PYTHON PROJECT REPORT

(Project Term Aug – Dec , 2020)

STICKMAN GAME USING PYGAME

SUBMITTED BY:

NAME OF STUDENT	REG. NO	SECTION	GROUP
Chekka Sri Ram Atchut	11904457	K19JC	1
Pathan Asif Khan	11904455	K19JC	1
Sarakanam Sai Pavan	11904618	K19JC	2

SCHOOL OF COMPUTER SCIENCE ENGINEERING

ABSTRACT

This report introduces the process of creating a computer action game named as **The Stickman Game** in python programming language using the module pygame. The objective of this game is that player must try to escape from the enemy(computer) which comes in between the player's path and the player has to kill the enemy with the help of bullets. As the player tries to kill it, the health of the enemy decreases slowly and when its health becomes zero enemy will die, thus victory for the player. The implementation is done by using a python library called Pygame which is used to create games in python programming language.

ACKNOWLEDGEMENT

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INTRODUCTION

PYTHON

Python is a interpreted language, High level general purpose programming language created by gguido van Rossum and first released in 1991Python has design philosophy that emphasises code readability notably using significant white space it provides constructs that enable clear programming on both small and large scales.

PY-GAME

Pygame is a cross platform set off Python modules designed for writing video games it includes computer graphics and sound libraries designed to be used with the Python programming language.

OBJECT OREINTED PROGRAMMING

OOP is a method of structuring a program by bundling related properties and behaviors into individual **objects**. Conceptually, objects are like the components of a system.

An object contains data, like the raw or pre-processed materials at each step on an assembly line, and behaviour, like the action each assembly line component performs.

This project report will introduce how to build stick man game using the pygame library. Pygame is a cross platform set off Python modules designed for writing video games it includes computer graphics and sound libraries designed to be used with the Python programming language . In the project report we will demonstrate details of using pygame to build one basic computer game . We will look forward to add some more functionalities in our game like adding multiplayer.

REVIEW OF LITERATURE

During our project we have researched about the python library-Pygame. Pygame is a cross platform set off Python modules designed for writing video games it includes computer graphics and sound libraries designed to be used with the Python programming language. We have also implemented the use of object oriented programming and functions in our code to make it more accurate.

OBJECTIVE

The main objective of this project is to learn how to use the pygame library to make more interesting and creative video games in python programming language.

MATERIALS AND METHODS

The materials which we require to do this project is- A pc (with good internet connection) , a good python idle to run the code. We have used background music in our game, so it is adviced to have good internet connection so that music can be played in the background or else the code will run without music.

The methods we used in our project are pygame library, classes and objects, functions. Code consists of various classes. We have created separate classes for each element like class for player, class for enemy, class for music player and so on.

SNAPSHOTS OF MOVEMENTS

BACKGROUND

 LEFT MOVEMENT(1) OF PLAYER

 LEFT MOVEMENT(2) OF PLAYER

 LEFT MOVEMENT(3) OF PLAYER

 LEFT MOVEMENT(4) OF PLAYER

 RIGHT MOVEMENT(1) OF PLAYER

 RIGHT MOVEMENT(2) OF PLAYER

 RIGHT MOVEMENT(3) OF PLAYER

RIGHT MOVEMENT(4) OF PLAYER

LEFT MOVEMENT(1) OF ENEMY

LEFT MOVEMENT(2) OF ENEMY

LEFT MOVEMENT(3) OF ENEMY

LEFT MOVEMENT(4) OF ENEMY

LEFT MOVEMENT(5) OF ENEMY

RIGHT MOVEMENT(1) OF ENEMY

RIGHT MOVEMENT(2) OF ENEMY

RIGHT MOVEMENT(3) OF ENEMY

<u>DISCUSSION</u>

In this section we will see the working of our game. This game is purely written in python code by using the pygame library. The stickman game is computer action game. The main goal of this game is to escape from the enemy.

The enemy's aim will be to kill the player. So we should try to escape from him. For that there are few commands, like

- The up arrow button it will jump.
- The right arrow button is used to move the player forward.
- The left arrow button is used to move the player backward.
- Space bar is used to fire the bullets towards the enemy.

If we collide with the enemy, our score will be deducted by -5 points and the time increases by 10 microseconds. Death of enemy will occur after firing 10 bullets towards it. If we keep on colliding with the enemy our score will get dropped in negative.

RESULT

      Fom this project we have learnt how to create good, clean and creative video games using the python library – Pygame. We have also learnt the usage of object oriented programming and functions in creating the video games.

We have learnt the movement, motions of the players in the game and we will look forward to make more games by extended the functionalities like multiplayer, online mode etc.

<u>REFERENCES</u>

❖ https://www.geeksforgeeks.org/introduction-to-pygame/

❖ https://www.python.org/doc/

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❖ Programming and problem solving with Python - Ashok Kamthane, Amit Kamthane