

PyGame- SDES Battle

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github code link:

https://github.com/amankhanna89/ae_663_project

Introduction

- ▶ We are making a game in python : **SDES Battle** using pygame library.
- ▶ multiple stages in which obstacles(examinations and assignments) are appearing in screen- move from Right to Left- starting at random position
- ▶ Player (student) has to tackle them by firing.
- ▶ Score obtained will be displayed on top-right.
- ▶ After completion of each stage, notification window will be appeared.

Features

- ▶ Upon user input (Clicking on *Begin*), the game will start.
- ▶ Obstacles of different shape will move from right to left.
- ▶ Player has to fire to destruct these obstacles.
- ▶ If fire passes within the dimension, of obstacles, destruct the object and display the score on the top
- ▶ If any obstacle is missed, reduce the number of attempts (initially, the attempts=3)
- ▶ If the attempts are over, Display *Game Over*
- ▶ As the stage progresses,
 1. The speed of the obstacle increases.
 2. The background changes, and its speed also increases.
 3. Minimum threshold score required to clear the level increases.
- ▶ After completion of stage each stage, message will be displayed on the screen.

Libraries used and their Features

- ▶ pygame
 1. Initialize all the gaming features: display, background
 2. Includes sound effects.
 3. Continuously scan the keyboard and take action accordingly.
- ▶ xlib
 - 1.
- ▶ serge
 - 1.
- ▶ os
- ▶ sys
- ▶ math
- ▶ subprocess

Programming Efforts

- ▶ Initialize all the global variables.
- ▶ Initialize all the local variables upon function call: reset
- ▶ Initialize gaming window using pygame modules
- ▶ background image initialization and movement using continuously shifting of images.
- ▶ Fire object:
 1. Define a class called *make_fire*.
 2. Define different parameters for fires, such as shape, color, speed
 3. Construct the fire object when fire-key is pressed.
 4. Destruct the fire object when target is destroyed or the fire reaches to right end.

Programming Efforts (contd.)

- ▶ Target object:

1. Define a class called *make_target*.
2. Define different parameters for targets, such as images, score,
3. Construct the target object randomly and in random number on the screen.
4. Take multiple image for each target so that it seems moving.
5. Destruct the target object when its co-ordinate matches with fire or the target reaches to left end.
6. if the object is destructed through fire, increase the score equal to member score for that object.

- ▶ Key pressing and functioning

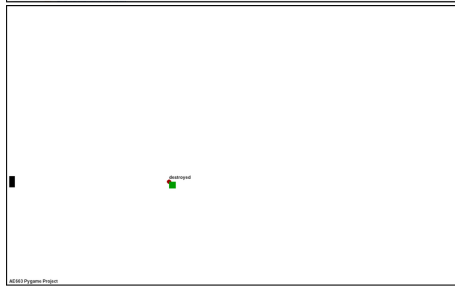
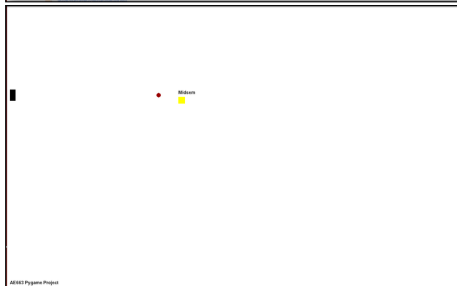
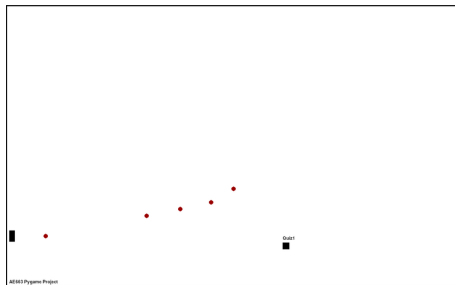
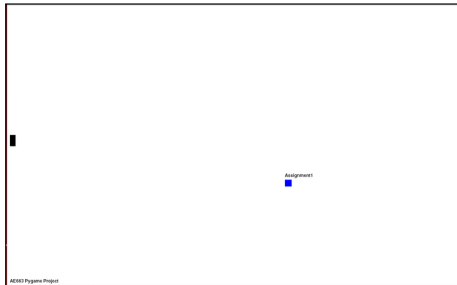
- ▶ Player movement

- 1.

- ▶ fire object is generated with its position same as player position when fire key is pressed.

Keys Functioning

Work Done



Future Work (Depending on time permit)

- ▶ Graphics movement on the background
- ▶ Complex firing can be made by making player static and firing at different angles.
- ▶ Add sound for firing and obstacle destruction.