OST Lab

Week-4 Assignment Submission

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Batch B1

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Experiment Question:

In C, write a program to implement a stack with push, pop operations using suitable functions. Create static libraries for various operations on stack. Create a header file for function declarations.

Code:

“program2.c”

```
#include <stdio.h>
#include <stdlib.h>
#include "stack.h"
#define MAX_STACK_SIZE 10
int main()
{
push(2);
push(3);
push(4);
int it = pop();
display();
it = pop();
display();
```

```
// printf("\n");
return 0;
}
```

“stack.c”

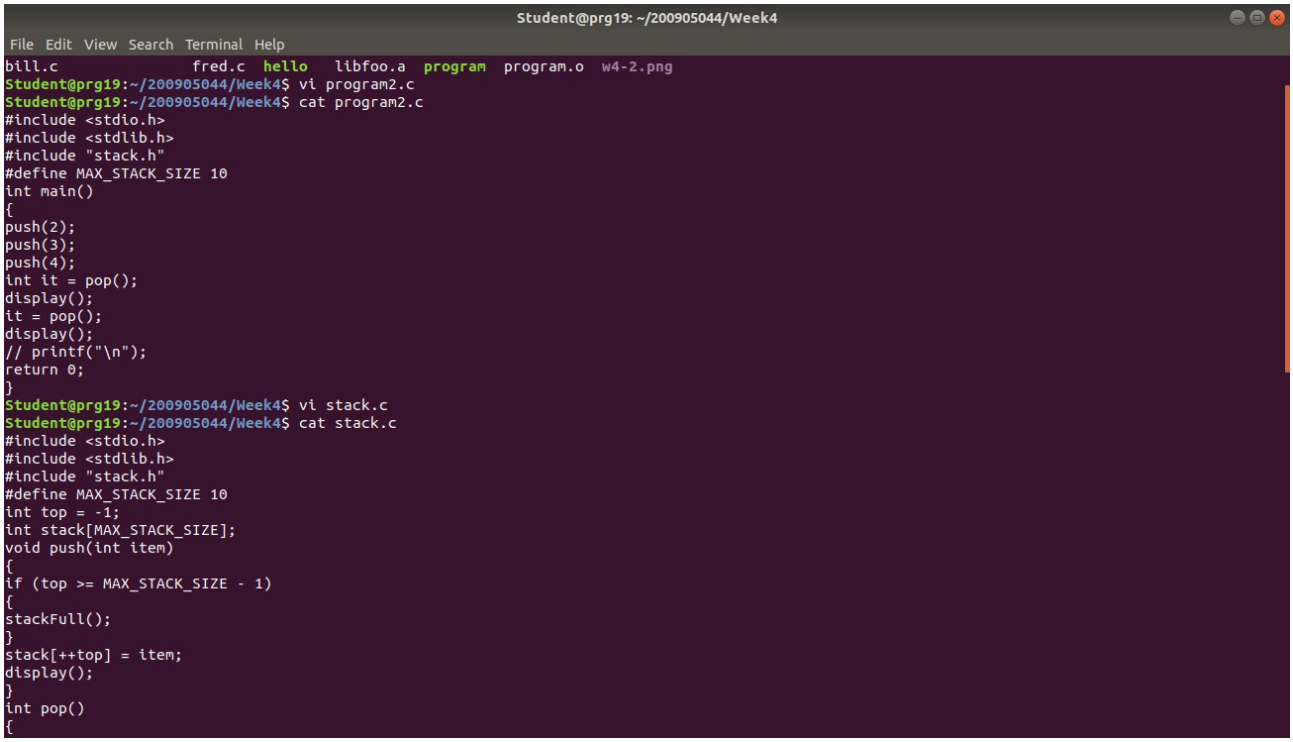
```
#include <stdio.h>
#include <stdlib.h>
#include "stack.h"
#define MAX_STACK_SIZE 10
int top = -1;
int stack[MAX_STACK_SIZE];
void push(int item)
{
if (top >= MAX_STACK_SIZE - 1)
{
stackFull();
}
stack[++top] = item;
display();
}
int pop()
{
if(top == -1){
stackEmpty();
exit(0);
}
return stack[top--];
```

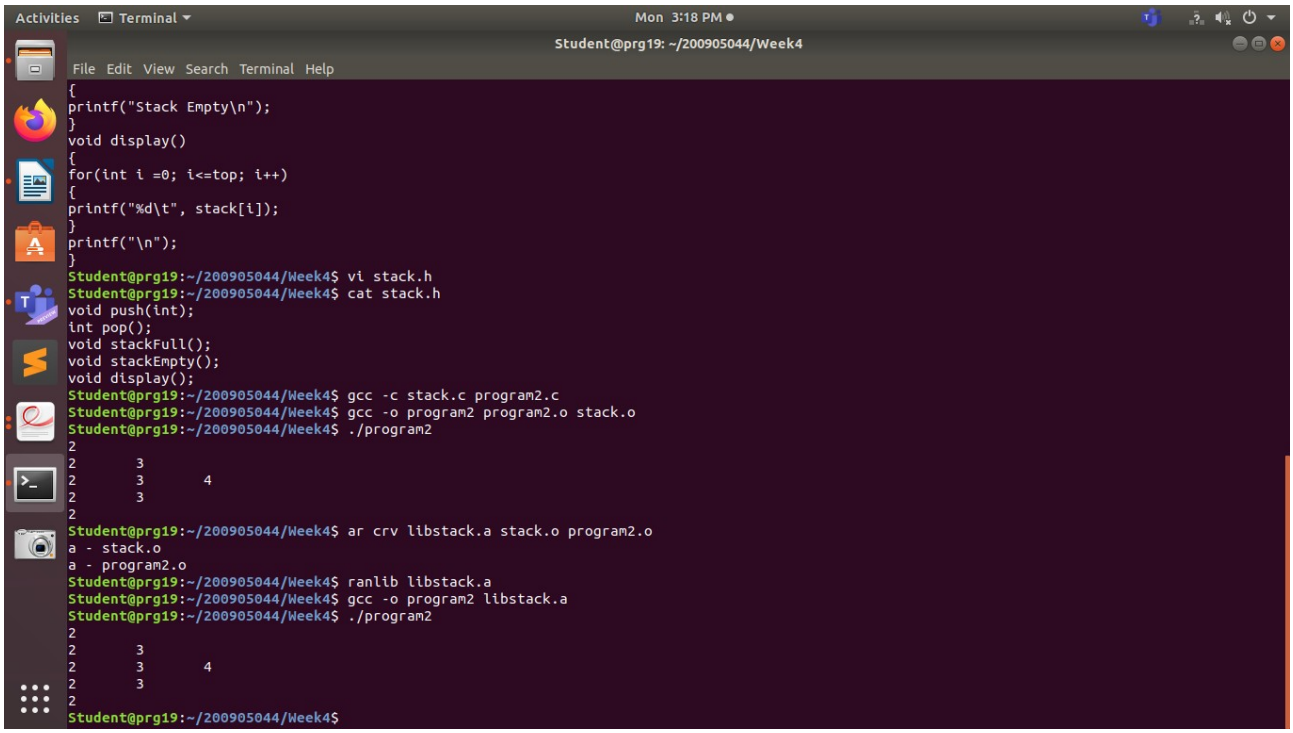
```
}
void stackFull()
{
printf("Stack Full\n");}
void stackEmpty()
{
printf("Stack Empty\n");
}
void display()
{
for(int i =0; i<=top; i++)
{
printf("%d\t", stack[i]);
}
printf("\n");
}
```

“stack.h” :

```
void push(int);
int pop();
void stackFull();
void stackEmpty();
void display();
```

OUTPUT AND COMMANDS:





THANK YOU!