

Binary Search Application:

User Guide

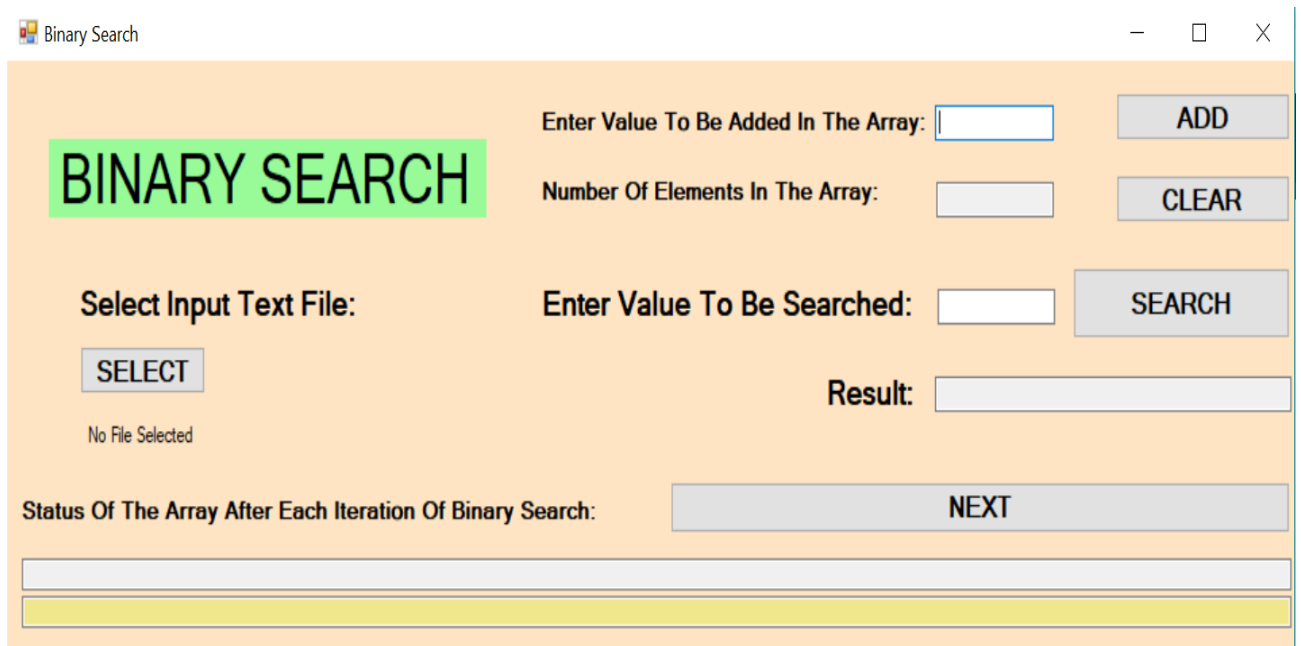
INTRODUCTION:

It is a Visual Basic.Net application to search for an element in an list using Binary Search Algorithm and show how the Binary Search Algorithm works.

USAGE:

People who want to search for a value in a list of similar values can use this application to get their job done instantaneously. Beginners who are interested in the Binary Search Algorithm, can use this application to see step-by-step process of how the Binary Search Algorithm works on different inputs.

INTERFACE:

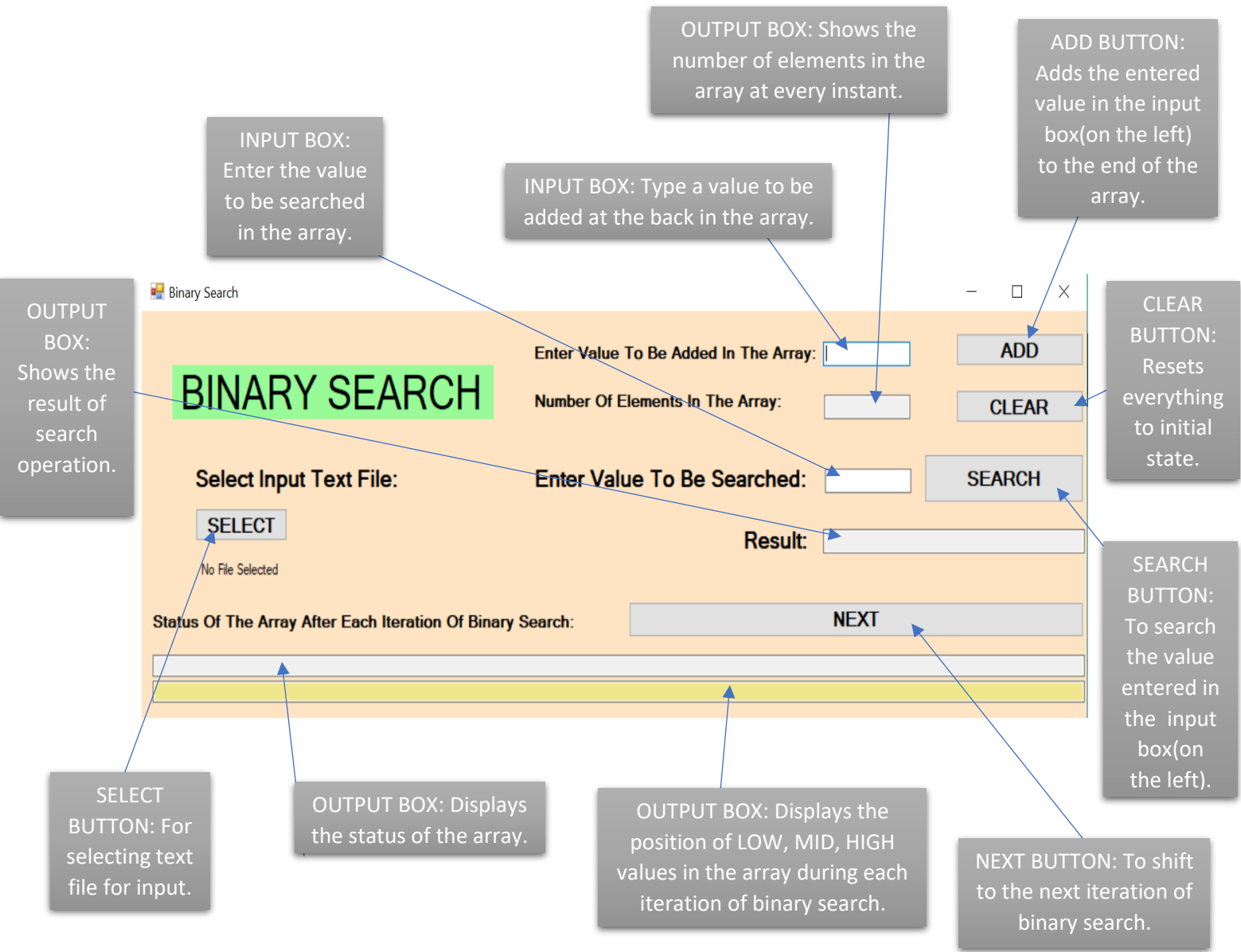


The screenshot shows a window titled "Binary Search" with a light orange background. The title bar includes standard Windows window controls (minimize, maximize, close). The main content area features a green rectangular box on the left with the text "BINARY SEARCH" in black. To the right of this box are several input fields and buttons. At the top right, there is a text input field labeled "Enter Value To Be Added In The Array:" followed by an "ADD" button. Below this is another text input field labeled "Number Of Elements In The Array:" followed by a "CLEAR" button. In the center, there is a text input field labeled "Enter Value To Be Searched:" followed by a "SEARCH" button. To the left of the "SEARCH" button is a "Select Input Text File:" label with a "SELECT" button below it. Below the "SELECT" button, the text "No File Selected" is displayed. To the right of the "SEARCH" button is a text input field labeled "Result:". At the bottom, there is a label "Status Of The Array After Each Iteration Of Binary Search:" followed by a "NEXT" button. Below the "NEXT" button are two horizontal bars: a white one on top and a yellow one on the bottom.

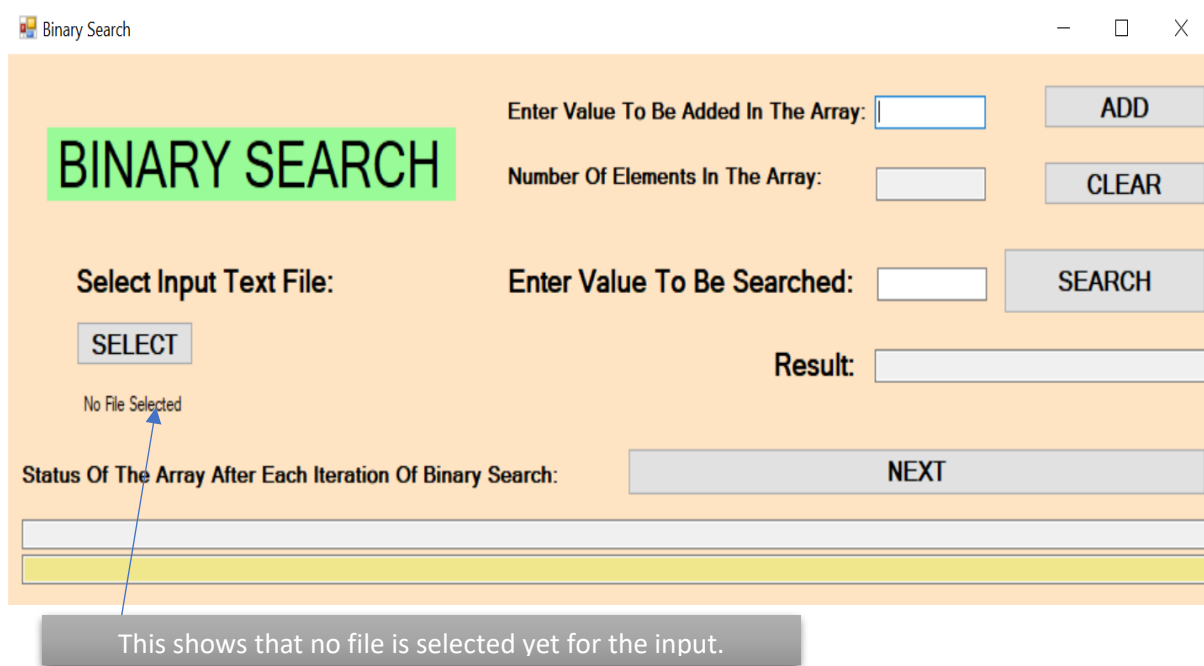
(Window Size: 1459, 568)

As can be seen in the diagram that the application contains three elements:

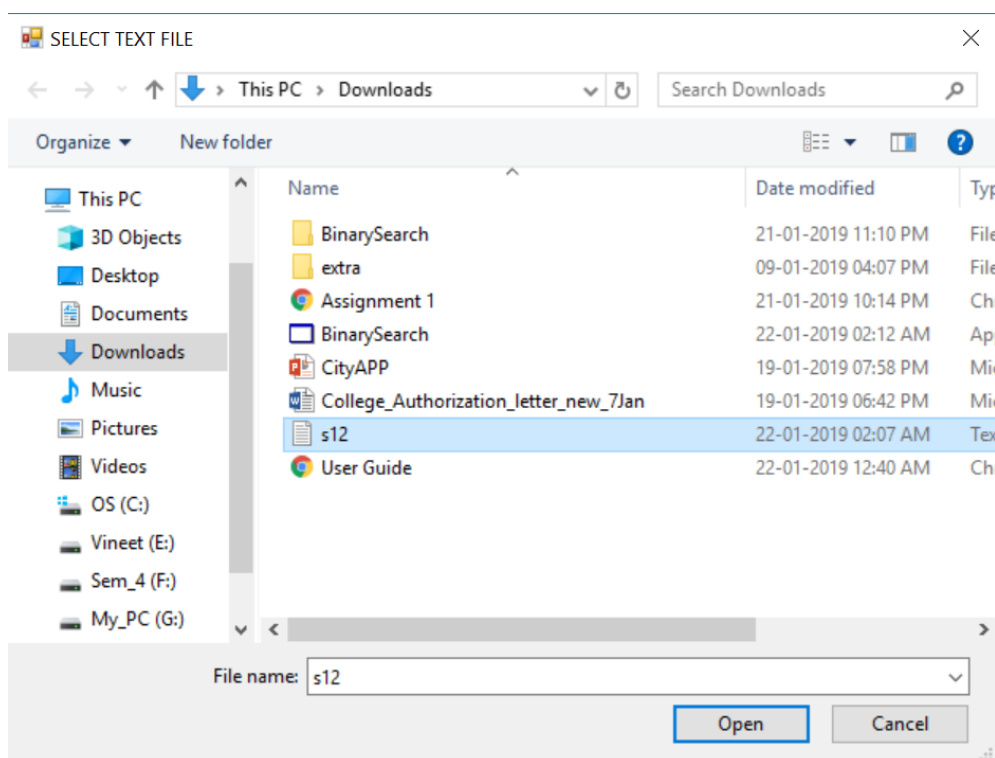
1. **INPUT BOX:** User can write values in it.
2. **BUTTONS:** Each button has a specific task and those tasks are performed when the user presses the button.
3. **OUTPUT BOX:** Displays some values. User can not write in an output box.



SELECT BUTTON:



When you click on the select button a new window appears:



Now choose the text file with inputs, and click "Open".

Binary Search

BINARY SEARCH

Enter Value To Be Added In The Array: **ADD**

Number Of Elements In The Array: **CLEAR**

Select Input Text File: **SELECT**

Enter Value To Be Searched: **SEARCH**

Result:

Status Of The Array After Each Iteration Of Binary Search: **NEXT**

C:\Users\vinee\Downloads\s12.txt

This is the file which has been selected for input.

Limitations/Precautions of the Application:

1. Array size cannot be greater than 1,000,000.
2. Input array should be sorted. The program won't work for an unsorted array.
3. Array values should be of the same data type.
4. Selected file should be a text file, with each array value written on a separate line.
5. The visualization feature will only be helpful for arrays with number of elements ≤ 20 , due to the limitation of the window size.