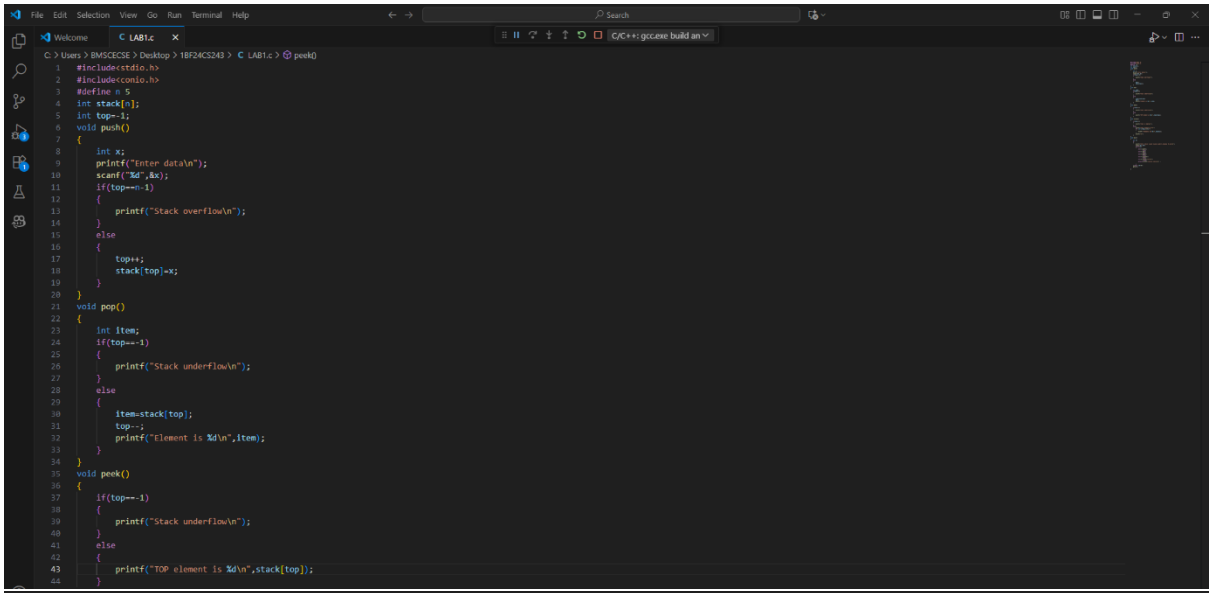
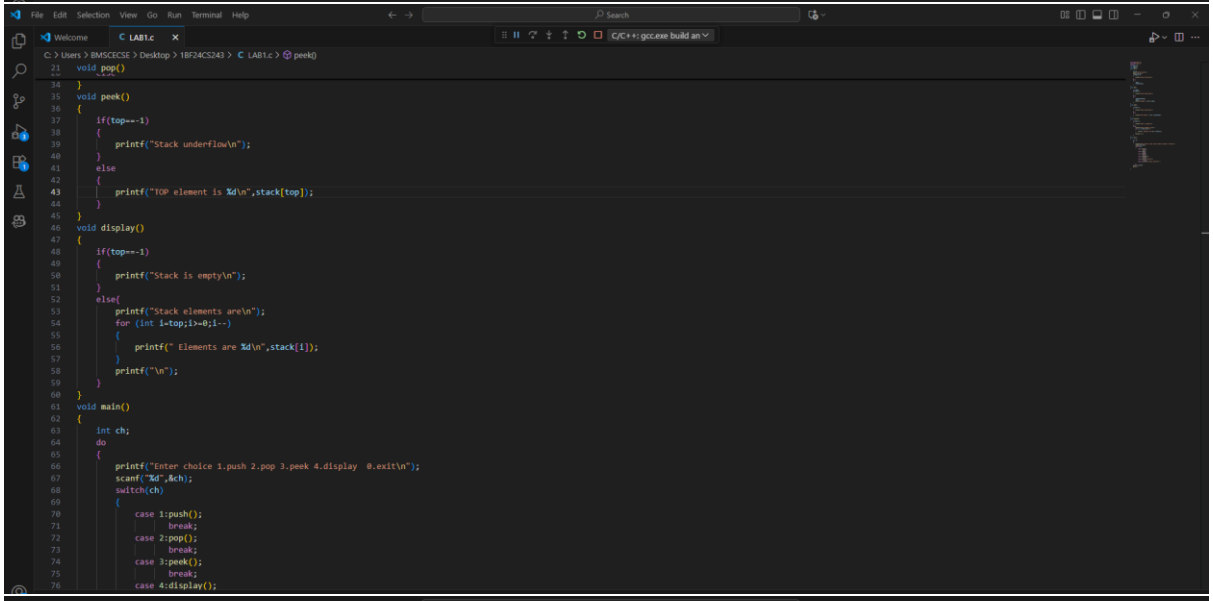
```
#include<stdio.h>
#include<conio.h>
#define n 5
int stack[n];
int top=-1;
void push()
{
   int x;
   printf("Enter data\n");
   scanf("%d",&x);
   if(top==n-1)
   {
      printf("Stack overflow\n");
   }
   else
   {
      top++;
      stack[top]=x;
   }
}
void pop()
{
   int item;
   if(top==-1)
   {
      printf("Stack underflow\n");
   }
   else
   {
      item=stack[top];
      top--;
```

```
        printf("Element is %d\n",item);
    }
}
void peek()
{
    if(top==-1)
    {
        printf("Stack underflow\n");
    }
    else
    {
        printf("%d\n",stack[top]);
    }
}
void display()
{
    if(top==-1)
    {
        printf("Stack is empty\n");
    }
    else{
        printf("Stack elements are\n");
        for (int i=top;i>=0;i--)
        {
            printf(" Elements are %d\n",stack[i]);
        }
        printf("\n");
    }
}
void main()
{
```

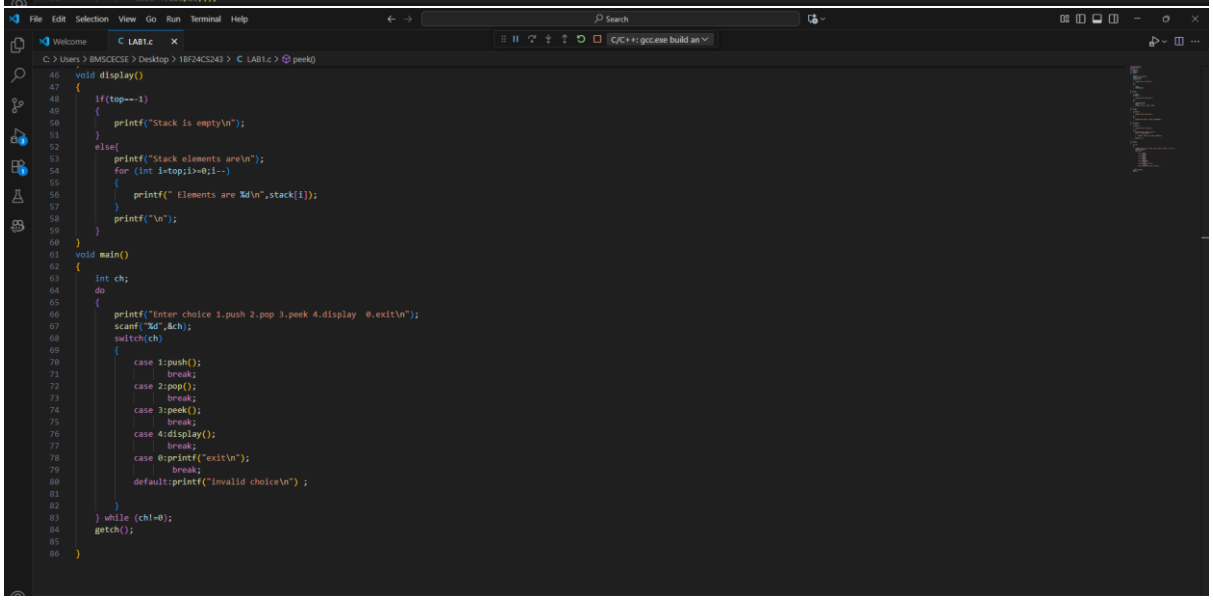
```
    int ch;
    do
    {
       printf("Enter choice 1.push 2.pop 3.peek 4.display  0.exit\n");
       scanf("%d",&ch);
       switch(ch)
       {
          case 1:push();
                 break;
          case 2:pop();
                 break;
          case 3:peek();
                 break;
          case 4:display();
                 break;
          case 0:printf("exit\n");
                  break;
          default:printf("invalid choice\n") ;

       }
    } while (ch!=0);
    getch();

}
```



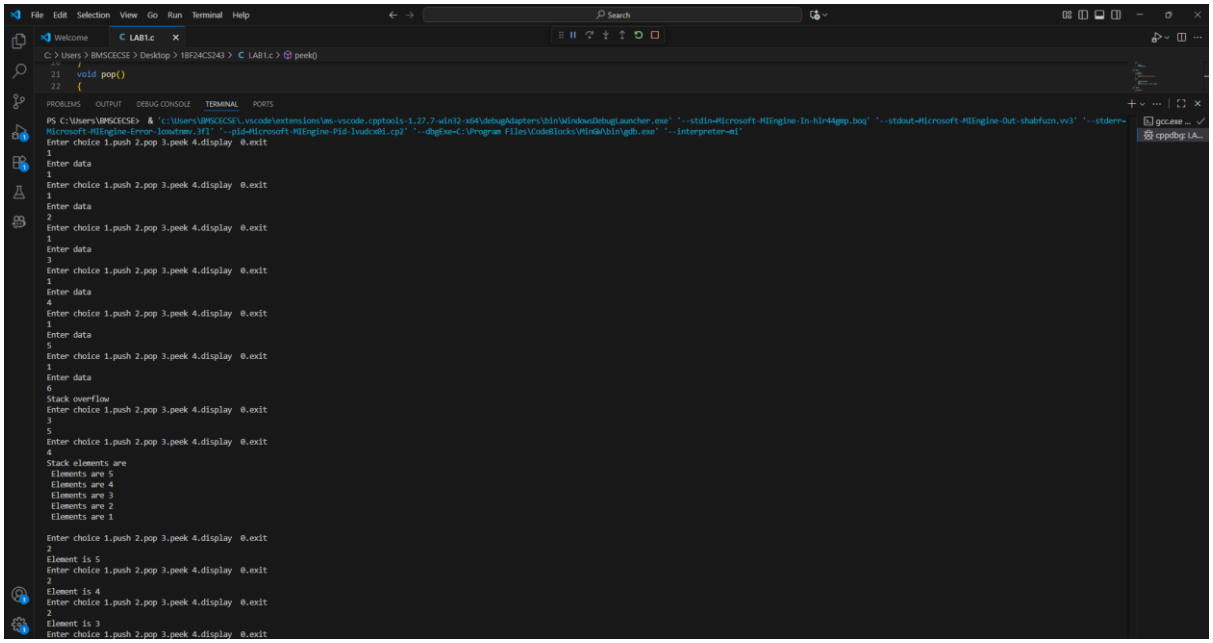
```c
#include<stdio.h>
#include<conio.h>
#define n 5
int stack[n];
int top=-1;
void push()
{
    int x;
    printf("Enter data\n");
    scanf("%d",&x);
    if(top==n-1)
    {
        printf("Stack overflow\n");
    }
    else
    {
        top++;
        stack[top]=x;
    }
}
void pop()
{
    int item;
    if(top==-1)
    {
        printf("Stack underflow\n");
    }
    else
    {
        item=stack[top];
        top--;
        printf("Element is %d\n",item);
    }
}
void peek()
{
    if(top==-1)
    {
        printf("Stack underflow\n");
    }
    else
    {
        printf("TOP element is %d\n",stack[top]);
    }
```

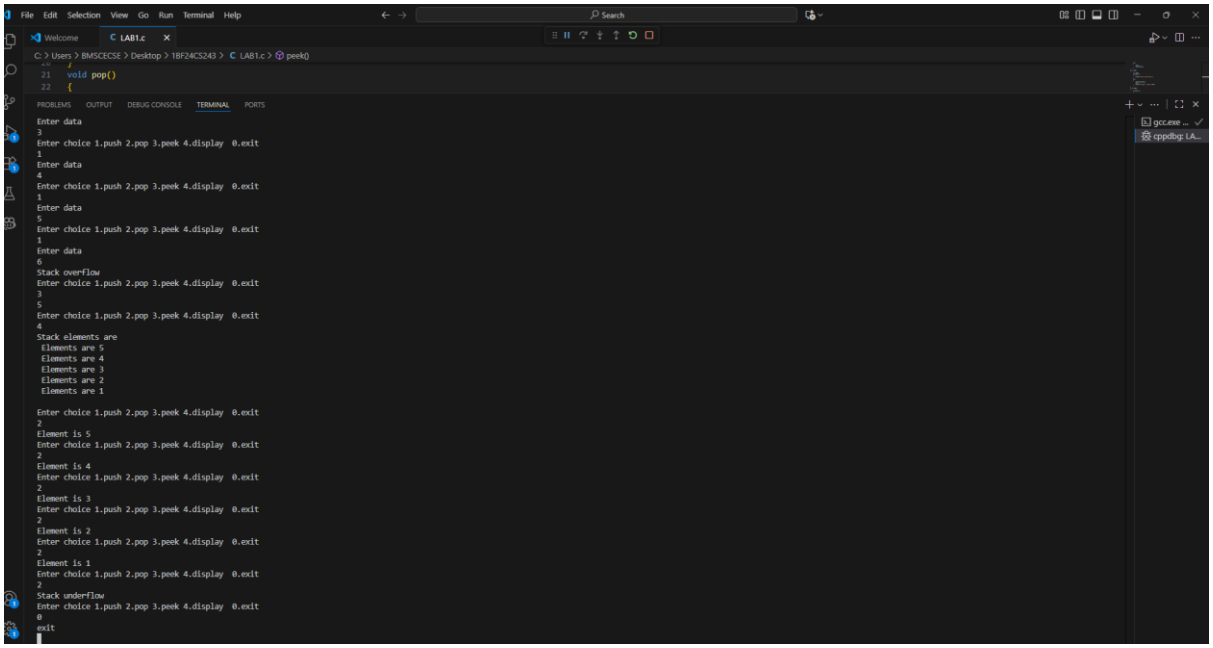


```c
void pop()
}
void peek()
{
    if(top==-1)
    {
        printf("Stack underflow\n");
    }
    else
    {
        printf("TOP element is %d\n",stack[top]);
    }
}
void display()
{
    if(top==-1)
    {
        printf("Stack is empty\n");
    }
    else{
        printf("Stack elements are\n");
        for (int i=top;i>=0;i--)
        {
            printf(" Elements are %d\n",stack[i]);
        }
        printf("\n");
    }
}
void main()
{
    int ch;
    do
    {
        printf("Enter choice 1.push 2.pop 3.peek 4.display  0.exit\n");
        scanf("%d",&ch);
        switch(ch)
        {
            case 1:push();
                   break;
            case 2:pop();
                   break;
            case 3:peek();
                   break;
            case 4:display();
```



```c
void display()
{
    if(top==-1)
    {
        printf("Stack is empty\n");
    }
    else{
        printf("Stack elements are\n");
        for (int i=top;i>=0;i--)
        {
            printf(" Elements are %d\n",stack[i]);
        }
        printf("\n");
    }
}
void main()
{
    int ch;
    do
    {
        printf("Enter choice 1.push 2.pop 3.peek 4.display  0.exit\n");
        scanf("%d",&ch);
        switch(ch)
        {
            case 1:push();
                   break;
            case 2:pop();
                   break;
            case 3:peek();
                   break;
            case 4:display();
                   break;
            case 0:printf("exit\n");
                   break;
            default:printf("Invalid choice\n") ;

        }
    } while (ch!=0);
    getch();

}
```


File Edit Selection View Go Run Terminal Help
Search
Welcome
LAB1.c
C: > Users > BMSCECSE > Desktop > 18F24CS243 > C LAB1.c > peek()
void pop()
{
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\BMSCECSE> & 'c:\Users\BMSCECSE\.vscode\extensions\ms-vscode.cpptools-1.27.7-win32-x64\debugAdapters\bin\WindowsDebugLauncher.exe' '--stdin=Microsoft-MIEngine-In-hlr44gmp.boq' '--stdout=Microsoft-MIEngine-Out-shabfuzn.vv3' '--stderr=Microsoft-MIEngine-Error-1oudtmmv.3f1' '--pid=Microsoft-MIEngine-Pid-1vudcx0l.cp2' '--dbgExe=C:\Program Files\CodeBlocks\MinGW\bin\gdb.exe' '--interpreter=mi'
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
1
Enter data
1
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
1
Enter data
2
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
1
Enter data
3
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
1
Enter data
4
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
1
Enter data
5
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
1
Enter data
6
Stack overflow
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
3
5
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
4
Stack elements are
Elements are 5
Elements are 4
Elements are 3
Elements are 2
Elements are 1
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
2
Element is 5
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
2
Element is 4
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
2
Element is 3
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
gcc.exe ...
cppdbg: LA...


File Edit Selection View Go Run Terminal Help
Search
Welcome
LAB1.c
C: > Users > BMSCECSE > Desktop > 18F24CS243 > C LAB1.c > peek()
void pop()
{
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Enter data
3
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
1
Enter data
4
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
1
Enter data
5
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
1
Enter data
6
Stack overflow
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
3
5
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
4
Stack elements are
Elements are 5
Elements are 4
Elements are 3
Elements are 2
Elements are 1
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
2
Element is 5
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
2
Element is 4
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
2
Element is 3
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
2
Element is 2
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
2
Element is 1
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
2
Stack underflow
Enter choice 1.push 2.pop 3.peek 4.display 0.exit
0
exit
gcc.exe ...
cppdbg: LA...