**PRACTICAL – 1**

**Write a program to implement Linear Search using Array**.

#include <stdio.h>

int main() {

int s,num,i,flag=0;

printf("Enter number of elements in array");

scanf("%d",&s);

int arr[s];

printf("Enter the elements of Array");

for(i=0;i<s;i++){

scanf("%d",&arr[i]);

}

printf("Enter the element to be searched");

scanf("%d",&num);

for(i=0;i<s;i++){

if(arr[i]==num){

flag=1;

break;

}

}

if(flag==1){

printf("Element found in the array at postition %d",i+1);

}

else{

printf("Element is not present in the array \n");

}

return 0;

}

**OUTPUT :**

**Case 1:** Element is not found.

**Case 2:** Element is found.

**PRACTICAL – 2**

**Write a program to implement Binary Search using Array**.

#include <stdio.h>

int main()

{

int i,j,low,high,middle,n,search,arr[200];

printf("Enter no. of elements");

scanf("%d",&n);

printf("Enter elements of array in sorted form :");

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

scanf("%d",&arr[i]);

}

printf("Enter value to be searched :");

scanf("%d",&search);

low=0;

high=n-1;

middle=(low+high)/2;

while(low<=high){

if(search==arr[middle]){

printf("%d is found at location %d ",search,middle+1);

break;

}

else if(search>arr[middle]){

low=middle+1;

}

else{

high = middle-1;

middle=(low+high)/2;

}

}

if(low>high){

printf("%d is not present in the array ",search);

}

return 0;

}