Algorithm Visualizers

A program to visualize different **searching (binary search, linear search etc.)** and **sorting algorithms (merge sort, quick sort etc.)** using python library Tkinter.

Abstract

The graphical user interface (GUI) is a form of user interface that allows users to interact with electronic devices through icons, tabs, audio indicators etc. A GUI based algorithm visualizer enables the user to visualize the process followed by different algorithms to arrive at the conclusion stage.

In the GUI, the first window is dedicated to select the algorithm type (searching or sorting). The second window provides the list of algorithms (merge, linear etc.) based on the type selected from the former window.

In the final window, the user can visualise the process followed and final result of the particular algorithm. The user can also vary the size of the array and the speed of the code in this window. Special tabs are also provided for entering the search element (in case of searching algorithms). The GUI is made user-friendly.

Rough timeline

- Starting 3-4 days we saw the videos on how to create a GUI using tkinter library. We also went through the logic of different algorithms.
- Then for the rest of time, we started experimenting and implementing different codes to create a user-friendly GUI and finally chose the best one.

References:

https://github.com/algorithm-visualizer/

https://github.com/DebRC/Algorithm-Visualizer