Project Report on

GAME

Submitted by

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Under the Guidance of
Prof. D. P.Bhamare

S. Y. B.Tech
[Information Technology]

DEPARTMENT OF INFORMATION TECHNOLOGY ENGINEERING

SRES's SANJIVANI COLLEGE OF ENGINEERING, KOPARGAON

2021-2022

Sanjivani Rural Education Society's

Sanjivani College of Engineering, Kopargaon-423603

(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)

(NAAC 'A' Grade Accredited, ISO 9001:2015 Certified)

Department of Information Technology

(NBA Accredited)

CERTIFICATE

This is to certify that the Project entitled ***"Game"*** submitted by

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Jadhav Abhishek Vinayak[Exam Seat no:UIT20M1029]
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Jeughale Shreyas Devanand[Exam seat no:UIT20M1032]

is a record of bonafide work carried out by themin partial fulfilment of the requirement of Degree of Bachelor of Technology in Information Technology at Sanjivani College of Engineering, Kopargaon under the University of Pune during academic year 2021-2022.

Devyani Jadhav	**Dr.M. A. Jawale**	**Dr. A. G. Thakur**
Project Guide	**Head of IT Dept.**	**Director**

Examiner 1: *(Name and Signature)*

Examiner 2: *(Name and Signature)*

Place: S.R.E.S's Sanjivani collegeof Engineering, Kopargoan

Date:

ACKNOWLEDGEMENT

The entire session of Mini- Project completion phase so far was a great experience providing us with great insight and innovation into learning various data security concepts and achievement of it. As is rightly said, for the successful completion of any work, people are the most important asset our project would not be materialized without the cooperation of the people involved.

First and foremost, we are very thankful to our respected project guide Prof. D. P. Bhamare for their leading guidance and sincere efforts in finalizing this topic. They took deep interest in correcting the minor mistakes and guided us through our journey so far. Also, they have been persistent source of inspiration for us.

We are also very thankful of Dr. M. A. Jawale, Head of Department of Information Technology for the symmetric guidance and providing necessary facilities and we express deep gratitude to all the faculty members and our department's technical Staff for providing us needed help.

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Abstract

Games are well- known among children even among matured people. The rules and regulations of the game are well-known as the regular game. The case study meant for implementing this game without losing its attraction. This games comes with a single player mode. This Game in python is an easy game for all. The graphics of the gameplay system is good and smooth to control for the users. Talking approximately the gameplay of the system, the gambling strategies are too easy, all you need to do is simply pass round and hit enemies or protect from enemies through moving rikshwas. In this Game the user has to manage a rickshaw. The game is controlled through a keyboard (up, down, right, left arrow keys). It means that the more you crash or hit enemies through stones, the more a highest game score to get. When the crashes then the game is over and again you have to start a new game otherwise you win the game you switch to next level.

Contents

INTRODUCTION

A **game** is a structured form of play, usually undertaken for entertainment or fun, and sometimes used as an educational tool. Games are different from work, which is usually carried out for remuniration, and from art, which is more often an expression of aesthetic or ideological elements. However, the distinction is not clear-cut, and many games are also considered to be work (such as professional players of spectator sports orgames) or art (such as puzzle or games involving an artistic layout such as mahion, orsome video game).

Games are sometimes played purely for enjoyment, sometimes for achievement or reward as well. They can be played alone, in teams, or online; by all age group of people.

part of the entertainment for children playing a game is deciding who is part of their audience and who is a player.

In our game we are creating GUI for some different types of levels and menu used in game for activity of objects and for different levels which are after the winning gameand also loosing game in that different types of game at different levels.

OBJECTIVES

1. Learn the python language with its different Types of application.

2.LearnTo Construct Graphical User interfaces(GUI).

3. A Fun experience.

4. Improves overall skill ceiling.

5.Build An interactive Ability useful for programming projects.

6. Develop Games with Deep learning **.**

7.To provide add on game on functionality ,create graphics , and script various part of game

8.Using Pygame in future develop a video games

9. Python and pygame is a good lang. and framework for beginners.

10. Develop a good game with creating GUI, levels, animations.

SCOPE

1. Now a days gaming is become a very popular,and gaming industries growing very fast and trend.

2. New game development trends emerge every year and technology advances

3. It bringing great opportunities in future

4. We have implemented game is some basic level to creating object and movement of object.

5. Gaming is in trend infuture it becomes very popular

6. We want to implement our game in future in next level

7. Now a days people like to spend their time in enjoyment and that's why not only children's but also any age group of people are play games

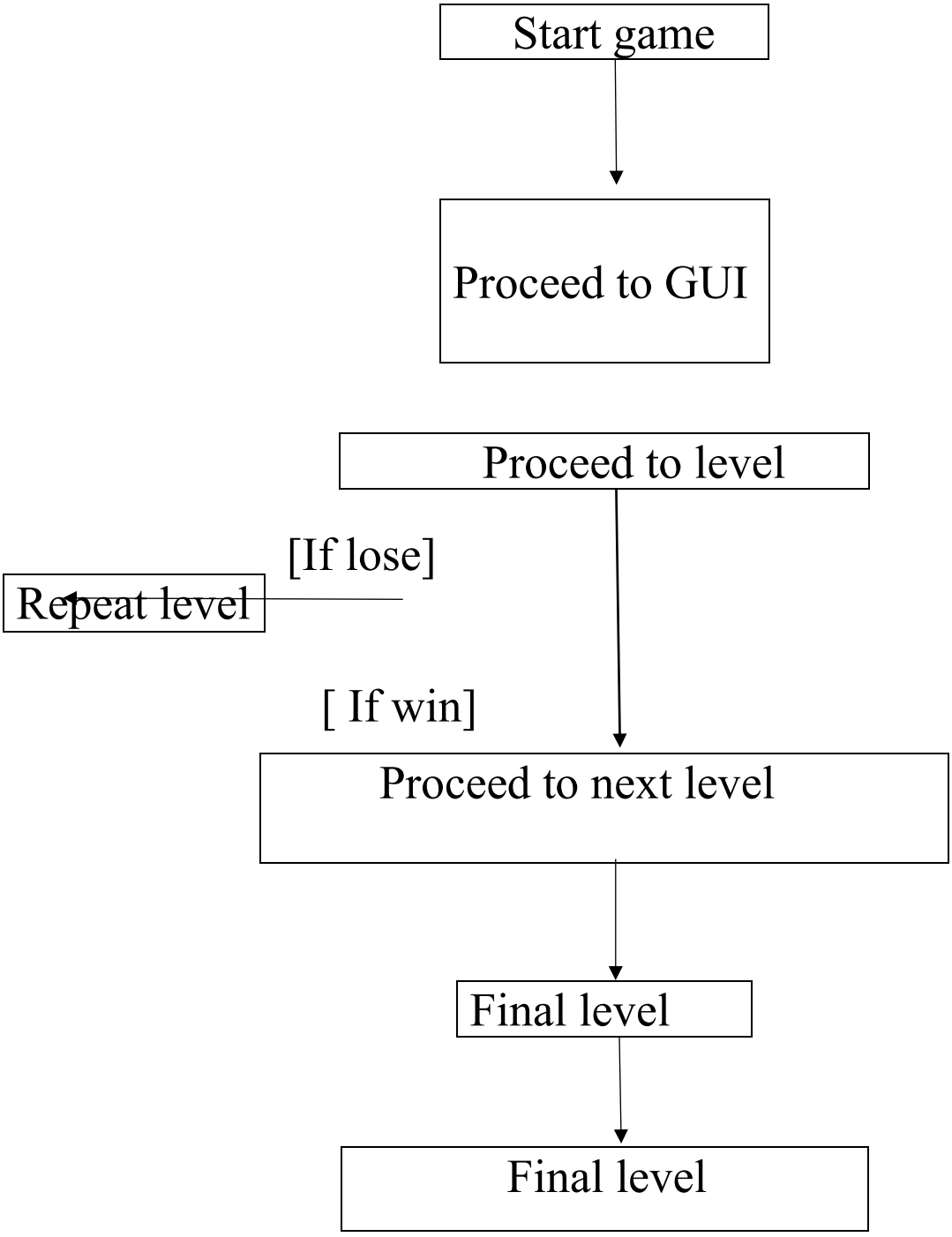
8. During pandemics esports/games to rise in popularity,in future we want to make game which are playing by family also ,and make it in study oriented also.

9. The emergence of 5G is expected to bring technological breakthroughs and spur innovation in game.

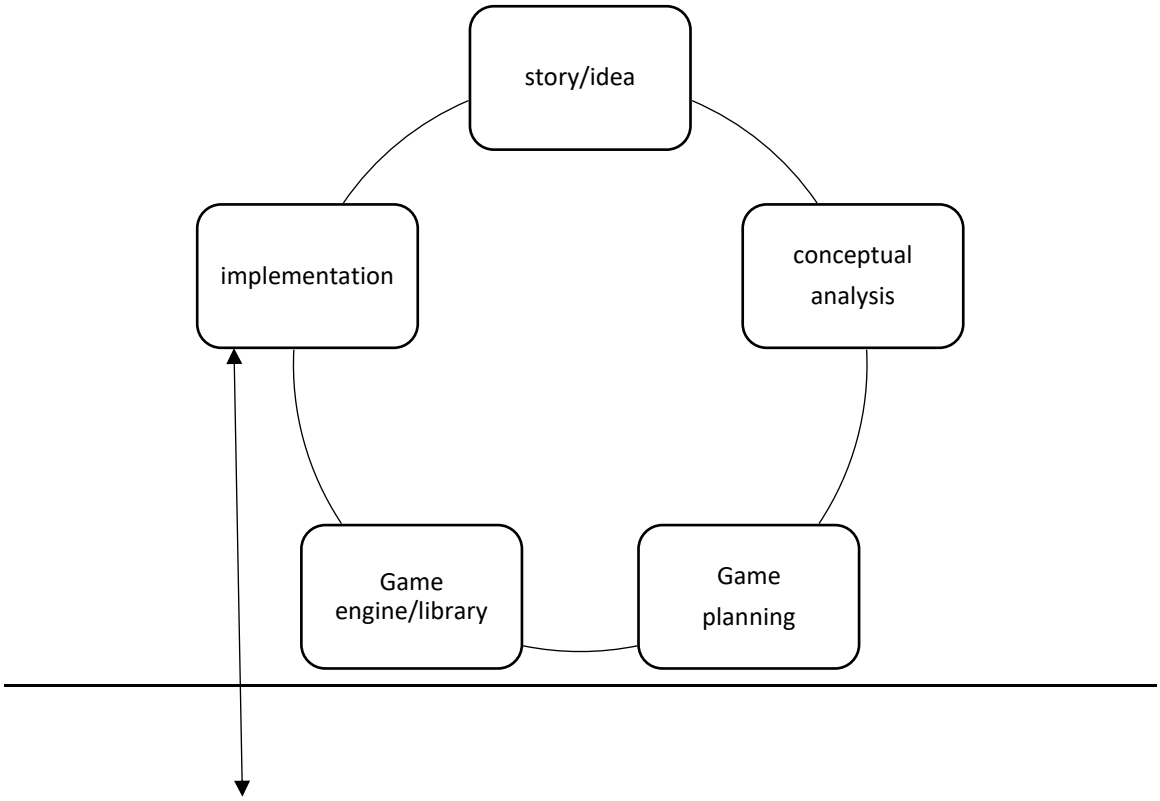
10. In future making innovation in this existing game or system we can implement more prestigious games.

11. The purpose of this research or game is to virtual image for combination of both structure and unstructured information of our project.

Architecture



Architecture

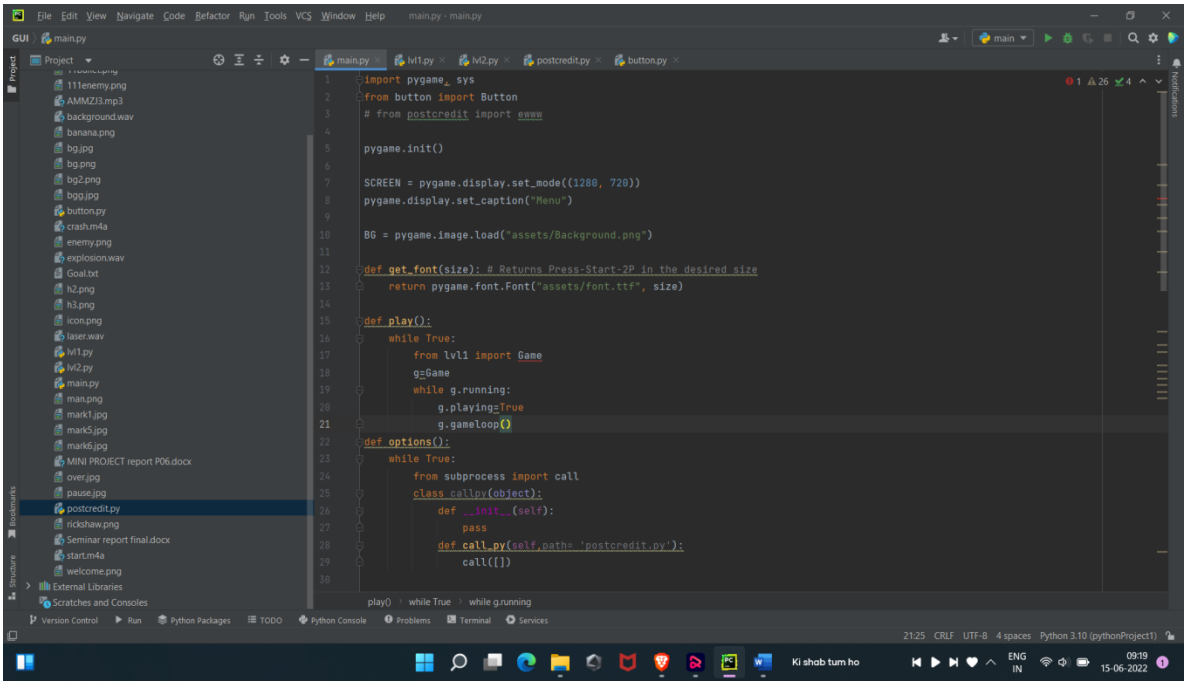


These are main steps or architecture that we follow to implemented our game.

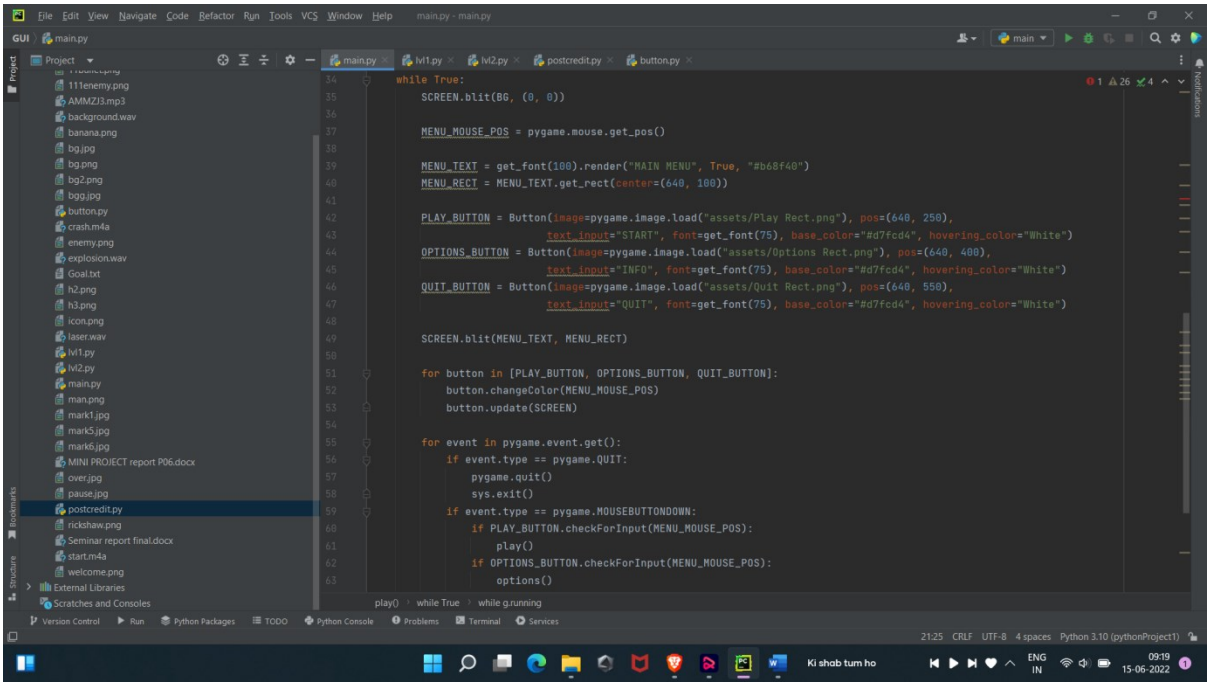
Creating GUI, Object creation & moments.
Background effect (like parallax method), and linking the levels.
Background sound effect to game.
Creating opposite obstacles , creating animation.
Level shifting after win or lose condition.

Implementation

Input for GUI:

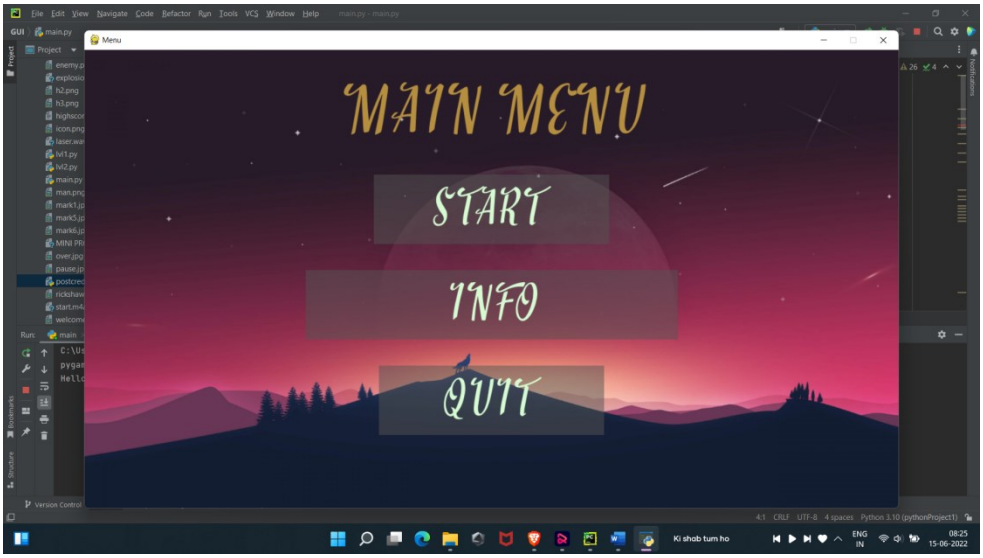


```
import pygame, sys
from button import Button
# from postcredit import ewww

pygame.init()

SCREEN = pygame.display.set_mode((1280, 720))
pygame.display.set_caption("Menu")

BG = pygame.image.load("assets/Background.png")

def get_font(size): # Returns Press-Start-2P in the desired size
    return pygame.font.Font("assets/font.ttf", size)

def play():
    while True:
        from lvl1 import Game
        g=Game
        while g.running:
            g.playing=True
            g.gameloop()
def options():
    while True:
        from subprocess import call
        class callpy(object):
            def __init__(self):
                pass
            def call_py(self,path= 'postcredit.py'):
                call([])
```

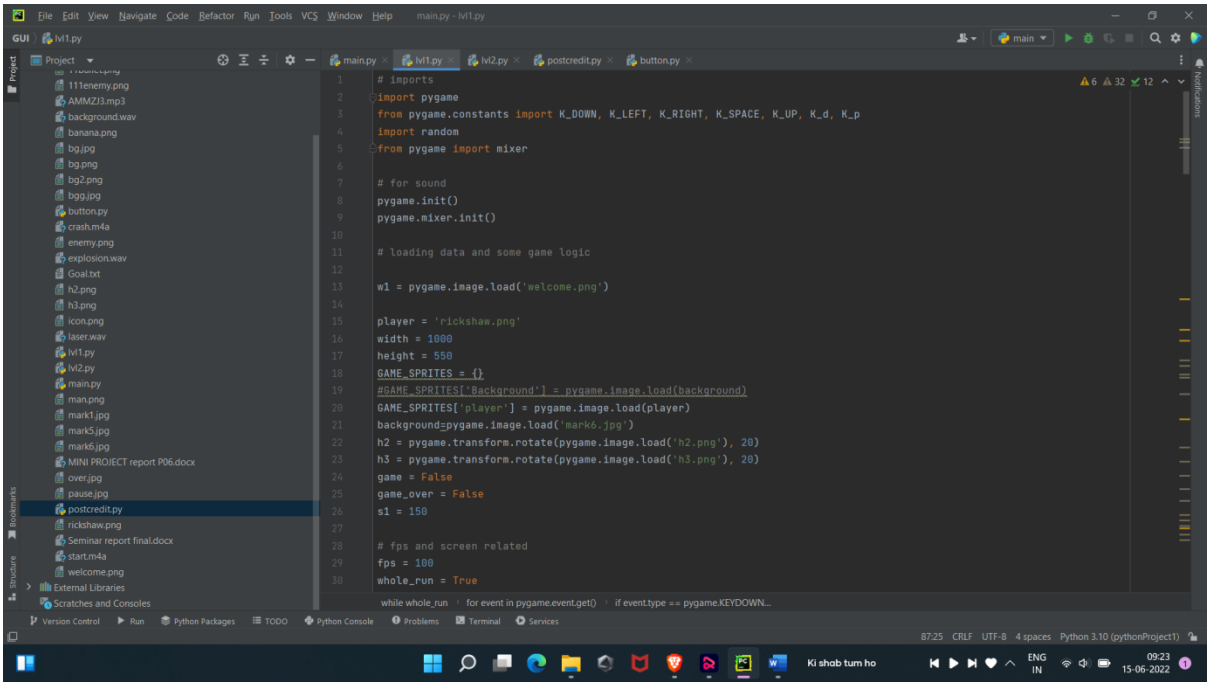


```
while True:
    SCREEN.blit(BG, (0, 0))

    MENU_MOUSE_POS = pygame.mouse.get_pos()

    MENU_TEXT = get_font(100).render("MAIN MENU", True, "#b68f40")
    MENU_RECT = MENU_TEXT.get_rect(center=(640, 100))

    PLAY_BUTTON = Button(image=pygame.image.load("assets/Play Rect.png"), pos=(640, 250),
                         text_input="START", font=get_font(75), base_color="#d7fcd4", hovering_color="White")
    OPTIONS_BUTTON = Button(image=pygame.image.load("assets/Options Rect.png"), pos=(640, 400),
                         text_input="INFO", font=get_font(75), base_color="#d7fcd4", hovering_color="White")
    QUIT_BUTTON = Button(image=pygame.image.load("assets/Quit Rect.png"), pos=(640, 550),
                         text_input="QUIT", font=get_font(75), base_color="#d7fcd4", hovering_color="White")

    SCREEN.blit(MENU_TEXT, MENU_RECT)

    for button in [PLAY_BUTTON, OPTIONS_BUTTON, QUIT_BUTTON]:
        button.changeColor(MENU_MOUSE_POS)
        button.update(SCREEN)

    for event in pygame.event.get():
        if event.type == pygame.QUIT:
            pygame.quit()
            sys.exit()
        if event.type == pygame.MOUSEBUTTONDOWN:
            if PLAY_BUTTON.checkForInput(MENU_MOUSE_POS):
                play()
            if OPTIONS_BUTTON.checkForInput(MENU_MOUSE_POS):
                options()
```

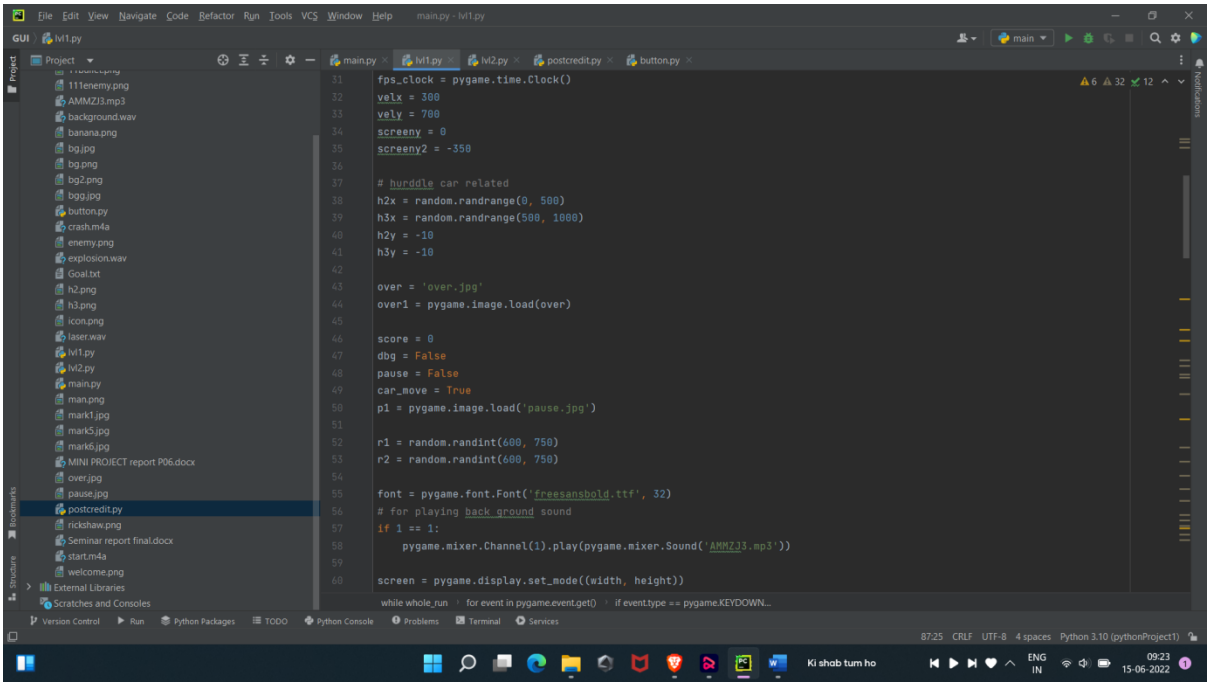
Output:



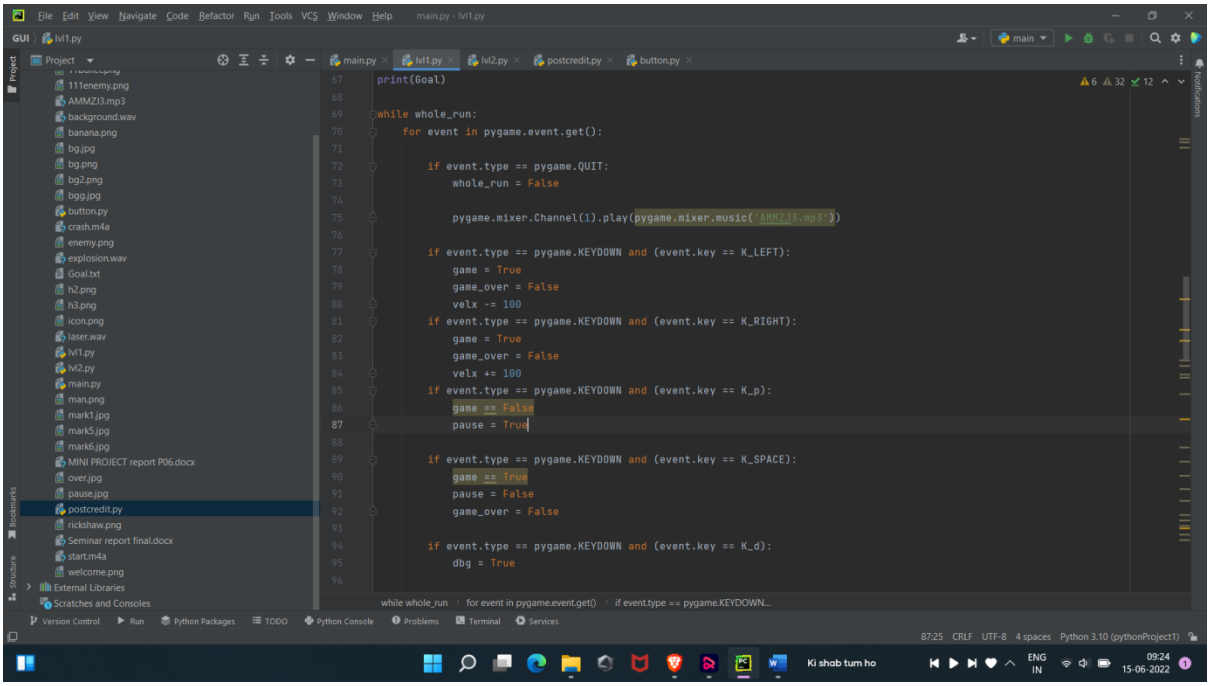
Level 1 Source Code:



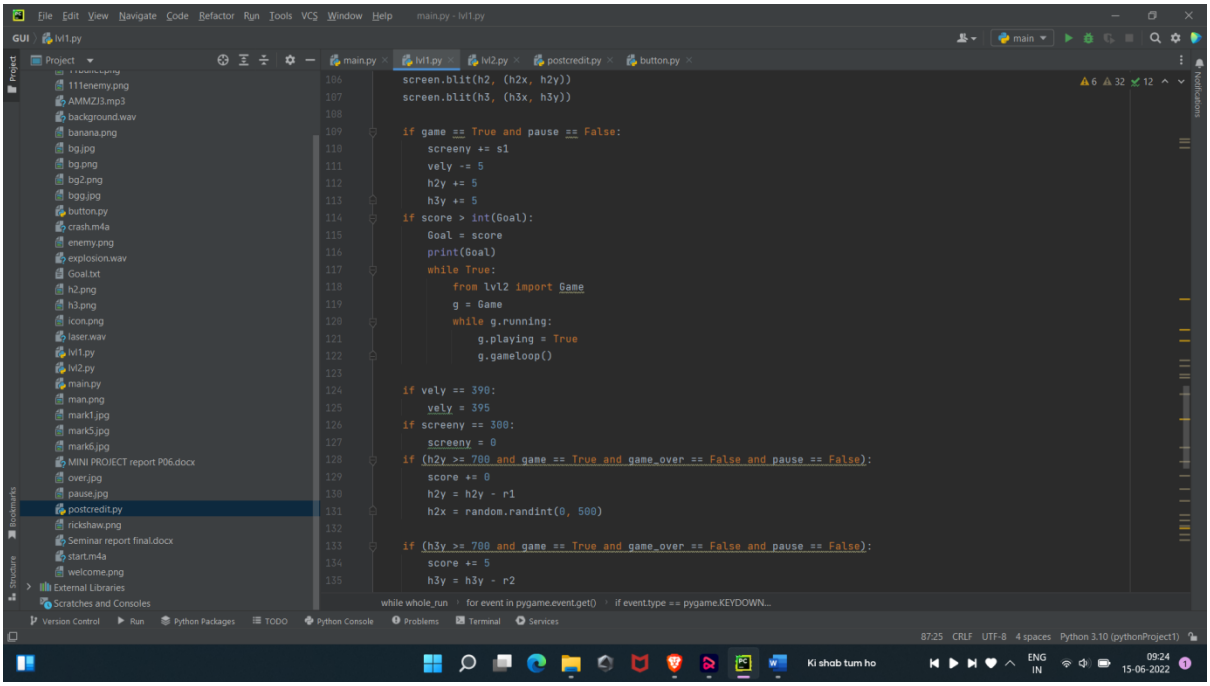
```
# imports
import pygame
from pygame.constants import K_DOWN, K_LEFT, K_RIGHT, K_SPACE, K_UP, K_d, K_p
import random
from pygame import mixer

# for sound
pygame.init()
pygame.mixer.init()

# loading data and some game logic

w1 = pygame.image.load('welcome.png')

player = 'rickshaw.png'
width = 1000
height = 550
GAME_SPRITES = {}
#GAME_SPRITES['Background'] = pygame.image.load(background)
GAME_SPRITES['player'] = pygame.image.load(player)
background=pygame.image.load('mark6.jpg')
h2 = pygame.transform.rotate(pygame.image.load('h2.png'), 20)
h3 = pygame.transform.rotate(pygame.image.load('h3.png'), 20)
game = False
game_over = False
s1 = 150

# fps and screen related
fps = 100
whole_run = True
```



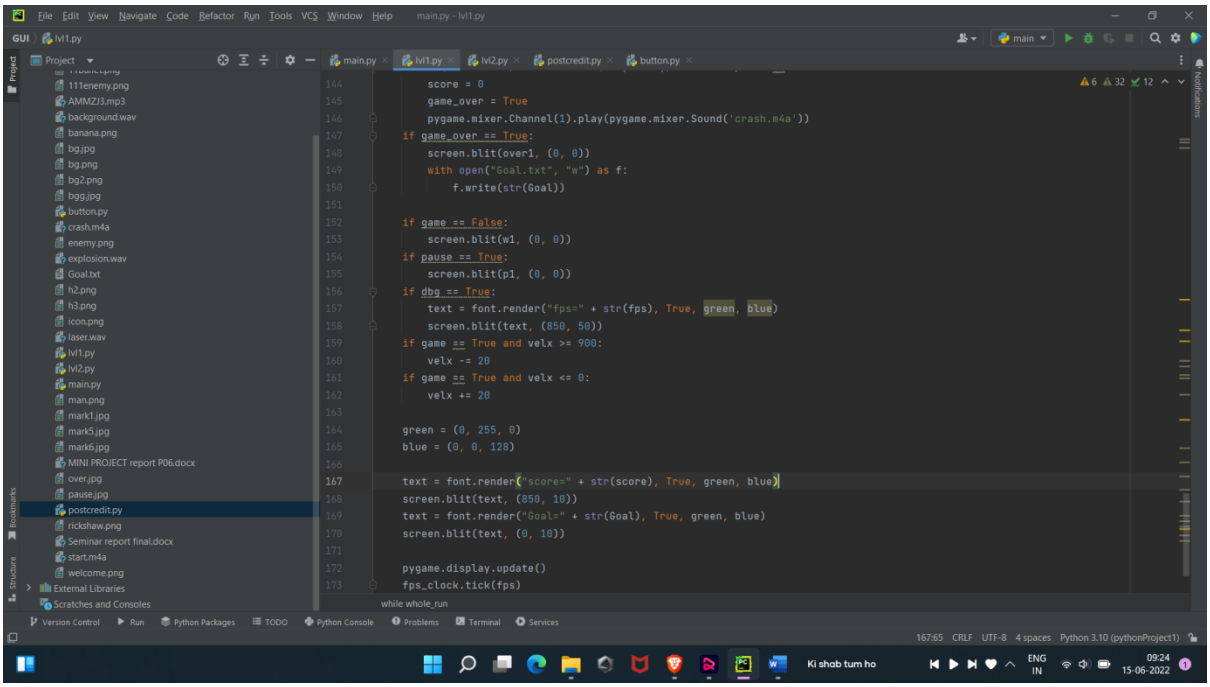
```
fps_clock = pygame.time.Clock()
velx = 300
vely = 700
screeny = 0
screeny2 = -350

# hurddle car related
h2x = random.randrange(0, 500)
h3x = random.randrange(500, 1000)
h2y = -10
h3y = -10

over = 'over.jpg'
over1 = pygame.image.load(over)

score = 0
dbg = False
pause = False
car_move = True
p1 = pygame.image.load('pause.jpg')

r1 = random.randint(600, 750)
r2 = random.randint(600, 750)

font = pygame.font.Font('freesansbold.ttf', 32)
# for playing back ground sound
if 1 == 1:
    pygame.mixer.Channel(1).play(pygame.mixer.Sound('AMMZJ3.mp3'))

screen = pygame.display.set_mode((width, height))
```



```
print(Goal)

while whole_run:
    for event in pygame.event.get():

        if event.type == pygame.QUIT:
            whole_run = False

            pygame.mixer.Channel(1).play(pygame.mixer.music('AMMZJ3.mp3'))

        if event.type == pygame.KEYDOWN and (event.key == K_LEFT):
            game = True
            game_over = False
            velx -= 100
        if event.type == pygame.KEYDOWN and (event.key == K_RIGHT):
            game = True
            game_over = False
            velx += 100
        if event.type == pygame.KEYDOWN and (event.key == K_p):
            game == False
            pause = True

        if event.type == pygame.KEYDOWN and (event.key == K_SPACE):
            game == True
            pause = False
            game_over = False

        if event.type == pygame.KEYDOWN and (event.key == K_d):
            dbg = True
```

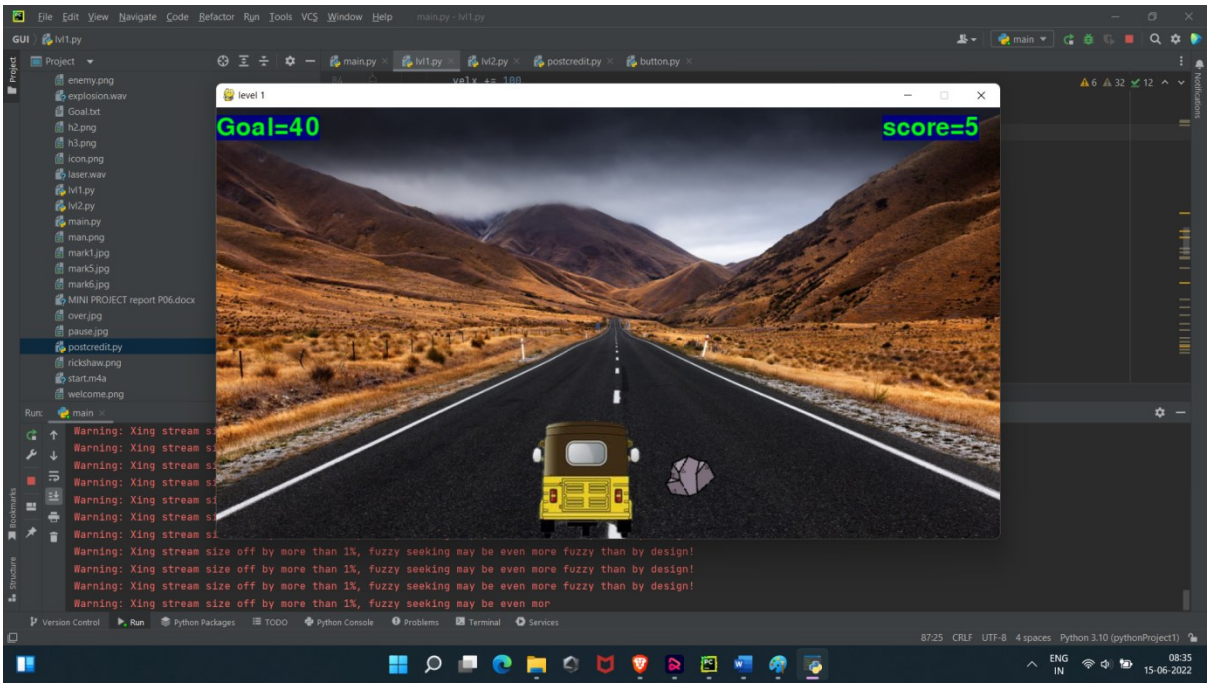


```
        screen.blit(h2, (h2x, h2y))
        screen.blit(h3, (h3x, h3y))

    if game == True and pause == False:
        screeny += s1
        vely -= 5
        h2y += 5
        h3y += 5
    if score > int(Goal):
        Goal = score
        print(Goal)
        while True:
            from lvl2 import Game
            g = Game
            while g.running:
                g.playing = True
                g.gameloop()

    if vely == 390:
        vely = 395
    if screeny == 300:
        screeny = 0
    if (h2y >= 700 and game == True and game_over == False and pause == False):
        score += 0
        h2y = h2y - r1
        h2x = random.randint(0, 500)

    if (h3y >= 700 and game == True and game_over == False and pause == False):
        score += 5
        h3y = h3y - r2
```

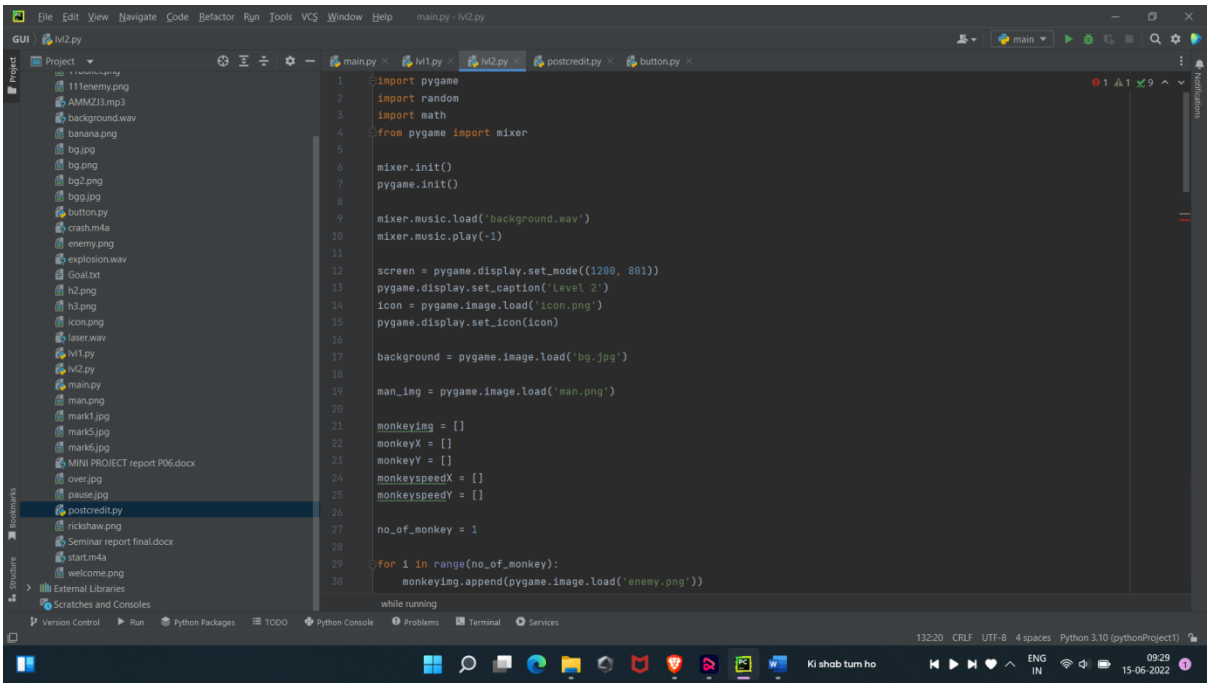


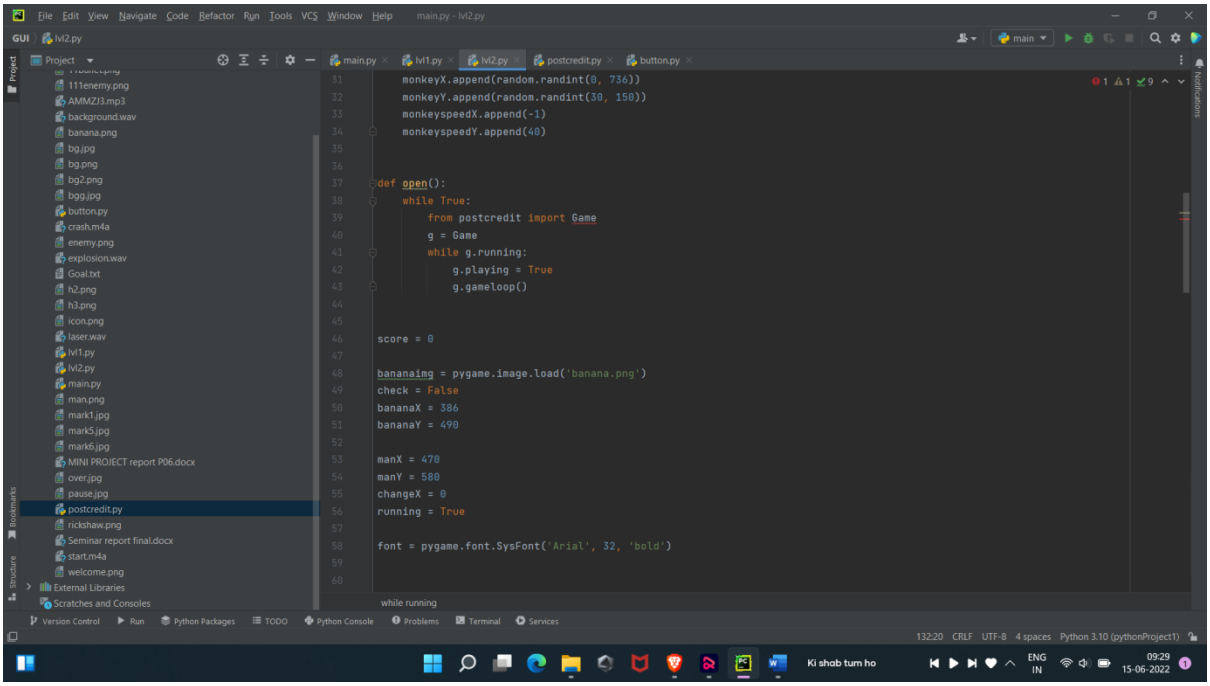
```
        score = 0
        game_over = True
        pygame.mixer.Channel(1).play(pygame.mixer.Sound('crash.m4a'))
    if game_over == True:
        screen.blit(over1, (0, 0))
        with open("Goal.txt", "w") as f:
            f.write(str(Goal))

    if game == False:
        screen.blit(w1, (0, 0))
    if pause == True:
        screen.blit(p1, (0, 0))
    if dbg == True:
        text = font.render("fps=" + str(fps), True, green, blue)
        screen.blit(text, (850, 50))
    if game == True and velx >= 900:
        velx -= 20
    if game == True and velx <= 0:
        velx += 20

    green = (0, 255, 0)
    blue = (0, 0, 128)

    text = font.render("score=" + str(score), True, green, blue)
    screen.blit(text, (850, 10))
    text = font.render("Goal=" + str(Goal), True, green, blue)
    screen.blit(text, (0, 10))

    pygame.display.update()
    fps_clock.tick(fps)
```

Output for Level 1:

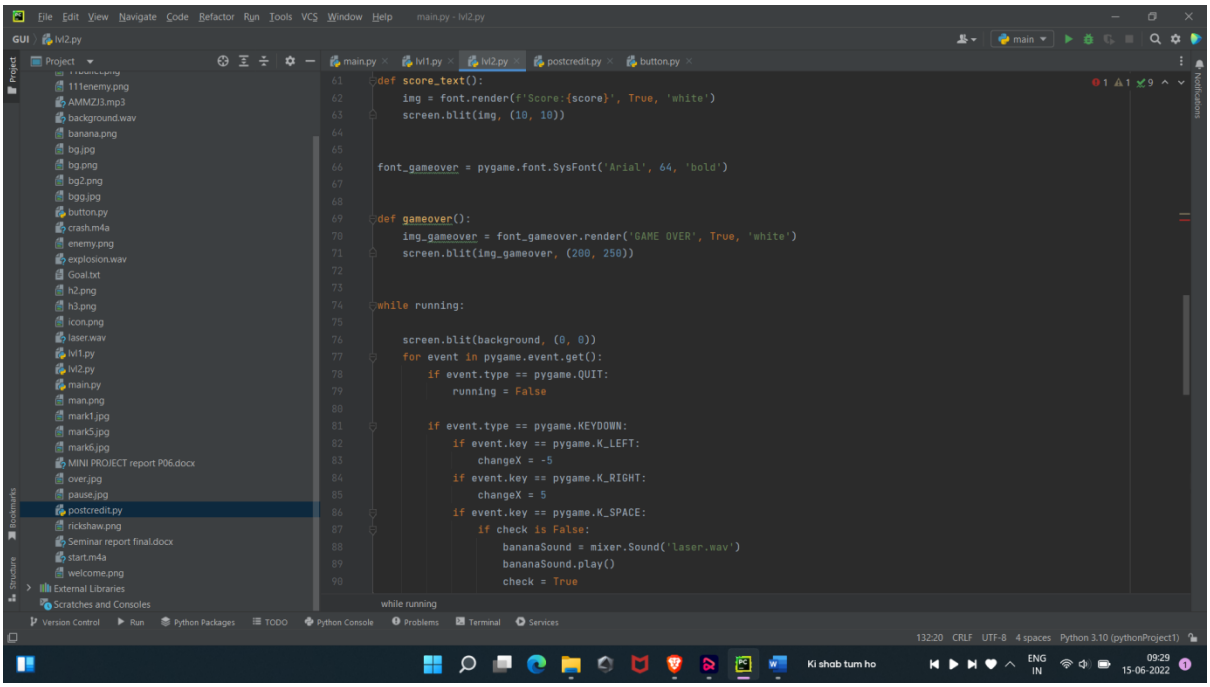


Level 2 Source Code:

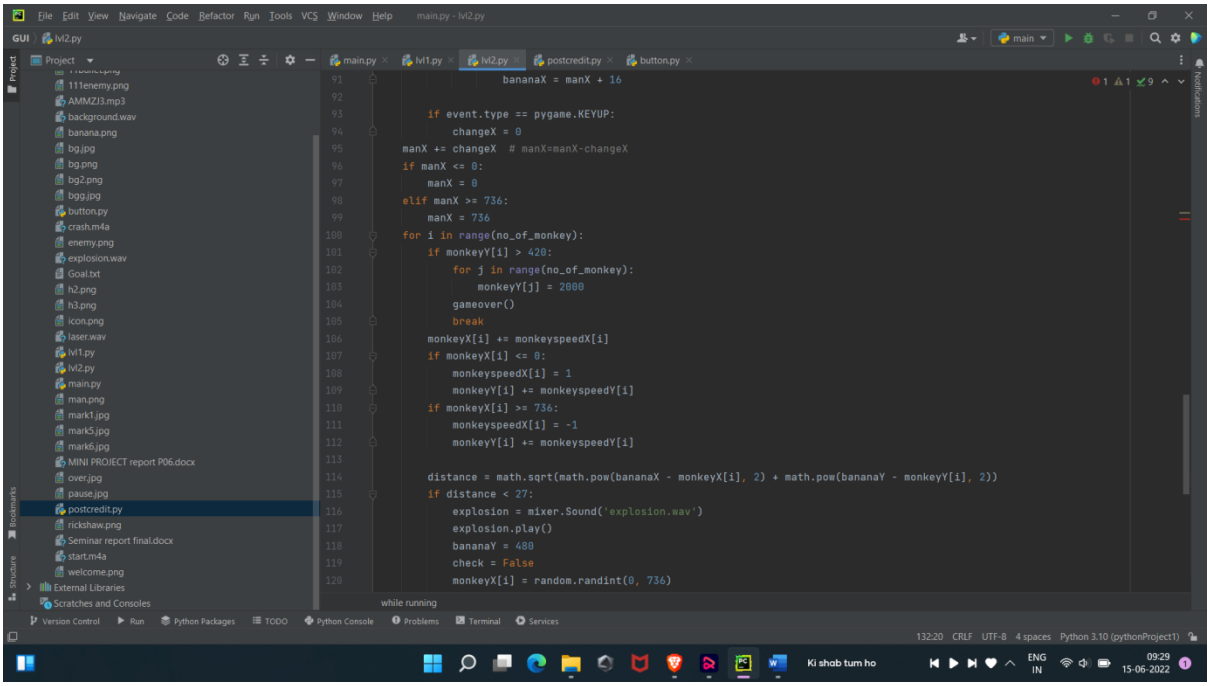


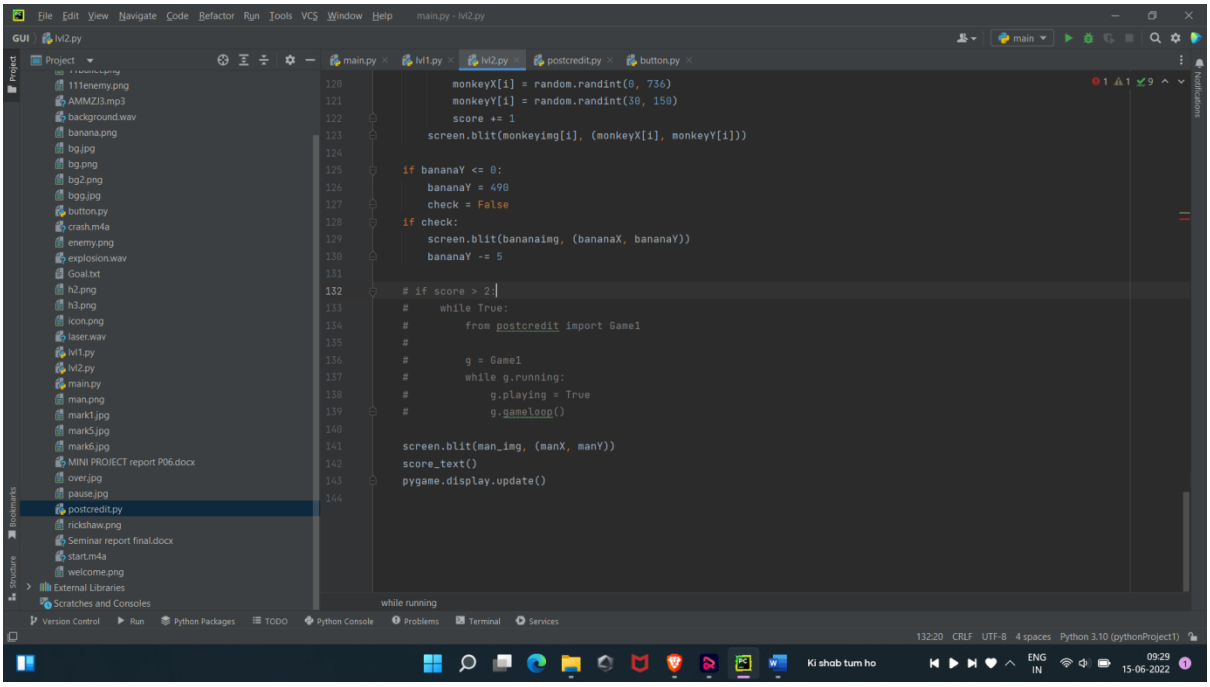


```
monkeyX.append(random.randint(0, 736))
monkeyY.append(random.randint(30, 150))
monkeyspeedX.append(-1)
monkeyspeedY.append(40)


def open():
    while True:
        from postcredit import Game
        g = Game
        while g.running:
            g.playing = True
            g.gameloop()


score = 0

bananaimg = pygame.image.load('banana.png')
check = False
bananaX = 386
bananaY = 490

manX = 470
manY = 580
changeX = 0
running = True

font = pygame.font.SysFont('Arial', 32, 'bold')
```



```
def score_text():
    img = font.render(f'Score:{score}', True, 'white')
    screen.blit(img, (10, 10))


font_gameover = pygame.font.SysFont('Arial', 64, 'bold')


def gameover():
    img_gameover = font_gameover.render('GAME OVER', True, 'white')
    screen.blit(img_gameover, (200, 250))


while running:

    screen.blit(background, (0, 0))
    for event in pygame.event.get():
        if event.type == pygame.QUIT:
            running = False

        if event.type == pygame.KEYDOWN:
            if event.key == pygame.K_LEFT:
                changeX = -5
            if event.key == pygame.K_RIGHT:
                changeX = 5
            if event.key == pygame.K_SPACE:
                if check is False:
                    bananaSound = mixer.Sound('laser.wav')
                    bananaSound.play()
                    check = True
```


File Edit View Navigate Code Refactor Run Tools VCS Window Help
main.py - lvl2.py
GUI
lvl2.py
main.py
lvl1.py
lvl2.py
postcredit.py
button.py
Project
111enemy.png
AMMZJ3.mp3
background.wav
banana.png
bg.jpg
bg.png
bg2.png
bgg.jpg
button.py
crash.m4a
enemy.png
explosion.wav
Goal.txt
h2.png
h3.png
icon.png
laser.wav
lvl1.py
lvl2.py
main.py
man.png
mark1.jpg
mark5.jpg
mark6.jpg
MINI PROJECT report P06.docx
over.jpg
pause.jpg
postcredit.py
rickshaw.png
Seminar report final.docx
start.m4a
welcome.png
External Libraries
Scratches and Consoles
bananaX = manX + 16
if event.type == pygame.KEYUP:
changeX = 0
manX += changeX # manX=manX-changeX
if manX <= 0:
manX = 0
elif manX >= 736:
manX = 736
for i in range(no_of_monkey):
if monkeyY[i] > 420:
for j in range(no_of_monkey):
monkeyY[j] = 2000
gameover()
break
monkeyX[i] += monkeyspeedX[i]
if monkeyX[i] <= 0:
monkeyspeedX[i] = 1
monkeyY[i] += monkeyspeedY[i]
if monkeyX[i] >= 736:
monkeyspeedX[i] = -1
monkeyY[i] += monkeyspeedY[i]
distance = math.sqrt(math.pow(bananaX - monkeyX[i], 2) + math.pow(bananaY - monkeyY[i], 2))
if distance < 27:
explosion = mixer.Sound('explosion.wav')
explosion.play()
bananaY = 480
check = False
monkeyX[i] = random.randint(0, 736)
while running
Version Control
Run
Python Packages
TODO
Python Console
Problems
Terminal
Services
132:20 CRLF UTF-8 4 spaces Python 3.10 (pythonProject1)
Ki shab tum ho
ENG
IN
09:29
15-06-2022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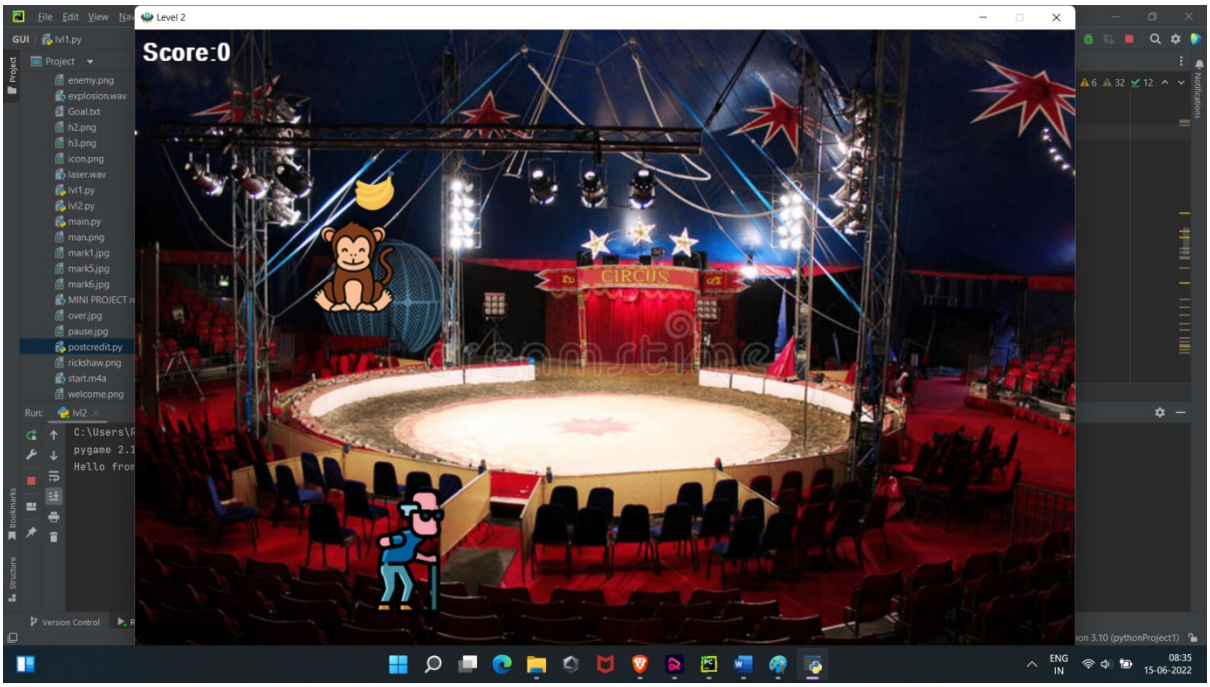
button.py
crash.m4a
enemy.png
explosion.wav
Goal.txt
h2.png
h3.png
icon.png
laser.wav
lvl1.py
lvl2.py
main.py
man.png
mark1.jpg
mark5.jpg
mark6.jpg
MINI PROJECT report P06.docx
over.jpg
pause.jpg
postcredit.py
rickshaw.png
Seminar report final.docx
start.m4a
welcome.png
External Libraries
Scratches and Consoles
monkeyX[i] = random.randint(0, 736)
monkeyY[i] = random.randint(30, 150)
score += 1
screen.blit(monkeyimg[i], (monkeyX[i], monkeyY[i]))
if bananaY <= 0:
bananaY = 490
check = False
if check:
screen.blit(bananaimg, (bananaX, bananaY))
bananaY -= 5
if score > 2:
while True:
from postcredit import Game1
#
# g = Game1
# while g.running:
# g.playing = True
# g.gameloop()
screen.blit(man_img, (manX, manY))
score_text()
pygame.display.update()
while running
Version Control
Run
Python Packages
TODO
Python Console
Problems
Terminal
Services
132:20 CRLF UTF-8 4 spaces Python 3.10 (pythonProject1)
Ki shab tum ho
ENG
IN
09:29
15-06-2022

Output:



Advantages and Disadvantages

Advantages:

1.Improved vision-studies suggest that game players may get better vision. they have been shown to increases ability to distinguish suitable differences in shades of gray.

2.Brain booster – playing game directly impact on regions of the brain responsible for memory, spatial orientation, information organizations, and fine motor skill.

3.Improveslife skills –

It involves taking risks, and the ability to strategize

, It give patience , perseverance and right judgment.

4. May ease anxiety and depression.

5.Make ability to make innovations.

Disadvantages:

1. Addiction –

This is an major disadvantage of any game , but it is totally depends on us .

2.Social replacement –

It mainly affect on real time human connections. people find themselves playing hours upon hours of game may find losing touch with the relationships.

3. Obesity

New studies show that the risk of being overweight increases with every hour people spend on virtual play. Lack of motion and overplaying lead to muscle pain as well

4. Stress

game addiction could lead to other levels of psychological stress as well. Gamers may suffer from low self-esteem, have social anxieties, or even suffer from depression.

Excessive gaming can also inspire feelings of guilt and shame. It is possible that uncontrolled gaming could enhance the signs and symptoms of other mental disorders.

5. Could Limit Academic Process

Although v games can improve the strategic thinking decision-making process, they can also deteriorate them.

Students who use their free time to video games can struggle to keep up with school/college. Most gamers have been seen to procrastinate on their studying, or they simply ignore a deadline just to play their favorite game.

6. games aren't bad for you as long as you aren't overdoing. So, enjoy your downtime and relax with your games but get out there and keep your life as diverse as possible as well, because eventually, you have got to win the game of life.

Conclusion

- Game Design is ultimately a Creative process And everyone develops differently.
- End product is an Fun ,playing game Make fun and enjoyment.
- Thus we have implemented that our final game in python using Pygame and its associative libraries , and create GUI, and levels ,level shifting in game after wining or losing game.
- This Is our overall work/development in project.

References

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