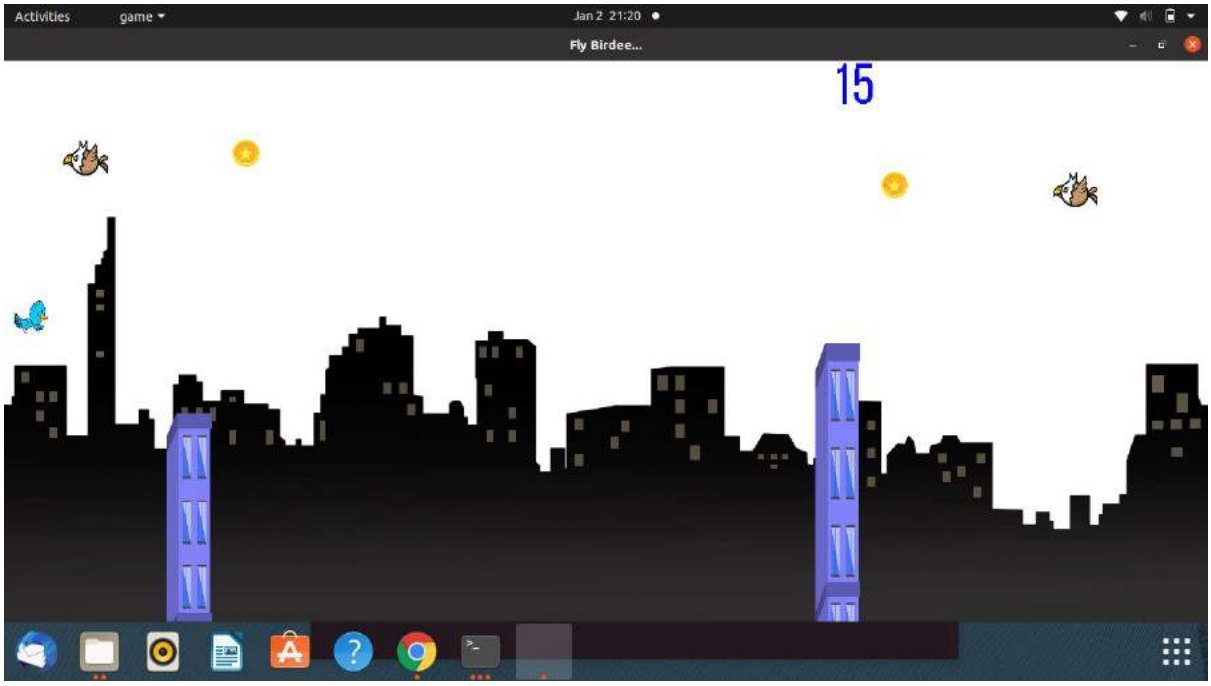
Screenshots of game:

Starting page:




Activities
game
Jan 2 21:20
Fly Birdee...
40


Activities
game
Jan 2 21:20
Fly Birdee...
35



Scoreboard displaying scores based highest on score: