

WEEK-2

```
2)
#include <stdio.h>
#include <stdlib.h>
#define STACK_SIZE 3
int top=-1;
int s[10];
int item;
void push(int item,int s[],int* top)
{
if(*top==STACK_SIZE -1)
{
printf("stack overflow\n");
}
*top=*top+1;
s[*top]=item;
}
int pop(int s[],int *top)
{
int deleted_item;
if(*top== -1)
{
printf("stack underflow\n");
}
deleted_item = s[*top];
*top=*top-1;
return deleted_item;
}
void display(int top,int s[])
{
int i;
if(top== -1)
{
printf("stack is empty\n");
}
printf("contents of the stack\n");
```

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```
for(i=top;i>=0;i--)
{
printf("%d\n",s[i]);
}

}

void main()
{
int deleted_item;
int choice;
for(;;)
{
printf("\n 1:push \n 2: pop \n 3:display \n 4:exit\n");
printf("enter your choice\n");
scanf("%d",&choice);
switch(choice)
{
case 1: printf("Enter the item to be inserted\n");
scanf("%d",&item);
push(item,s,&top);
break;
case 2: deleted_item = pop(s,&top);
if(deleted_item != 0)
{
printf("item deleted is % d \n",deleted_item);
}
break;
case 3: display(top,s);
break;
default:exit(0);
}
}
}
```

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C:\Users\llok\m\Desktop\c.c\bin\Debug\c.c.exe

```
1:push
2: pop
3:display
4:exit
enter your choice
1
Enter the item to be inserted
10

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

1:push
2: pop
3:display
4:exit
enter your choice
1
Enter the item to be inserted
30

1:push
2: pop
3:display
4:exit
enter your choice
3
contents of the stack
30
20
10

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

WEEK-2

C:\Users\Ilokm\Desktop\c.c\bin\Debug\c.c.exe

```
enter your choice
1
Enter the item to be inserted
40
stack overflow
```

```
1:push
2: pop
3:display
4:exit
enter your choice
2
item deleted is 40
```

```
1:push
2: pop
3:display
4:exit
enter your choice
2
item deleted is 30
```

```
1:push
2: pop
3:display
4:exit
enter your choice
2
item deleted is 20
```

```
1:push
2: pop
3:display
4:exit
enter your choice
2
item deleted is 10
```

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

WEEK-2

```
1:push
2: pop
3:display
4:exit
enter your choice
2
stack underflow

1:push
2: pop
3:display
4:exit
enter your choice
4

Process returned 0 (0x0)   execution time : 802.158 s
Press any key to continue.
```