Experiment 4: To implement Binary Search for ‘n’ number and perform analysis using DAC technique

Code:

```
#include<stdio.h>
#include<conio.h>

int n,array[10],i,j,low,high,mid,key;
void main(){
   printf("******This is the Binary Search********\n");
   printf("Enter the number of Element in array:");
   scanf("%d",&n);
 for(i=0;i<n;i++){
   printf("Enter the element %d  :",i);
   scanf("%d",&array[i]);

 }
 printf("Enter the element you want to find:");
 scanf("%d",&key);
 low=0;
 high=n;
 mid=0;
 while(low<=high)
 {
  mid = (high+low)/2;
  if( array[mid]==key){
     printf("Element is found at %d",mid);
     break;

  }
  else if(array[mid]<key){
     low=mid+1;
  }
  else
  {
     high=mid-1;

  }
 }

}
```

Output:

Binary Search

```
******This is the Binary Search********
Enter the number of Element in array:5
Enter the element 0  :12
Enter the element 1  :23
Enter the element 2  :34
Enter the element 3  :45
Enter the element 4  :32
Enter the element you want to find:23
Element is found at 1
```