main.c

```c
#include<stdio.h>
#include<stdlib.h>
#define stack_size 3
int top=-1;
int s[3];
int item;
void push()
{
    if(top==stack_size-1)
   {
    printf("stack overflow\n");
    return;
    }
    top=top+1;
    s[top]=item;
}
int pop()
{
    if(top==-1) return -1;
    return s[top--];
}

void display()
{
    int i;
    if(top==-1)
    {
        printf("stack is empty\n");
        return;
    }
    printf("conents of the stack\n");
    for(i=0;i<=top;i++)
    {
        printf("%d\n",s[i]);
    }
}
void main()
{
    int item_deleted;
    int choice;
    for(;;)
    {
        printf("\n1:push\n2:pop\n3:display\n4:exit\n");
        printf("enter the choice\n");
        scanf("%d",&choice);
```

main.c

```c
}

void display()
{
    int i;
    if(top==-1)
    {
        printf("stack is empty\n");
        return;
    }
    printf("conents of the stack\n");
    for(i=0;i<=top;i++)
    {
        printf("%d\n",s[i]);
    }
}
void main()
{
    int item_deleted;
    int choice;
    for(;;)
    {
        printf("\n1:push\n2:pop\n3:display\n4:exit\n");
        printf("enter the choice\n");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:
            printf("enter the item to be inserted\n");
            scanf("%d",&item);
            push();
            break;
            case 2:
            item_deleted=pop();
            if(item_deleted==-1)
            printf("stack is empty\n");
            else
            printf("Item Deleted is %d\n",item_deleted);
            break;
            case 3:
            display();
            break;
            default:exit(0);
         }
    }
}
```

```c
#include<stdio.h>
#include<stdlib.h>
#define stack_size 3
int top=-1;
int s[3];
int item;
void push()
```

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

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

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
conents 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

```c
#include<stdio.h>
#include<stdlib.h>
#define stack_size 3
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 -1;
    }
    return s[top--];
}

void display(int s[])
{
    int i;
    if(top==-1)
    {
        printf("stack is empty\n");
        return;
    }
    printf("conents of the stack\n");
    for(i=0;i<=top;i++)
    {
        printf("%d\n",s[i]);
    }
```

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

    int s[3],item;
    int item_deleted;
    int choice;
    for(;;)
    {
        printf("\n1:push\n2:pop\n3:display\n4:exit\n");
        printf("enter the choice\n");
        scanf("%d",&choice);
        switch(choice)
        {
            case 1:
            printf("enter the item to be inserted\n");
            scanf("%d",&item);
            push(item,s);
            break;
            case 2:
            item_deleted=pop(s);
            if(item_deleted==-1)
            printf("stack is empty\n");
            else
            printf("Item Deleted is %d\n",item_deleted);
            break;
            case 3:
            display(s);
            break;
            default:exit(0);
         }
    }
}
```

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

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

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

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

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

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
conents 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.
```