DATA STRUCTURE PRACTICAL NO. 2

ARRAY INSERTION AND DELETION

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

PROGRAM:-

```
#include<stdio.h>

void main()

{
        int a[100] , n , i , index , num;

        printf("Enter the no. of element\n");

        scanf("%d", &n);

        printf("Enter the array elements\n");


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

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

        }

        printf("at which index you want to insert the element\n");

        scanf("%d" , &num);

        for(i=n-1 ; i>=index ; i--)

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

        }

        a[index] = num;

        printf("new array : \n");

        for (i=0 ; i<n+1 ; i++)

        {
                printf("%d\n", a[i]);

        }
```

}

OUTPUT

Enter the no. of element

5

Enter the array elements

11

22

33

44

55

at which index you want to insert the element

0

new array :

0

11

22

33

44

55

shreyasgajananswamitalankar@SHREYASs-MacBook-Air output % ;3B

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

PROGRAM:-

```c
#include <stdio.h>

void main() {
    int a[100], n, i, index;
```

```
    printf("Enter the number of elements:\n");
    scanf("%d", &n);

    if (n > 100) {
        printf("The number of elements exceeds the maximum allowed (100).\n");
        return;
    }

    printf("Enter the array elements:\n");
    for (i = 0; i < n; i++) {
        scanf("%d", &a[i]);
    }

    printf("Which index do you want to delete?\n");
    scanf("%d", &index);

    if (index < 0 || index >= n) {
        printf("Invalid index.\n");
        return;
    }

    for (i = index; i < n - 1; i++) {
        a[i] = a[i + 1];
    }

    // Reduce the size of the array
    n--;

    printf("New array:\n");
    for (i = 0; i < n; i++) {
        printf("%d\n", a[i]);
    }
}
```

OUTPUT

Enter the number of elements:

4

Enter the array elements:

11

22

33

44

Which index do you want to delete?

2

New array:

11

22

44

GITHUB LINK OF PRACTICAL No. 02 :-

https://github.com shreyastalankar/DATA-STRUCTURE-PRACTICALS /