

main.c

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #define stack_size 3
4 int top=-1;
5 int s[3];
6 int item;
7 void push()
8 {
9     if(top==stack_size-1)
10     {
11         printf("stack overflow\n");
12         return;
13     }
14     top=top+1;
15     s[top]=item;
16 }
17 int pop()
18 {
19     if(top== -1) return -1;
20     return s[top--];
21 }
22
23 void display()
24 {
25     int i;
26     if(top== -1)
27     {
28         printf("stack is empty\n");
29         return;
30     }
31     printf("contents of the stack\n");
32     for(i=0;i<=top;i++)
33     {
34         printf("%d\n",s[i]);
35     }
36 }
37 void main()
38 {
39     int item_deleted;
40     int choice;
41     for(;;)
42     {
43         printf("\n1:push\n2:pop\n3:display\n4:exit\n");
44         printf("enter the choice\n");
45         scanf("%d",&choice);
```

```

main.c
21 }
22
23 void display()
24 {
25     int i;
26     if(top==-1)
27     {
28         printf("stack is empty\n");
29         return;
30     }
31     printf("conents of the stack\n");
32     for(i=0;i<=top;i++)
33     {
34         printf("%d\n",s[i]);
35     }
36 }
37 void main()
38 {
39     int item_deleted;
40     int choice;
41     for(;;)
42     {
43         printf("\n1:push\n2:pop\n3:display\n4:exit\n");
44         printf("enter the choice\n");
45         scanf("%d",&choice);
46         switch(choice)
47         {
48             case 1:
49                 printf("enter the item to be inserted\n");
50                 scanf("%d",&item);
51                 push();
52                 break;
53             case 2:
54                 item_deleted=pop();
55                 if(item_deleted==-1)
56                     printf("stack is empty\n");
57                 else
58                     printf("Item Deleted is %d\n",item_deleted);
59                 break;
60             case 3:
61                 display();
62                 break;
63             default:exit(0);
64         }
65     }
66 }

```

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #define stack_size 3
4 int top=-1;
5 int s[3];
6 int item;
7 void push()
8 {
```

input

```
1:push
2:pop
3:display
4:exit
enter the choice
1
enter the item to be inserted
34
```

```
1:push
2:pop
3:display
4:exit
enter the choice
1
enter the item to be inserted
45
```

```
1:push
2:pop
3:display
4:exit
enter the choice
1
enter the item to be inserted
38
```

```
1:push
2:pop
3:display
4:exit
enter the choice
1
enter the item to be inserted
48
stack overflow
```

main.c

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #define stack_size 3
4 int top=-1;
5 int s[3];
6 int item;
7 void push()
8 {
```

input

```
2:pop
3:display
4:exit
enter the choice
1
enter the item to be inserted
48
stack overflow
```

```
1:push
2:pop
3:display
4:exit
enter the choice
2
Item Deleted is 38
```

```
1:push
2:pop
3:display
4:exit
enter the choice
3
contents of the stack
34
45
```

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

```
...Program finished with exit code 0
Press ENTER to exit console.
```

main.c

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #define stack_size 3
4 int top=-1;
5 void push(int item,int s[])
6 {
7     if(top==stack_size-1)
8     {
9         printf("stack overflow\n");
10        return;
11    }
12    top=top+1;
13    s[top]=item;
14 }
15 int pop(int s[])
16 {
17     if(top==-1)
18     {
19         printf("stack underflow\n");
20         return -1;
21     }
22     return s[top--];
23 }
24
25 void display(int s[])
26 {
27     int i;
28     if(top==-1)
29     {
30         printf("stack is empty\n");
31         return;
32     }
33     printf("conents of the stack\n");
34     for(i=0;i<=top;i++)
35     {
36         printf("%d\n",s[i]);
37     }
```

```

34     for(i=0;i<=top;i++)
35     {
36         printf("%d\n",s[i]);
37     }
38 }
39 void main()
40 {
41     int s[3],item;
42     int item_deleted;
43     int choice;
44     for(;;)
45     {
46         printf("\n1:push\n2:pop\n3:display\n4:exit\n");
47         printf("enter the choice\n");
48         scanf("%d",&choice);
49         switch(choice)
50         {
51             case 1:
52                 printf("enter the item to be inserted\n");
53                 scanf("%d",&item);
54                 push(item,s);
55                 break;
56             case 2:
57                 item_deleted=pop(s);
58                 if(item_deleted==-1)
59                     printf("stack is empty\n");
60                 else
61                     printf("Item Deleted is %d\n",item_deleted);
62                 break;
63             case 3:
64                 display(s);
65                 break;
66             default:exit(0);
67         }
68     }
69 }
70 }

```

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #define stack_size 3
4 int top=-1;
5 void push(int item,int s[])
6 {
```

input

```
1:push
2:pop
3:display
4:exit
enter the choice
1
enter the item to be inserted
34
```

```
1:push
2:pop
3:display
4:exit
enter the choice
1
enter the item to be inserted
56
```

```
1:push
2:pop
3:display
4:exit
enter the choice
1
enter the item to be inserted
67
```

```
1:push
```

main.c

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #define stack_size 3
4 int top=-1;
5 void push(int item,int s[])
6 {
```

input

enter the item to be inserted

67

1:push

2:pop

3:display

4:exit

enter the choice

1

enter the item to be inserted

57

stack overflow

1:push

2:pop

3:display

4:exit

enter the choice

2

Item Deleted is 67

1:push

2:pop

3:display

4:exit

enter the choice

3

conents of the stack

34

main.c

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #define stack_size 3
4 int top=-1;
5 void push(int item,int s[])
6 {
```

input

```
1:push
2:pop
3:display
4:exit
enter the choice
2
Item Deleted is 67
```

```
1:push
2:pop
3:display
4:exit
enter the choice
3
contents of the stack
34
56
```

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

```
...Program finished with exit code 0
Press ENTER to exit console.
```