```c
#include<stdio.h>
#include<stdlib.h>
#define STACK_SIZE 5

int item;
int stack[10];
int top=-1;

void push()
{
    if(top==STACK_SIZE-1)
    {
        printf("STACK OVERFLOW\n");
        return ;
    }

    top=top+1;
    stack[top]=item;
}
int pop()
{
    if(top==-1)return -1;
    return stack[top--];
}
void display()
{
    int i;
    if(top==-1)
    {
        printf("STACK UNDERFLOW\n");
        return ;
    }

    printf("\nDISPLAYING CONTENTS OF STACK\n");

    for(i=0;i<=top;i++)
    {
        printf("%d\n", stack[i]);
```

```c
35
36    for(i=0;i<=top;i++)
37    {
38      printf("%d\n",stack[i]);
39    }
40  }
41     int main()
42  {
43      int Deleted_item;
44      int choice;
45      for(;;)
46      {
47        printf("\n1:push\n2:pop\n3:display\n4:exit\n");
48        printf("Enter the choice\n");
49        scanf("%d",&choice);
50        switch(choice)
51        {
52          case 1:printf("Enter the item to be Inserted\n");
53                 scanf("%d",&item);
54                 push();
55                 break;
56
57          case 2:Deleted_item=pop();
58                 if(Deleted_item==-1)
59                 {
60                   printf("STACK IS EMPTY\n");
61                 }
62                 else
63                 {
64                   printf("ITEM DELETED IS %d\n",Deleted_item);
65                 }
66                 break;
67
68          case 3:display();
69                 break;
70
71          default:exit(0);
72          return 0;
```

```c
42  {
43      int Deleted_item;
44      int choice;
45      for(;;)
46      {
47          printf("\n1:push\n2:pop\n3:display\n4:exit\n");
48          printf("Enter the choice\n");
49          scanf("%d",&choice);
50          switch(choice)
51          {
52              case 1:printf("Enter the item to be Inserted\n");
53                      scanf("%d",&item);
54                      push();
55                      break;

57              case 2:Deleted_item=pop();
58                      if(Deleted_item==-1)
59                      {
60                          printf("STACK IS EMPTY\n");
61                      }
62                      else
63                      {
64                          printf("ITEM DELETED IS %d\n",Deleted_item);
65                      }
66                      break;

68              case 3:display();
69                      break;

71              default:exit(0);
72              return 0;
73          }
74      }
75  }
76
77
78
```

```
C:\WINDOWS\SYSTEM32\cmd.exe

1:push
2:pop
3:display
4:exit
Enter the choice
1
Enter the item to be Inserted
5

1:push
2:pop
3:display
4:exit
Enter the choice
1
Enter the item to be Inserted
10

1:push
2:pop
3:display
4:exit
Enter the choice
1
Enter the item to be Inserted
15

1:push
2:pop
3:display
4:exit
Enter the choice
1
Enter the item to be Inserted
20

1:push
2:pop
3:display
4:exit
Enter the choice
```

```
3:display
4:exit
Enter the choice
1
Enter the item to be Inserted
25

1:push
2:pop
3:display
4:exit
Enter the choice
1
Enter the item to be Inserted
26
STACK OVERFLOW

1:push
2:pop
3:display
4:exit
Enter the choice
3

DISPLAYING CONTENTS OF STACK
5
10
15
20
25

1:push
2:pop
3:display
4:exit
Enter the choice
2
ITEM DELETED IS 25

1:push
2:pop
3:display
```

```
C:\WINDOWS\SYSTEM32\cmd.exe

1:push
2:pop
3:display
4:exit
Enter the choice
2
ITEM DELETED IS 20

1:push
2:pop
3:display
4:exit
Enter the choice
2
ITEM DELETED IS 15

1:push
2:pop
3:display
4:exit
Enter the choice
2
ITEM DELETED IS 10

1:push
2:pop
3:display
4:exit
Enter the choice
2
ITEM DELETED IS 5

1:push
2:pop
3:display
4:exit
Enter the choice
2
STACK IS EMPTY

1:push
2:pop
```

```
C:\WINDOWS\SYSTEM32\cmd.exe

2
ITEM DELETED IS 10

1:push
2:pop
3:display
4:exit
Enter the choice
2
ITEM DELETED IS 5

1:push
2:pop
3:display
4:exit
Enter the choice
2
STACK IS EMPTY

1:push
2:pop
3:display
4:exit
Enter the choice
3
STACK UNDERFLOW

1:push
2:pop
3:display
4:exit
Enter the choice
4


------------------
(program exited with code: 0)

Press any key to continue . . .
```