INTRODUCTION TO ALGORITHMS

Project Name: Sorting Algorithms Visualized

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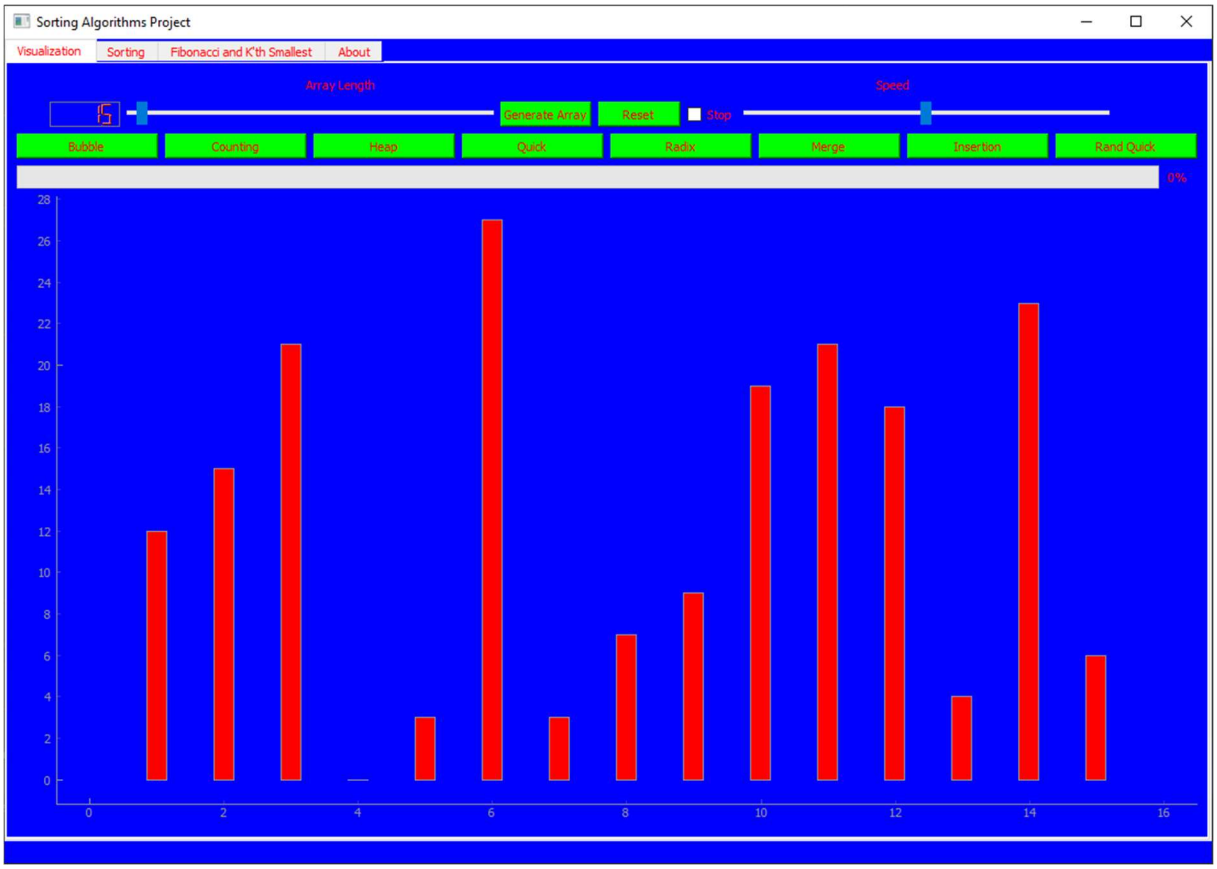


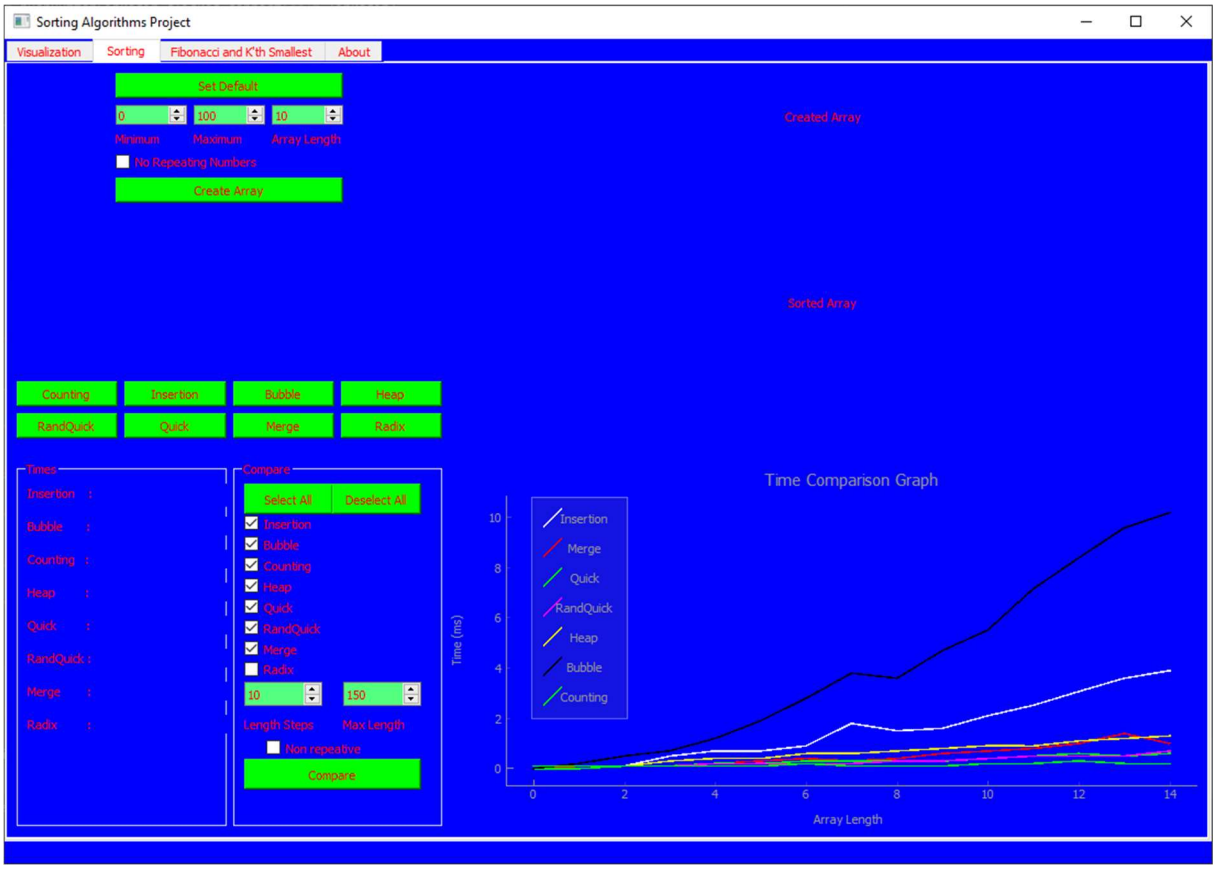
Array Length Slider : Select array length and Show it on the lcd that at the top right.
Speed Slider : Choose speed of the operation. There are 5 stage to be choosen(default = 2)

Buttons:

Generate Array : Creates array and plots it in the corresponding area.
Reset : Changes **Array Length slider, Speed slider, Progress bar, Stop checkbox** and **plot** to the startup stage.
Other Buttons(Bubble, Counting etc.) : Start process with corresponding sorting algorithm.

Stop Checkbox : Stops current process during checked.

Progress Bar : Shows percentage of current process.



Buttons

Set Default : Resets page to first stage.

Generate Array : Creates random array with corresponding selections.

Sorting Names(Counting, Insertion etc.) : Sorts unsorted array with corresponding algorithm and writes sorted array in Sorted Array section and writes elapsed time to corresponding area in

Times section

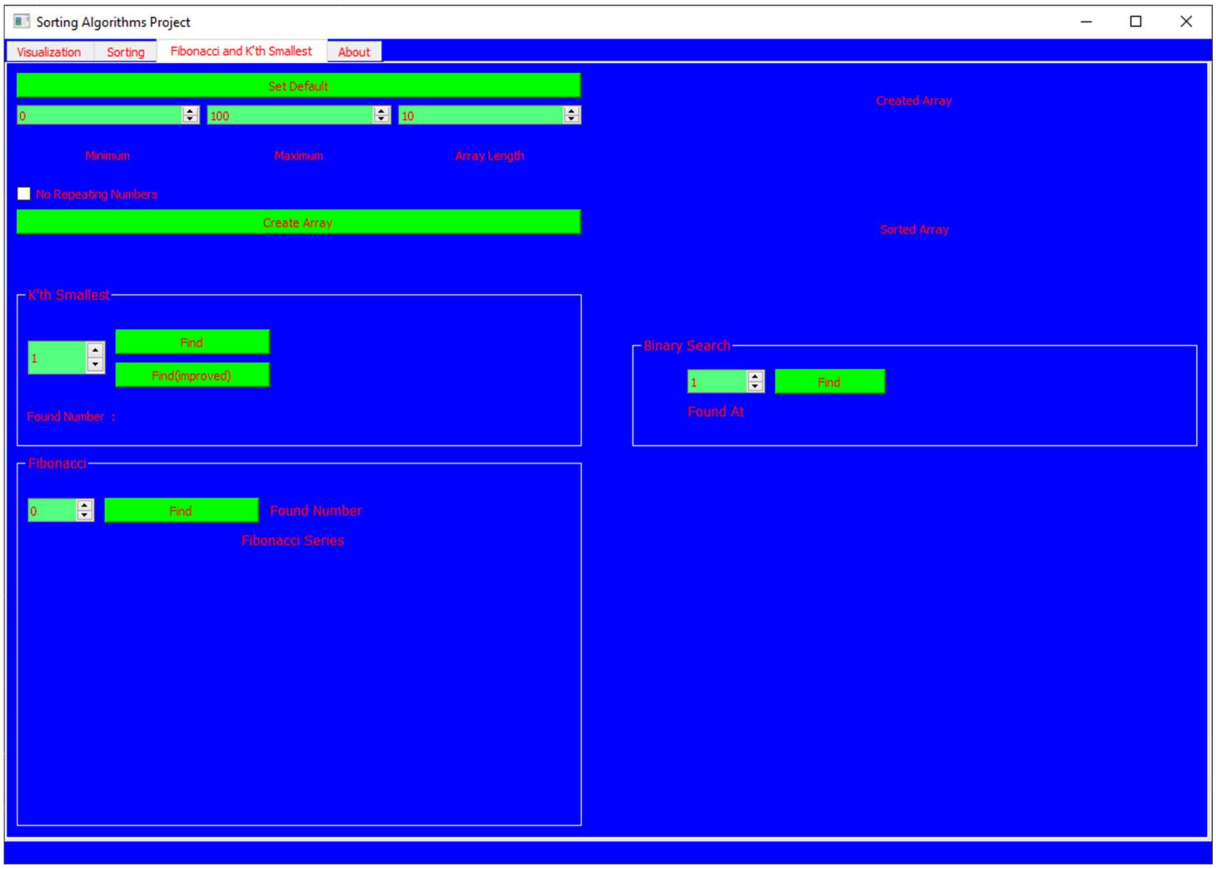
Select All : Change status to checked all checkboxes under the button except Non repeative.

Deselect All : Change status to not checked all checkboxes under the button except Non repeative.

Spin Boxes

Non Repeating Numbers : Do not allow repeating numbers when checked.

Non Repeative : Do not allow repeating numbers when checked.



Set Default Button : Resets pages to first stage.
Create Array : Creates random array with corresponding values set by spinboxes and sorts created array with insertion sorting algorithm and writes arrays in corresponding areas.

K'th Smallest Section

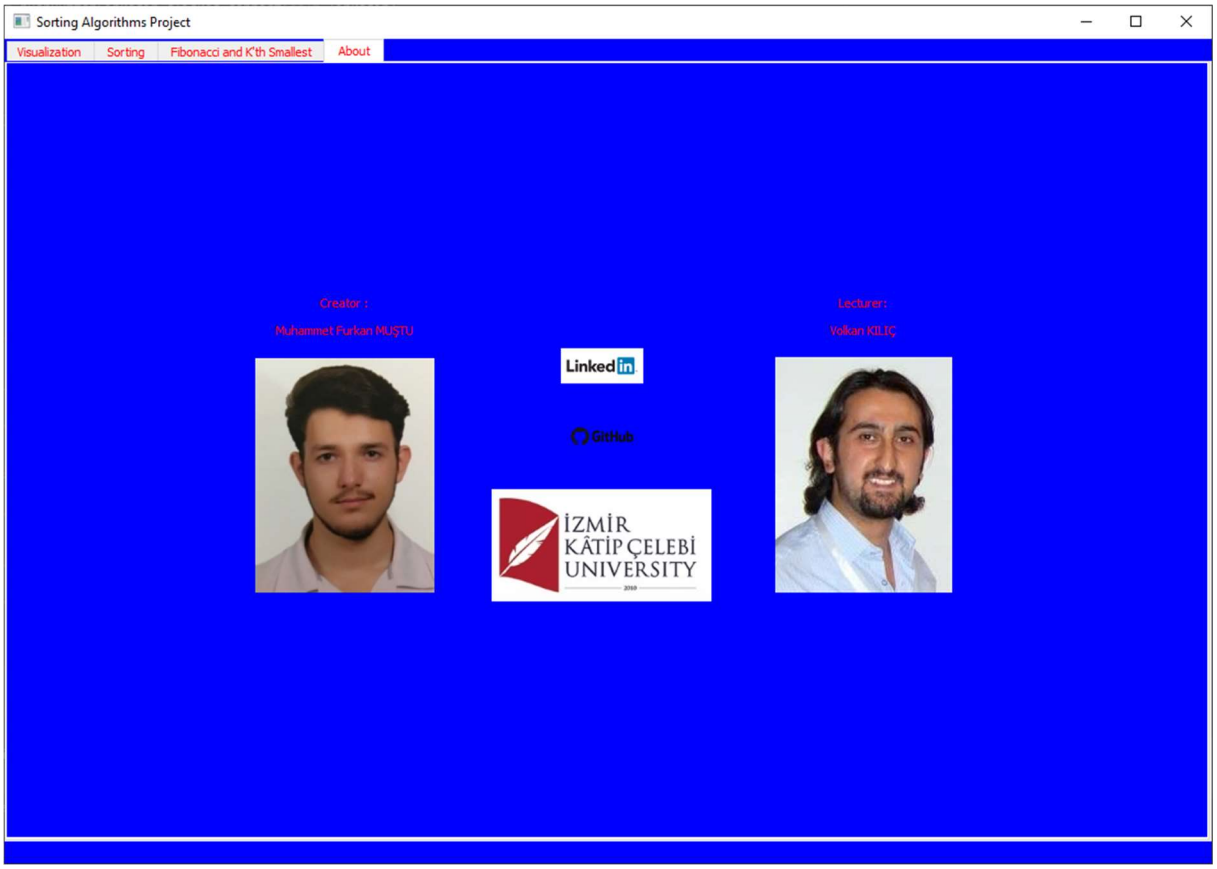
Find : Finds K'th smallest number in the sorted array.
Find(Improved) : Finds K'th smallest number in the sorted array with improved find algorithm.
Spinbox : Takes K number.(From 1 to (Array Length +1))

Fibonacci Section

Find : Calculates first i element of fibonacci series and displays it on the Fibonacci Series area and i'th element on the Found Number area.
Spinbox : Takes i number.(from 0 to 1000000)

Binary Search Section

Find : Seraches the given number in spinbox in the sorted array.
Spinbox : Takes number to search in the sorted array.(From **Minimum** spinbox to **Maximum** spinbox values)



Linkedin : Opens browser and go to linkedin page of creator.

Github : Opens browser and go to github page of creator.

İzmir Katip Çelebi University : Opens browser and go to university's web page.

Picture of Lecturer : Opens browser and go to personal information page of Lecturer.