

WEEK 1:POP,PUSH AND DISPLAY OF STACKS

PROGRAM

```
#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("Contents 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);

} } }
```

OUTPUT:

1:Push
2:Pop
3:Display
4:Exit
Enter your choice:
1
Enter the item to be inserted:
5

1:Push
2:Pop
3:Display
4:Exit
Enter your choice:
2
Item deleted is 5

1:Push
2:Pop
3:Display
4:Exit
Enter your choice:

1:Push
2:Pop
3:Display
4:Exit
Enter your choice:
3
Stack is empty

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

