Day-5

1. **Write a program of binary search taking the inputs by the user[Arrays]**

   Code:

```
#include<stdio.h>
int main(){
   printf("Enter the size of an array\n");
   int n;
   scanf("%d",&n);
   int a[n];
   printf("Enter the elements into an array\n");
   for(int i=0; i<n; i++){
      scanf("%d",&a[i]);
   }
   int s=0,e=n-1,mid;
   printf("Enter the element to be searched: \n");
   int k;
   scanf("%d",&k);
   while(s<e){
      int mid=(s+e)/2;
      if(a[mid]==k){
         printf("Found at index:: %d",mid);
         return 1;
      }
      else if(k>a[mid]){
         s=mid+1;
      }
      else
         e=mid-1;
   }
   printf("Element not found\n");
}
```

Output:

2.Write a program to delete an element in an array.

Code:

```
#include<stdio.h>
int main(){
    printf("Enter the size of an array\n");
    int n;
    scanf("%d",&n);
    int a[n];
    printf("Enter the elements into an array\n");
    for(int i=0; i<n; i++){
        scanf("%d",&a[i]);
    }
    printf("Enter the element to delete\n");
    int del;
    scanf("%d",&del);
    for(int i=0; i<n; i++){
        if(del==a[i]){
            printf("Element deleted at index %d \n", i);
            a[i] = 0;
        }
    }
    for(int i=0; i<n; i++){
        printf("%d ", a[i]);
    }
    return 0;
}
```

Output:

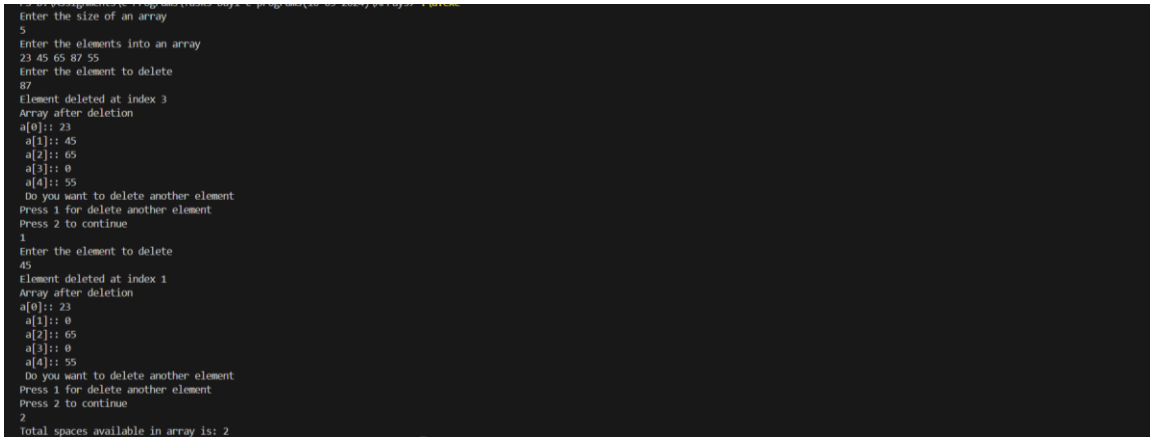
3.write a program to find how many elements delete in the array by asking user behavior.

Code:

```
#include<stdio.h>
int main(){
    printf("Enter the size of an array\n");
    int n;
    scanf("%d",&n);
    int a[n];
    printf("Enter the elements into an array\n");
    for(int i=0; i<n; i++){
        scanf("%d",&a[i]);
    }
    delete:
    printf("Enter the element to delete\n");
    int del;
    scanf("%d",&del);
    for(int i=0; i<n; i++){
        if(del==a[i]){
            printf("Element deleted at index %d \n", i);
            a[i] = 0;
        }
```

```
    }
    printf("Array after deletion\n");
    for(int i=0; i<n; i++){
        printf("a[%d]:: %d\n ",i, a[i]);
    }
    printf("Do you want to delete another element\n");
    printf("Press 1 for delete another element\n");
    printf("Press 2 to continue\n");
    int choice;
    scanf("%d", &choice);
    if(choice == 2){
        int c=0;
        for(int i=0; i<n; i++){
            if(a[i]==0)
                c++;
        }
        printf("Total spaces available in array is: %d\n",c);
    }
    else if(choice == 1){
        goto delete;
    }
    return 0;
}
```

Output:



4. Write a program to print the Elements in an array.

Code:

```
#include<stdio.h>
void print(int a[],int n){
    for(int i=0; i<n; i++){
        printf("%d ", a[i]);
    }
}
int main(){
    printf("Enter the size of an array\n");
    int n;
    scanf("%d",&n);
    int a[n];
    printf("Enter the elements into an array\n");
    for(int i=0; i<n; i++){
        scanf("%d",&a[i]);
    }
    print(a,n);
}
```

Output:


Enter the size of an array
5
Enter the elements into an array
43 77 44 99 34
43 77 44 99 34