**ES112 PROJECT – SPIKE DODGER**

* **Participants of the team:**

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We have made a game named "Spike Dodger" using the python module called pygame. To begin with the game, the user has to run the python file named as “restart.py”.

* **Introduction to the game:**

The game begins with a wallpaper showing the name of the game and providing the basic idea of the game.

* It is a single player game. In this game, spikes are falling randomly with increasing speed.
* The player has to dodge these spikes. If the player strikes the spike, then he is out.
* The score is displayed on the right (below) of the screen, and the high score is shown at the top right side of the screen.
* **Game controls:**

1. The left and right arrow keys are used to move the player left and right respectively.
2. After the game is over, pressing space key will restart the game.
3. To quit the game in between, press the close button of the window.

* **Game rules:**

The score will increase equally to the number of spikes the player dodges.

The player while dodging the spikes has given an opportunity to collect the bonus bag to increase the score easily.

But as the score increases, the speed of spike fall increases linearly.

The user can quit the game in between by pressing the close button of the window.

* **Unique features of the game:**
* As the player completes a half century, the background wallpaper changes and the player reaches a different place. A sound also occurs.
* We have used the sound effects in the whole game. Throughout the whole game, music is played to make the user enjoy the game. A sound occurs as the player collides with the spike indicating the end of the game and a sound occurs as the player catches a bonus bag indicating the collection.
* The score is stored in a list after each play of the game. A text file is used for storing the scores. To open the text file and to use it, we have introduced the Json module of python.
* As the score increases, the speed also increases which makes the game more interesting. The player has no option to reduce the speed of the spikes and hence has to face them.
* The game restarts by the use of another python file which executes the main file.
* **What do we learn from this project?**
* The project that we have made involves the use of the game and other different modules of the python.
* **We learned that game is formed by using different frames as during the implementation of the bonus bag in the game, on giving the bonus of 5 it was generating the bonus of greater points. So from that, we got the idea of these frames. So in debugging this type of error and other different errors made us learn a lot.**
* It was an amazing and learning experience that teaches us a lot of python.
* The implementation of unique features of the game as mentioned above requires a good understanding of the pygame and python functions that we learned.
* **To restart the game, we made a new python file instead of the main game file, which executes the main file. So we also learned the execution of a python file inside the other files.**

We saw the following video to get a basic idea for making this game.

Reference: <https://www.youtube.com/watch?v=-8n91btt5d8>