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// Stack | Class | Push, Pop, Display

#include<iostream>
#include<stdlib.h>

using namespace std;
#define max_size 100

class Stack{
    int top;
    int stack[max_size];

public:
    Stack(){
        top = -1;
    }
    bool isEmpty(){
        return (top==-1);
    }
    bool isFull(){
        return (top == max_size-1);
    }
    int push(int val){
        if(isFull())
            cout<<"Overflow";
        else{
            stack[++top] = val;
            cout<<"Pushed element : "<<val;
        }
    }

    int pop(){
        if(isEmpty())
            cout<<"Underflow";

        else{
            cout<<"Popped element"<<stack[top];
            top--;
        }
    }

    int display(){
        if(isEmpty())
            cout<<"Stack is empty";

        else{
            cout<<"Stack elements are : ";
            for(int i=top; i >=0; i--){
                cout<<stack[i]<<" ";
            }
        }
    }
};

int main(){
    int ch, val;

    Stack stack;

    do{
        cout<<endl;
        cout<<"1 Push"<<endl;
        cout<<"2 Pop"<<endl;
        cout<<"3 Display"<<endl;
```

```
cout<<"4 Exit"<<endl;
cout<<"Enter your choice : ";
cin>>ch;
switch(ch){
    case 1:
        cout<<"Enter the value to be inserted : ";
        cin>>val;
        stack.push(val);
        break;
    case 2:
        stack.pop();
        break;
    case 3:
        stack.display();
        break;
    case 4:
        exit(0);
        break;
    default:
        cout<<"Wrong Choice";
}

}while(ch != 4);

return 0;
}
```