

Lab 10: Implementation of Linear Search and Binary Search

Theory:

1) Linear Search

Declare and initialize necessary variables

n; a[n]; item-to be searched from array

flag=0 for determining the success of search

For i=0 to n-1

if a[i]=item

display "Search Successful"

flag=1

stop

end if

End for

If flag=0

display "Search Unsuccessful"

End if

2) Binary Search :

Declare and initialize necessary variables

n; a[n]; first=0; last=n-1; item; flag=0; middle=(first + last)/2

While (first<=last)

if (a[middle]=item)

display "Search Successful"

flag=1;

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        stop
    else if (item<a[middle])
        last=middle-1
    else
        first=middle+1
    end if
    middle=(first + last)/2
End while
If (flag=0)
    display "Search unsuccessful"
End if
```