**Project Report for ES112 Project:**

**Game: Slice Master**

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Slice Master is a simple, single-player and user-friendly PyGame based game.

**Working Mechanism**: Following are the rules to be followed while playing the game:

* The user is required to slice the fruits to earn points
* There are three different varieties of fruits available to slice
* The player must avoid slicing the bombs, as slicing the bombs turns off the game.
* 10 points are obtained for each fruit sliced.
* Sound can be heard after slicing each fruit
* The points get added up after each round when played successively
* The user’s objective is achieve as high a score as possible

**Controls:**

* Any key can be used to start the game
* Left and right arrow keys are used to move the knife laterally
* There is no control on the movement on the falling fruits and bombs, as they have been initialized by the computer itself.
* No mouse is required to play the game

**Modules used:**

* Pygame
* Random
* Os

**User defined functions used:**

* textbox(surf,text,size,x,y)

It is being used to initialize the settings for displaying text by giving suitable commands.

* start\_scr()

it is used to pop up the start screen at the beginning of the game to display title and instructions to the user. It is also being used at a later stage when the game gets over.

**Object Oriented Programming features used:**

* Classes and objects used

Five classes have been created, namely: Player, Fruit2, Fruit3, Fruit 4 and Bomb. All the classes contain two functions: one for initializing the variables and declaring some constants; second for updating the value of these variables whenever required.

* Modularity is used wherever required

We have made blocks of code for effective navigation and error-debugging

* Encapsulation through classes

All the contents of the variables which are related to a specific feature have been encapsulated within a class.

New concepts learned: We learnt one of the most fun and interactive game development module available in Python, i.e., PyGame. Through PyGame we have incorporated the whole game environment by utilizing its built-in functions. These have really shaped the program effectively and has given proper organization. We have also been able to use the graphics and sound effects to make the game more exciting and engaging.

**Limitations**

* The start and the end screen are similar
* The score is not initialized to zero when played continuously
* Simple use of graphics
* Bonus and level ups have been avoided to make the game appear easy to play and understand it well.

**Acknowledgement**

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(Kidscancode, n.d.)

# References

*Kidscancode*. (n.d.). Retrieved from https://www.youtube.com/channel/UCNaPQ5uLX5iIEHUCLmfAgKg