

Assignment 1:

- Write a program to implement the following array operations:
 - i. Initialize an array with n no. of elements.
 - ii. Insert data at specific position.
 - iii. Delete data from specific position.
 - iv. Reverse all the elements of the array.
 - v. Traverse the array.

Program –

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

void reverse(int* ,int);
void enterData(int* ,int);
void delData(int* ,int);
void traverse(int* ,int);

int main()
{
    int n, ch;
    printf("Enter size of array: ");
    scanf("%d",&n);
    int arr[n];    // array initialization
    printf("Enter data:\n");
    for(int i=1; i<=n; i++)
        scanf("%d",&arr[i]);

    while(1)
    {
        printf("1.Insert Data\n");
        printf("2.Delete Data\n");
        printf("3.Reverse array\n");
        printf("4.Traverse\n");
        printf("5.Exit\n");

        printf("Enter your choice: ");
        scanf("%d",&ch);
```

```
        switch(ch)
        {
            case 1: enterData(arr, n);
                     break;
            case 2: delData(arr, n);
                     break;
            case 3: reverse(arr, n);
                     break;
            case 4: traverse(arr, n);
                     break;
            case 5: exit(1);
            default: printf("Invalid choice!\n\n");
        }
    }
    return 0;
}

void enterData(int *arr, int n)
{
    int pos, data;
    printf("Enter position to enter data: ");
    scanf("%d",&pos);
    printf("Enter data: ");
    scanf("%d",&data);
    arr[pos] = data;
    for(int i=1; i<=n; i++)
        printf("%d ",arr[i]);
    printf("\n\n");
}

void delData(int *arr, int n)
{
    int pos;
    printf("Enter position to delete data from: ");
    scanf("%d",&pos);
    arr[pos] = 0;
    for(int i=1; i<=n; i++)
        printf("%d ",arr[i]);
    printf("\n\n");
}
```

```
void reverse(int *arr, int n)
{
    printf("Reverse of the array is:\n");
    for (int i=n; i>=1; i--)
        printf("%d ",arr[i]);
    printf("\n\n");
}

void traverse(int *arr, int n)
{
    for(int i=1; i<=n; i++)
        printf("%d ",arr[i]);
    printf("\n\n");
}
```