

LAB 2 .

Write a prog to stimulate the working of stack using array. Using push, pop, display with appropriate overflow, underflow messages.

```
#include <stdio.h>
#include <process.h>
#include <conio.h>
#define STACK_SIZE 5
int top = -1;
void push (int item, int s[])
{
    if (top == STACK_SIZE - 1)
    {
        printf("Stack overflow \n");
        return;
    }
    top = top + 1;
    s[top] = item;
}
int pop (int s[])
{
    if (top == -1)
    {
        printf("Stack underflow \n");
        return;
    }
    return (s[top--]);
}
void display (int s[])
{
    int i;
    if (top == -1)
    {
        printf("Empty stack \n");
        return;
    }
    for (i = 0; i <= top; i++)
```



```

    for (i = top; i ≥ 0; i--)
        printf ("%d\n", s[i]);
}

void main()
{
    int item, s[10], item_del, n;
    for (;;)
    {
        printf ("Enter 1. push\n 2. pop\n 3. display\n 4. exit\n");
        scanf ("%d", &n);
        switch (n)
        {
            case 1: printf ("enter item\n");
                     scanf scanf ("%d", &item);
                     push (item, s);
                     break;
            case 2: item_del = pop (s);
                     printf ("Deleted item = %d\n", item_del);
                     break;
            case 3: display (s);
                     break;
            default: exit (0);
        }
    }
}

```