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//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 Topelement of the stack
//Display all elements ofthe 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();
```

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}

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;
}
```