WEEK4 LAB 4

1. In c , write a c program to implement a stack with push,pop operations using suitable functions.Create static libraries for varius operations on stack .Create a header file for function declaration.

push.c

```c
#include <stdio.h>
void push(int a[],int *top,int element){

        a[++(*top)]=element;

}
```

pop.c

```c
#include <stdio.h>
void pop(int a[],int *top, int element){
        printf("Deleted item is = %d",a[*top]);
        (*top--);
}
```

dsp.c

```c
#include <stdio.h>
void display(int a[],int top){
        int i;
        printf("Stack is = ");
        for(i=0; i<=top; i++){
                printf("%d\n",a[i] );
        }
}
```

stk.c

```c
#include <stdio.h>
#include <stdlib.h>
#include "mystacklib.h"
int main(void){
```

```
    int a[5];
    int top=-1;
    push(a,&top,5);
    push(a,&top,10);
    push(a,&top,15);
    pop(a,&top,5);
    display(a,top);
}
```
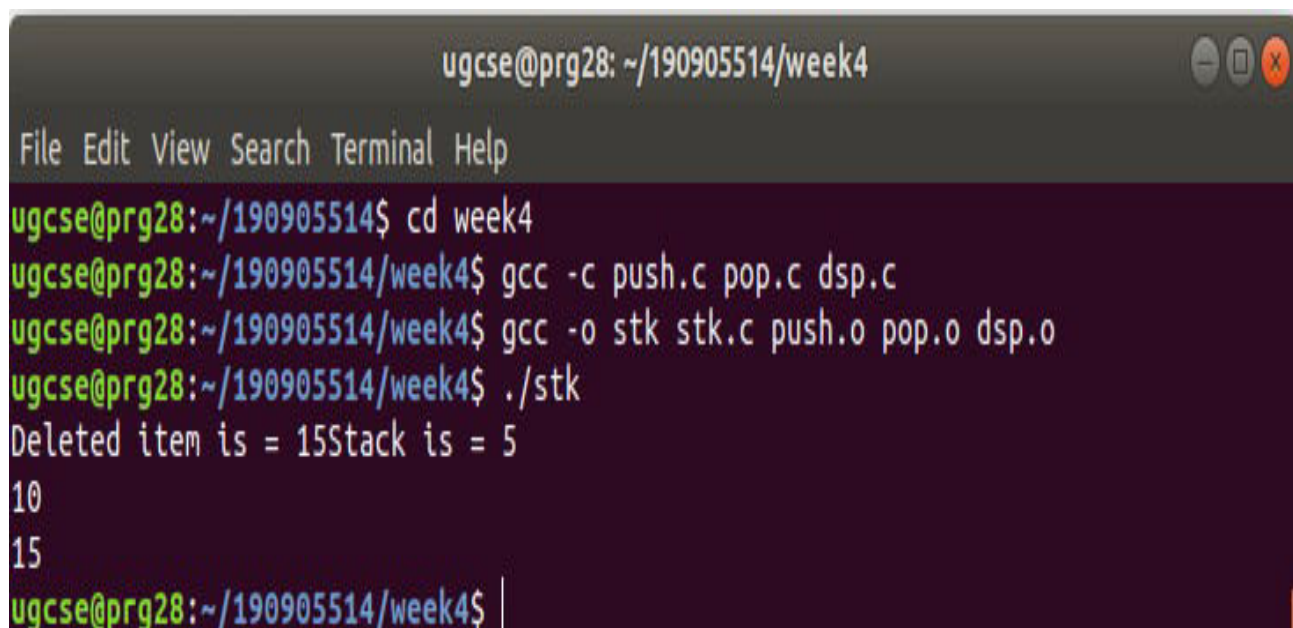
mystacklib.h

```
void pop(int a[],int *,int element);
void push(int a[],int *,int element);
void display(int a[],int top);
```

Q2. This is try out question.

hello.c
```
#include<stdio.h>
int main(void){
printf("hello world !");
}
```

```
linuxcode@linuxcode:~$ mkdir 190905514
linuxcode@linuxcode:~$ cd 190905514
linuxcode@linuxcode:~/190905514$ cat > hello.c
#include<stdio.h>
int main(void){
printf("hello world !");
}linuxcode@linuxcode:~/190905514$ chmod +x hello.c
linuxcode@linuxcode:~/190905514$ gcc hello.c -o hello
linuxcode@linuxcode:~/190905514$ ./hello
linuxcode@linuxcode:~/190905514$ ./hello
hello world !linuxcode@linuxcode:~/190905514$ 
```

Q3. This is try out question
pw.c

```
#include<stdio.h>
void pw(int arg){
printf("pw : we crossed %d\n",arg);


}
```

pw1.c

```
#include<stdio.h>
void pw1(char *arg){
printf("pw : we crossed %s\n",arg);


}
```

pw2.c

```
#include <stdio.h>
#include <stdlib.h>
#include "lib.h"
int main(void){
pw1("hello world");
exit(0);
}
```

lib.h

```
void pw(int);
void pw1(char *);
```

OUTPUT:

```
linuxcode@linuxcode:~/190905514$ ls
hello  hello.c  lib.h  pw1.c  pw1.o  pw2  pw2.c  pw2.o  pw.c  pw.o
linuxcode@linuxcode:~/190905514$ gcc -c pw2 pw2.c
gcc: warning: pw2: linker input file unused because linking not done
linuxcode@linuxcode:~/190905514$ gcc -o pw2 pw2.c
/usr/bin/ld: /tmp/ccsTwTrZ.o: in function `main':
pw2.c:(.text+0x10): undefined reference to `pw1'
collect2: error: ld returned 1 exit status
linuxcode@linuxcode:~/190905514$ gcc -c pw2.c -o pw2
linuxcode@linuxcode:~/190905514$ gcc pw2.c -o pw2.o
/usr/bin/ld: /tmp/ccaoVMTA.o: in function `main':
pw2.c:(.text+0x10): undefined reference to `pw1'
collect2: error: ld returned 1 exit status
linuxcode@linuxcode:~/190905514$ 
```