Discrete Structure & Logic Lab

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LAB 9 :- Write a Program in C to implement Binary Search.

```
#include <iostream>

using namespace std;

int main()

{

   int n,key,a[1000],flag=0;

   cout<<"Enter the size of array : ";

   cin>>n;

   cout<<"Enter find key position of: ";

   cin>>key;

   cout<<"Enter the element : ";

   for(int i=0;i<n;i++)

      cin>>a[i];

   int start=0;

   int end=n-1;

   int mid=(start+end)/2;

   while(start<=end){
```

```cpp
        if(a[mid]==key){

            cout<<"Key is present at the positon of : "<<mid;

            flag=1;

            break;

        }

        if(a[mid]<key)

            start=mid+1;

        else

            end=mid-1;

        mid=(start+end)/2;

    }

    if(!flag)

    cout<<"Key does not found";

    return 0;

}
```

```cpp
// Abhishek Rajput
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//04-11-2022

#include <iostream>
using namespace std;
int main()
{
    int n,key,a[1000],flag=0;
    cout<<"Enter the size of array : ";
    cin>>n;
    cout<<"Enter find key position of: ";
    cin>>key;
    cout<<"Enter the element : ";
    for(int i=0;i<n;i++)
        cin>>a[i];
    int start=0;
    int end=n-1;
    int mid=(start+end)/2;
    while(start<=end){
        if(a[mid]==key){
            cout<<"Key is present at the positon of : "<<mid;
            flag=1;
            break;
        }
        if(a[mid]<key)
            start=mid+1;
        else
            end=mid-1;
        mid=(start+end)/2;
    }
    if(!flag)
    cout<<"Key does not found";
    return 0;
}
```

```
/tmp/6MvEqpmdwO.o
Enter the size of array : 5
Enter find key position of: 6
Enter the element : 2 3 4 5 6
Key is present at the positon of : 4
```