GAME : 2048

ABSTRACT:-

2048 is a single-player sliding tile puzzle video game written by Italian web developer Gabriele Cirulli and published on GitHub. The objective of the game is to slide numbered tiles on a grid to combine them to create a tile with the number 2048; however, one can continue to play the game after reaching the goal, creating tiles with larger numbers. It was originally written in JavaScript and CSS over a weekend, and released on 9 March 2014 as free and open-source software subject to the MIT License. Versions for iOS and Android followed in May 2014.

2048 was intended to be an improved version of two other games, both of which were clones of the iOS game Threes released a month earlier. Cirulli himself described 2048 as being "conceptually similar" to Threes. The release of 2048 resulted in the rapid appearance of many similar games, akin to the flood of Flappy Bird variations from 2013. The game received generally positive reviews from critics, with it being described as "viral" and "addictive"

LIBRARIES:-

Tkinter:-

Tkinter is a Python binding to the Tk GUI toolkit. It is the standard Python interface to the Tk GUI toolkit, and is Python's de facto standard GUI. Tkinter is included with standard GNU/Linux, Microsoft Windows and macOS installs of Python. The name Tkinter comes from Tk interface.

Tkinter Widget:-

In general, Widget is an element of Graphical User Interface (GUI) that displays/illustrates information or gives a way for the user to interact with the OS. In Tkinter , Widgets are objects ; instances of classes that represent buttons, frames, and so on.

We Used The Following In Our Project :

1.**Frame** : Python Tkinter Frame widget is used to organize the group of widgets. It acts like a container which can be used to hold the other widgets. The rectangular areas of the screen are used to organize the widgets to the python application.

2.**Label** : Tkinter Label is a widget that is used to implement display boxes where you can place text or images. The text displayed by this widget can be changed by the developer at any time you want. It is also used to perform tasks such as to underline the part of the text and span the text across multiple lines.

3.**Message Box** : Python Tkinter – Message Box Widget is used to display the message boxes in the python applications. This module is used to display a message using provides a number of functions.

Random:-

Python Random module is an in-built module of Python which is used to generate random numbers. These are pseudo-random numbers means these are not truly random. This module can be used to perform random actions such as generating random numbers, print random a value for a list or string, etc..

We used :

1.random.choice(list of numbers)

2.random.randint(start,end)

Geometry Management:-

Geometry Management
All Tkinter widgets have access to specific geometry management methods, which have the purpose of organizing widgets throughout the parent widget area. Tkinter exposes the following geometry manager classes: pack, grid, and place.

Here We Used pack() & grid() Methods Only

The pack() Method − This geometry manager organizes widgets in blocks before placing them in the parent widget.

The grid() Method − This geometry manager organizes widgets in a table-like structure in the parent widget.

Configure In Tkinter :-

config() method. This method is used for performing an overwriting over label widget.
config is used to access an object's attributes after its initialization

SCREENSHOTS:-

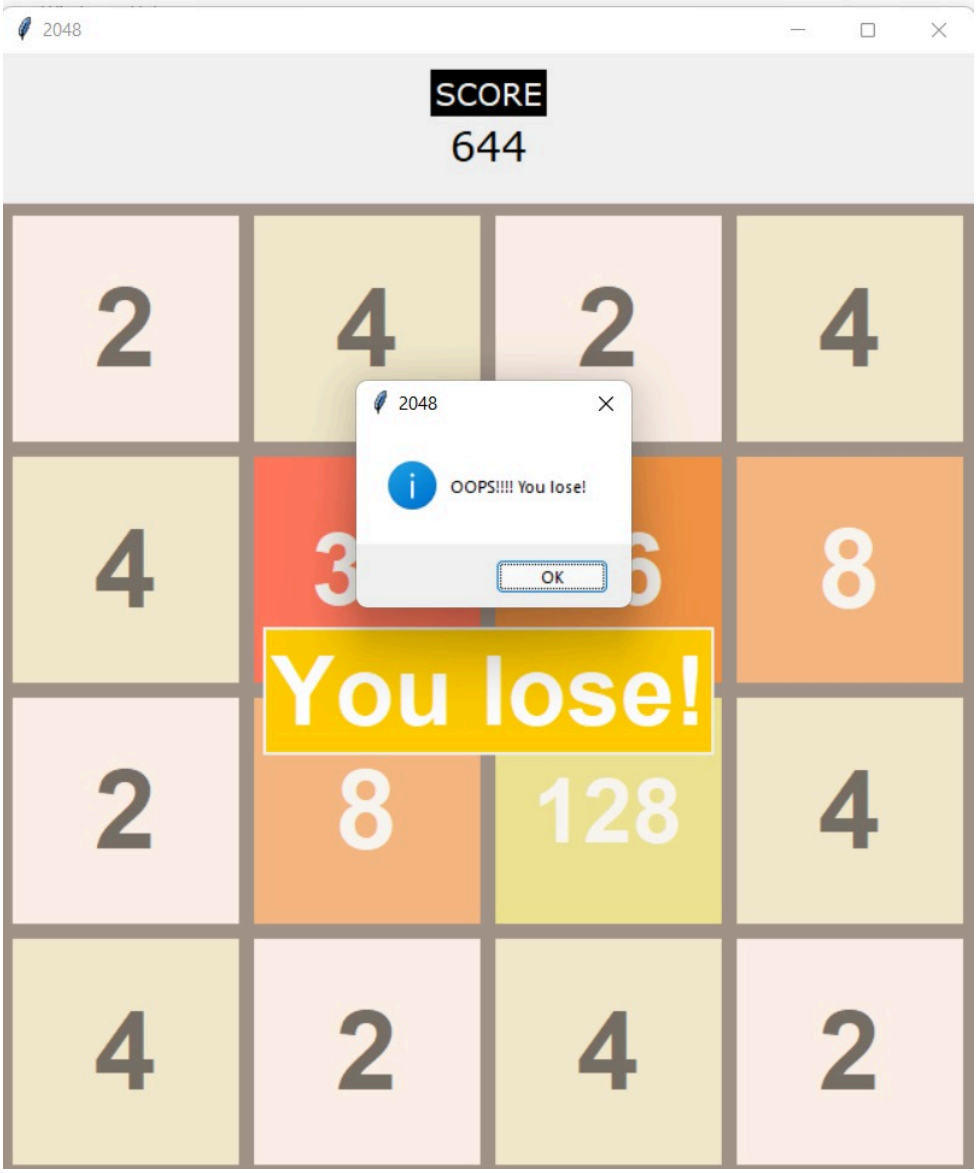
1.Beginning Of The Game:-

2.Winning Game:-

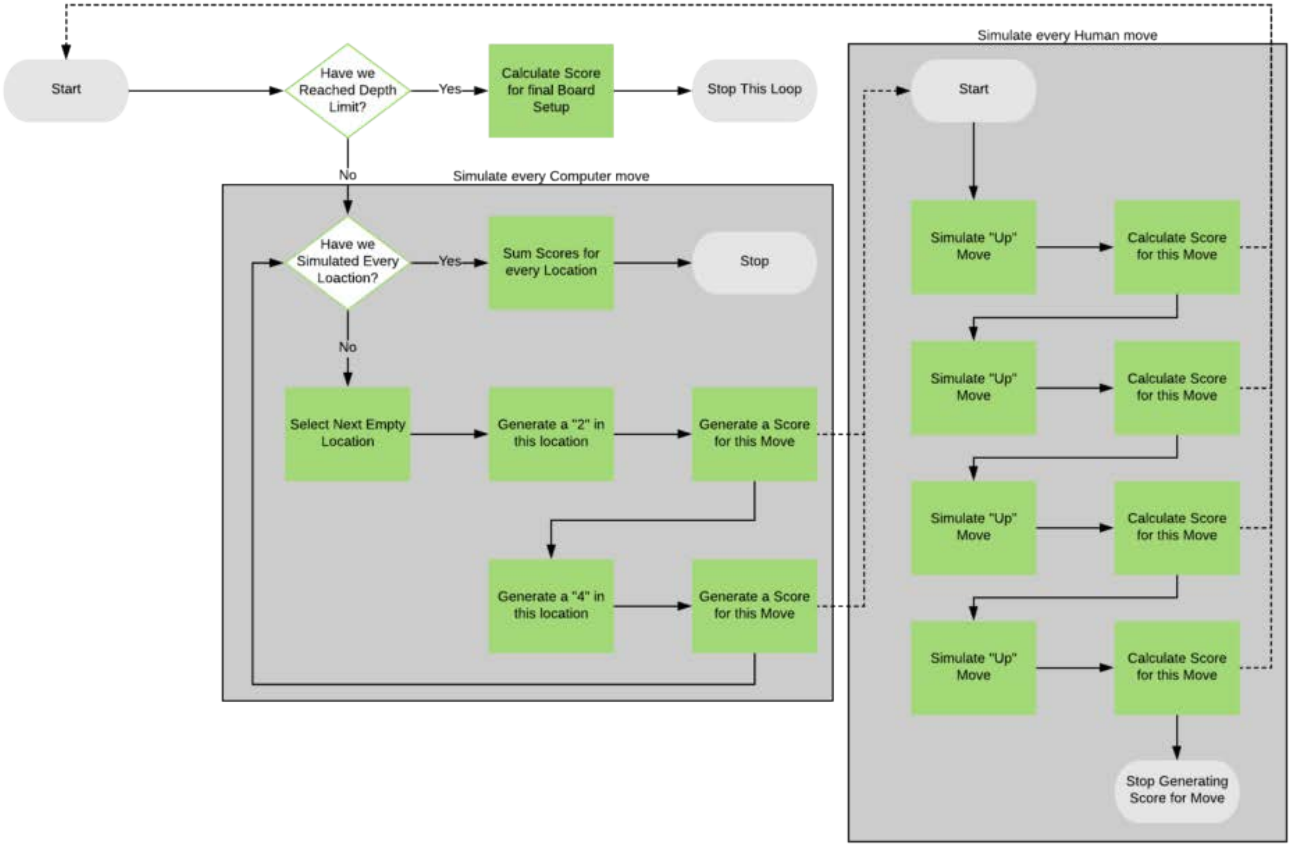
2.1.If Player Chooses Yes:-

2.2.If Player Chooses No:-

3.Losing Game:-



Flow Diagram:-



Conclusion:-

The purpose of this project was to explore the vast opportunities and features of the programming language python and especially tkinter module of python

Tkinter is excellent for small, quick GUI applications, and since it runs on more platforms than any other Python GUI toolkit, it is a good choice where portability is the prime concern we developed gaming logic skills and implemented GUI with the help of Tkinter which was very interesting as it contains many widgets through which GUI implementation is very feasible,compatible and easy and we would like to last but not least thank our lecturers and predecessors for giving us this opportunity as this project was very empowering & motivating for us

REFERENCES:-

To conduct this project the following tools have been used :

- Geeksforgeeks : https://www.geeksforgeeks.org/2048-game-in-python/
- Tkinter (Library) : https://docs.python.org/3/library/tkinter.html
- Random (Library) : https://www.tutorialsteacher.com/python/random-module

1.1 Youtube:-

We have used this side for our basis knowledge gain of the methods that will be used in the project

https://www.youtube.com/watch?v=b4XP2IcI-Bg

https://www.youtube.com/watch?v=VMP1oQOxfM0

1.2 Stackoverflow:-

We have used this site for solving our different problems which has occurred during this project.

https://stackoverflow.com/questions/34817328/creating-frames-in-tkinter/34817507

1.3 Python Tutorial:-

We have used this for reference.

https://www.pythontutorial.net/tkinter/tkinter-object-oriented-frame/