
BATTLE IN THE FOREST
PROJECT , 3RD YEAR

INDEX

Objectives

Here we explain the idea and inspiration of our project. We also explained the reason why we chose this project.

Conceptual Design of the game

This entails the rough idea we had when we started developing our software.

Technical Design and working of the game

As we go in deeper, we explain the technical aspects of are game. We have not only explained the different languages we have used, we have also explained the functions of the major modules used in the game.

Individual contribution of team members

In a team project , it is extremely important to showcase the contributions of each member of the group, so we have done that as well.

Entity Relationship Diagram

We have used the ER diagram to depict the different entities in our project and their attributes.

OBJECTIVE

The idea behind this project comes from a saying "Nothing great comes without a risk" . So we wanted to make a game that was not only age appropriate, bit was also visually appealing to our customers. This project helped us to increase our technical skills, as we learnt a lot more about python than we already knew. As we present this project, we hope that the professors like our progress as developers.

Conceptual Design

1

We have divided this PC game into various modules to make debugging easier.

2

. For example : we have a main file, a separate file for credentials and Instructions each.

3

We have added sound effects, buttons and images to our game, to make the game more user friendly.

We have created this game using Python v3.7 and its different modules , such as Pygame, Tkinter, os, sys,csv ,mixer,button, random etc. We have used Pycharm editor since it provides an IDE, i.e. integrated development environment and makes coding easier. We have also used SQLite for our database. We have made separate python files for the main project, for login/registration page and for instructions to increase modularity. All images are non- copyrighted, and are from Google. These images have been edited on Canva and their background was removed using remove.bg.

Technical Design

MAJOR MODULES USED

 Pygame : The pygame library is an open-source module for the Python programming language specifically intended to help you make games and other multimedia applications.

 Mixer : In order to play music/audio files in pygame , pygame . mixer is used (pygame module for loading and playing sounds).
This module contains classes for loading Sound objects and controlling playback

 OS : OS is a Standard library of python. Python OS is an environment for Python and Pygame applications to run in.

 RANDOM : Python Random module is an in-built module of Python which is used to generate random numbers.

 CSV : Stands for “Comma Separated Values.” It is the simplest form of storing data in tabular form as plain text. It allows programmers to say, “write this data in the format preferred by Excel,” or “read data from this file which was generated by Excel,” without knowing the precise details of the CSV format used by Excel.

 BUTTON : By this module , we create different buttons in a project.

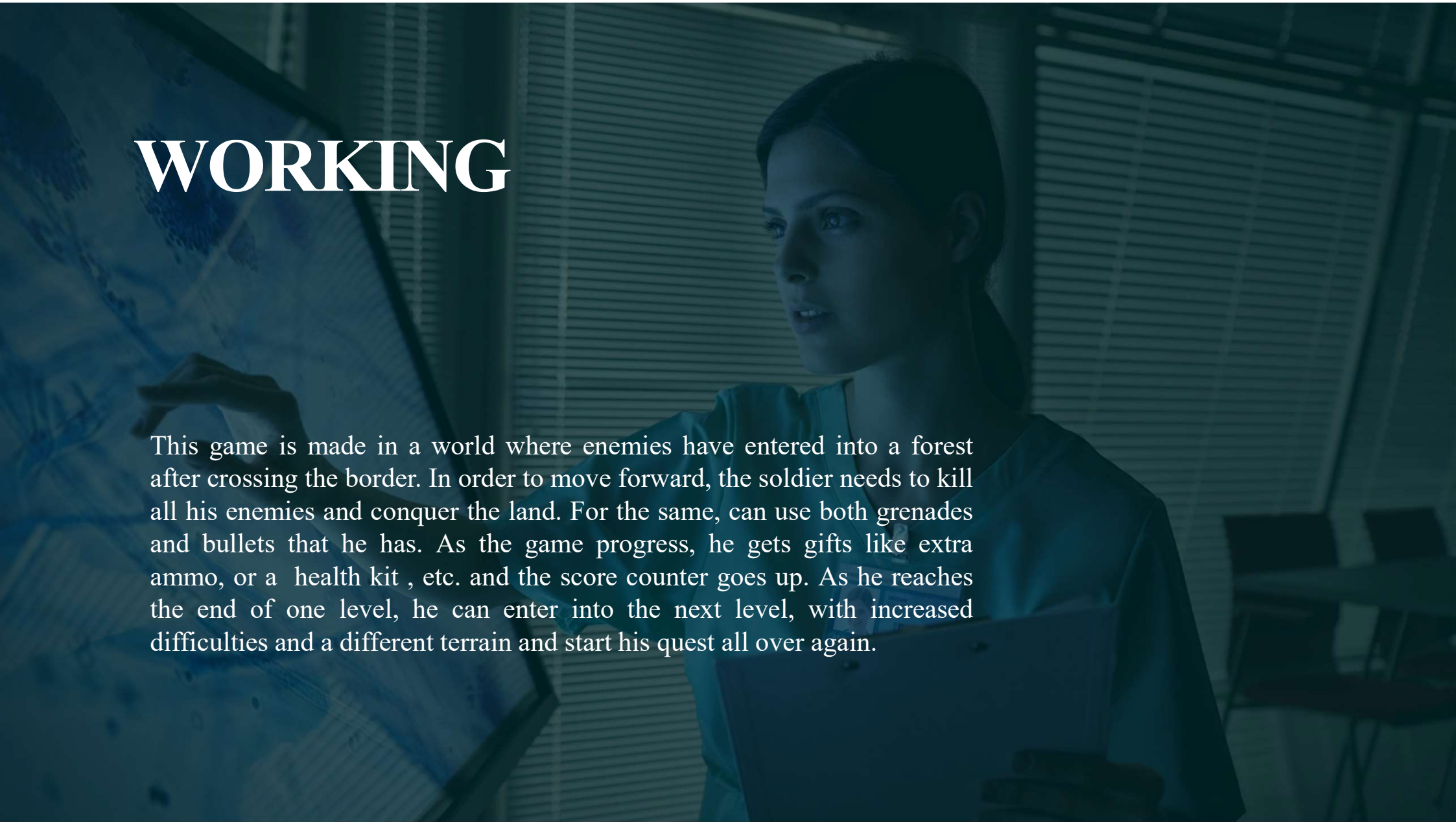
MODULES USED

 Tkinter : Python provides the standard library Tkinter for creating the graphical user interface for desktop based applications . Tkinter acts like CSS in python .

 Message Box : MessageBox Widget is used to display the message boxes in the python applications.

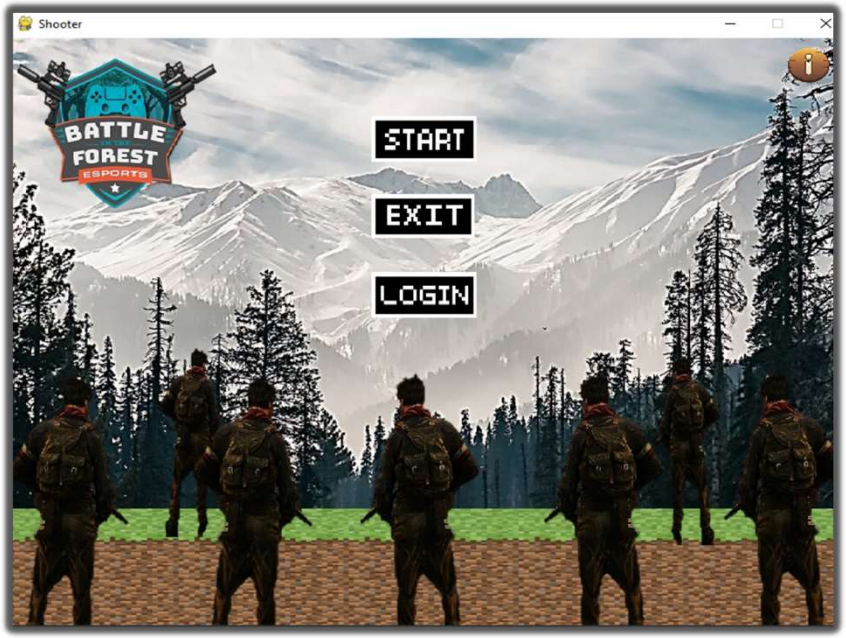
 SQLite3 : SQLite3 module is used to integrate the SQLite database with Python. It is a standardized Python DBI API 2.0 and provides a straightforward and simple- to-use interface for interacting with SQLite databases.

 Sys: The sys module in Python provides various functions and variables that are used to manipulate different parts of the Python runtime environment.

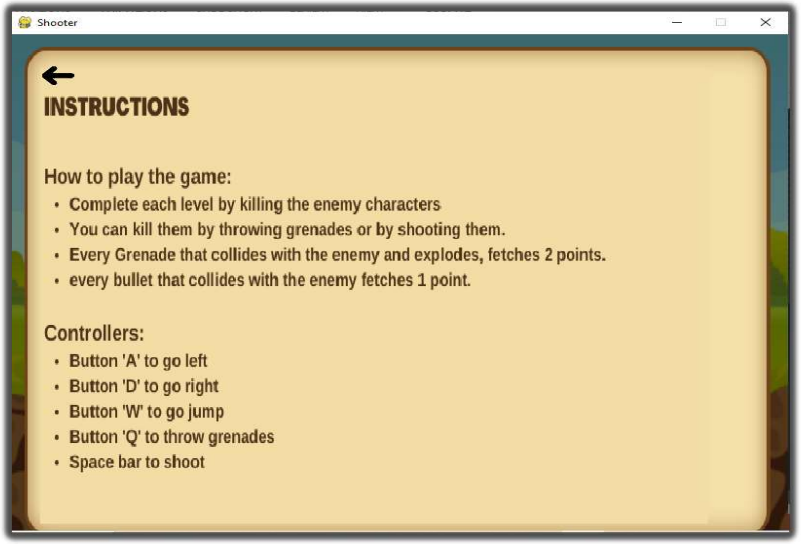


WORKING

This game is made in a world where enemies have entered into a forest after crossing the border. In order to move forward, the soldier needs to kill all his enemies and conquer the land. For the same, can use both grenades and bullets that he has. As the game progress, he gets gifts like extra ammo, or a health kit , etc. and the score counter goes up. As he reaches the end of one level, he can enter into the next level, with increased difficulties and a different terrain and start his quest all over again.



A Sneak Peek into the game



Instructions for the game

How to play the game:

- Complete each level by killing the enemy sprites
- You can kill enemies by either throwing grenades or by shooting them
- If you get shot, your health would decrease, eventually becoming 0, rendering you dead.
- Every grenade that collides with the enemy and explodes fetches 2 points.
- Every bullet that collides with the enemy fetches 1 point.

Controllers for the game:

- Press A to move left
- Press D to move right
- Press W to jump
- Press Q to throw grenades
- Press Space to shoot.

STRENGTHS AND WEAKNESSES

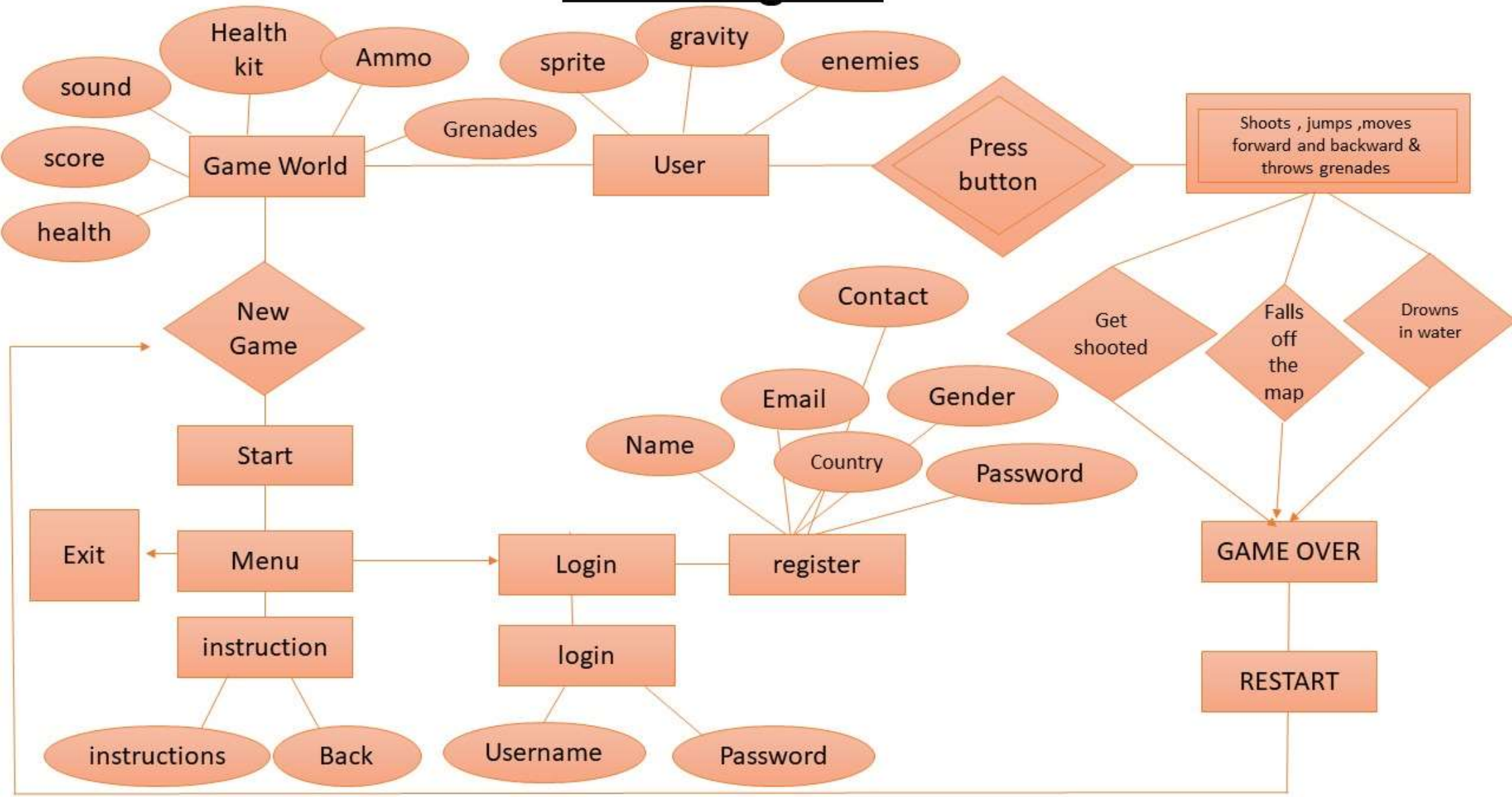
STRENGTHS

- Age appropriate
- User friendly
- Easy to maintain
- Modular code

WEAKNESSES

- Less levels
- Not extremely complex
- Scope for improvement

ER - Diagram


Health kit
Ammo
sound
sprite
gravity
enemies
score
Grenades
Game World
User
Press button
Shoots , jumps ,moves forward and backward & throws grenades
health
New Game
Contact
Get shooted
Falls off the map
Drowns in water
Email
Gender
Name
Country
Password
Start
Exit
Menu
Login
register
GAME OVER
instruction
login
RESTART
instructions
Back
Username
Password

CONTRIBUTION

Individual contribution to a team is extremely important as it makes sure that everyone is putting in efforts equally. In our project too, we have maintained a balance of individual contribution , to keep the team spirit alive. In this slide, we have mentioned the efforts that we have put in, individually to make this project a successful one.

VRINDA:

She was responsible for making coding part of the project and the presentation. She found images and sounds for the game, and edited them.

VARSHA:

She was responsible for the documentation of the project. She also edited the photos for the home page and restart page.

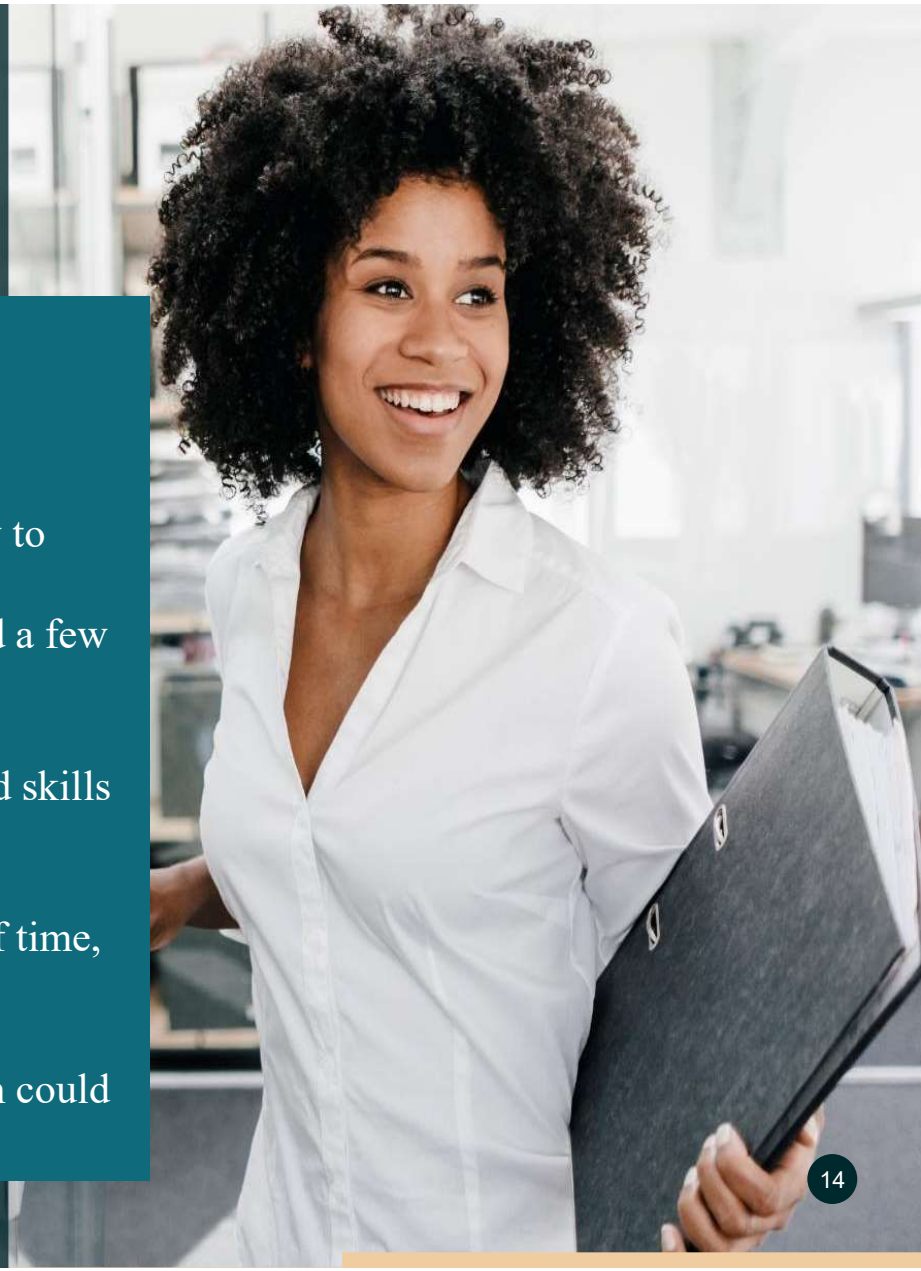
CONCLUSION

At the end of this project , we have a good understanding of how to develop a game using python. In this project, we have displayed graphics, Animated characters and used sounds. We have learned a few lessons while working on our project:

1. Having an idea in your mind is not enough, the knowledge and skills to develop your idea into software are more important.

2. Software development is a tedious task and it demands a lot of time, patience and self learning.

3. Coordination and team work are one of the best skills a person could have, as these are very important while working on a project.



Thank You!