DS PRACTICAL 02

AIM: [A]:- Create an array of size n and write a program to insert an element (begining, end and specific position).

PROGRAM:

```
#include<stdio.h>

void main(){
   int i, size, insert, temp, end, posi, ele;
   int a[10];

   //Declaring the array size:-
   printf("Enter the size of an array, which can be maximum of 10 elements: ");
   scanf("%d", &size);

   //Inserting array elements:-
   printf("Enter %d elements in array.\n ",size);
   for(i=0; i<size; i++){
      scanf("%d",&a[i]);
   }

   //Inserting element at begining in array
   printf("Enter the element to insert at begining:\t");
   scanf("%d", &insert);

   //Inserting element at end in array
   printf("Enter the element to insert at end:\t");
   scanf("%d", &end);

   //Inserrtion at begining
   size++;
   for(i=size; i>=0; i--){
```

```
    a[i+1]=a[i];

  }
  //Insertion at begining:-
  a[0] = insert;

  //Insertion at end:-
  a[size] = end;

  printf("\n");
  //Insertion at any position
  printf("Enter the position and the element:-\n");
  scanf("%d \n %d",&posi, &ele);
  size++;
  for ( i = size; i >= posi-1; i--)
  {
    a[i+1] = a[i];



  };

  a[posi-1] = ele;

  //Printing of complete arrray:-
  for(i=0; i<=size; i++){
    printf("%d\t", a[i]);
  }



}
```

OUTPUT

```
PS C:\Users\Arpit> cd 'c:\Users\Arpit\Desktop\cpp\output'
PS C:\Users\Arpit\Desktop\cpp\output> & .\'ds2.exe'
Enter the size of an array, which can be maximum of 10 elements: 5
Enter 5 elements in array.
 1
2
3
4
5
Enter the element to insert at begining:        55
Enter the element to insert at end:     66

Enter the position and the element:-
3
44
55      1       44      2       3       4       5       66
PS C:\Users\Arpit\Desktop\cpp\output>
```

[B]:- Create an array of size n and write a program to delete an element (begining, end and specific position).

PROGRAM:

```
#include<stdio.h>


void main(){
   int i, size, delete, temp, end, posi, ele;
   int a[10];


   //Declaring the array size:-
   printf("Enter the size of an array, which can be maximum of 10 elements: ");
   scanf("%d", &size);


   //Inserting array elements:-
   printf("Enter %d elements in array.\n ",size);
   for(i=0; i<size; i++){
      scanf("%d",&a[i]);
   }
```

```
//Deleting element at begining in array
printf("Deleting element at begining...\n");

//Deleting element at end in array
printf("Deliting element at end...\n");

//Deliting at begining
size--;
for(i=0; i < size; i++){
   a[i]=a[i+1];

}
//Deliting at begining:-
delete = a[0];
size--;

//Deliting at end:-
end = a[size];
size--;


for(i=0; i<=size; i++){
   printf("%d\t", a[i]);
}

printf("\n");

//Deliting at any position
printf("Enter the position :-\n");
scanf("%d",&posi);
posi--;
```

```
    for (i = posi; i <size; i++)
    {
      a[i] = a[i+1];

    }
    ele = a[posi-1];
    size--;


    //Printing of complete arrray:-
    for(i=0; i<=size; i++){
       printf("%d\t", a[i]);
    }
}
```

OUTPUT

```
PS C:\Users\Arpit> cd 'c:\Users\Arpit\Desktop\cpp\output'
PS C:\Users\Arpit\Desktop\cpp\output> & .\'ds.exe'
Enter the size of an array, which can be maximum of 10 elements: 5
Enter 5 elements in array.
 1
2
3
4
5
Deleting element at begining...
Deliting element at end...
2       3       4
Enter the position :-
3
2       3
PS C:\Users\Arpit\Desktop\cpp\output>
```

GITHUB LINK FOR PRACTICAL: https://github.com/AYUSH-Mahajan-07/DS-