Lab1 - Stack Program

```
#include <stdio.h>
#define size 3
int top = -1;
void push(int [], int );
int pop(int []);
void display(int []);
int main(int argc, char** argv)
{
   int stack[size];
   int choice, element;
   char ch;
   do
   {
case printf("\n Enter your choice \n");
     printf("1. Push \n");
     printf("2. Pop \n");
     printf("3. Display \n");
     scanf("%d", &choice);
     switch(choice)
     {
       case1: printf("Enter the element to be pushed \n");
              scanf("%d", &element);
              push(stack, element);
              break;
       case2: element = pop(stack);
              if(element == -1)
                printf("Stack Underflow");
              else
                printf("Poped element is %d \n",
                                    element);
              break;
```

```
        case 3: display(stack);
                break;
        default: printf("Invalid choice");
    }
    }while(choice<=3);
    return 0;
}
void push(int stack[], int ele)
{
    if(top==size-1)
    {
        printf("Stack overflow");
    }
    else
    {
        top++;
        stack[top]=ele;
    }
}
int pop(int stack[])
{
    int popele;
    if(top==-1)
    {
        return -1;
    }
    else
        popele=stack[top];
        top--;
        return(popele);
    }
}
```

```
void display(int stack[])
{
    if(top == -1)
    {
        printf("Stack underflow");
    }
    int i;
    printf("The stack elements\n");
    for(i = top; i >= 0; i--)
    {
        printf("%d\t", stack[i]);
    }
}
```