

Stacks

```
class StackObject {  
    String str;  
    int loc;  
    public StackObject(String s, int l) {  
        str = s;  
        loc = l;  
    }  
}
```

```
class MyStack {  
  
public MyStack() {}  
  
public void push (StackObject o) {}  
  
public StackObject pop () {}  
  
}
```

```
class Auxiliaries {  
    public static boolean matches(String a, String b) {  
        boolean ans = false;  
        if ((a == "(" && b == ")")) ans = true;  
        if ((a == "[" && b == "]")) ans = true;  
        return ans;  
    }  
}
```

```
public class Paranth {  
    public static void main (String argv []) {  
        String [] str = {"(", "[", "]", "]", "[", "]}";  
        StackObject ObjectOnTop;  
        int i = 0;  
        boolean notDone = true;
```

Code

```
    }  
}
```

```
MyStack sta = new MyStack();
```

```
while( (i < str.length) && notDone) {
```

```
    if ( (str[i] == "(") || (str[i] == "[")) {
```

```
        Code
```

```
    }
```

```
    else if( (str[i] == ")") || (str[i] == "]" ) ) {
```

```
        Code
```

```
    }
```

```
    else { Error Message }
```

```
        i++;
```

```
}
```

```
if (sta.pop() != null) Error Message
```

```
if ( (str[i] == "(") || (str[i] == "[")) {  
    sta.push(new StackObject(str[i],i));  
}
```

```
else if( (str[i] == "(") || (str[i] == "[") ) {
    ObjectOnTop = sta.pop();
    if (ObjectOnTop == null) {
        notDone = false; Error Message
    }
    else if (! Auxiliaries.matches(ObjectOnTop.str, str[i]) )
{
    notDone = false;
    Error Message
}
}
```