

//In this C++ program which implements Stack, you can perform following operations:

//Push an element into the stack

//Pop an element from the stack

//Display Top element of the stack

//Display all elements of the Stack

#include <iostream>

using namespace std;

int a[10];

int top = -1;

void display()

{

if (top == -1)

cout<<"*Stack is Empty***"<<endl;**

else

{

int count = 0;

cout<<"Displaying Stack: "<<endl;

for (int i = top; i > -1; i--){

cout<<"Element "<< ++count << ": "<< a[i] <<endl;

}

}

}

void push(int x)

{

top++;

a[top] = x;

cout<< x << " is pushed into the Stack."<<endl;

display();

```
}
```

```
void pop()
```

```
{
```

```
if (top == -1)
```

```
cout<<"***Stack is Empty***"<<endl;
```

```
else{
```

```
cout<< a[top] <<" is popped from the Stack."<<endl;
```

```
    top--;
```

```
display();
```

```
}
```

```
}
```

```
void Top()
```

```
{
```

```
if (top == -1)
```

```
cout<<"***Stack is Empty***"<<endl;
```

```
else
```

```
cout<<"Element at Top is "<< a[top] <<endl;
```

```
}
```

```
int main()
```

```
{
```

```
char condition ='y';
```

```
while (condition == 'y' || condition == 'Y')
```

```
{
```

```
cout<<"Which operation do you want to perform?\n";
```

```
cout<<"1) Push\t 2) Pop\t 3) Display Top\t 4) Display all elements of the Stack\n";
```

```
cout<<"Enter option: ";
```

```
int choice;
```

```
cin>> choice;
```

```
switch (choice)
```

```
{
```

```
case 1:
```

```
if (top >=9)
```

```
{
```

```
cout<<"***Stack is Full***"<<endl;
```

```
break;
```

```
}
```

```
cout<<"Enter element which you want to push: ";
```

```
int val; cin>>val;
```

```
push(val);
```

```
break;
```

```
case 2:
```

```
pop();
```

```
break;
```

```
case 3:
```

```
Top();
```

```
break;
```

```
case 4:
```

```
display();
```

```
break;
```

```
default:
```

```
cout<<"Invalid option!!"<<endl;
```

```
break;
```

```
}
```

```
cout<<"Do you want to perform any other operation? Enters y/n: ";
```

```
cin>>condition; cout<<endl;
```

```
}
```

```
return 0;
```

```
}
```