WEEK-1

(1)Write a c program to implement stack using array.

PROGRAM:

```
#include<stdio.h>
#include<conio.h>
#define max 10
int stack[max],top=-1;
void push(int x)
{
        if(top==max-1)
        printf("stack overflow\n");
        else
        stack[++top]=x;
}
void pop()
{
        int x;
        if(top==-1)
        printf("stack underflow\n");
        else
        {
                x=stack[top];
                top--;
                printf("deleted element : %d\n",x);
        }
}
void display()
{
        int i;
        if(top==-1)
        printf("stack underflow");
        else
        {
                printf("stack elements : ");
                for(i=0;i<=top;i++)
                printf("%d ",stack[i]);
        }
}
void main()
{
        int choice,ele;
        clrscr();
        do{
```

```
            printf("\n1.push\n2.pop\n3.display\n4.exit\n");
            printf("enter your choice :");
            scanf("%d",&choice);
            switch(choice)
            {
                case 1: printf("enter element to be pushed : ");
                        scanf("%d",&ele);
                        push(ele);
                        break;
                case 2: pop();
                        break;
                case 3: display();
                        break;
            }
        }while(choice!=4);
        getch();
}
```

INPUT/OUTPUT :