

Instructions:

- Create a separate java class file for each class.
- Zip the complete project and submit the .zip file.
- The general rubrics are given below:

Description	Max. Marks
Coding style Use the best practices for writing the code. The code is well organized and very easy to follow.	20%
Logic Student has used the effective programming logic for solution and demonstrates the appropriate concept in respective task.	60%
Results The program is error-free and generates the expected results as per the specifications.	20%

Task:

Given an expression string, write a program to examine whether the pairs and the orders of parenthesis {, }, (,), [,] are correct in expression.

For example, if the input: expression is entered by user is [()] { } { [() ()] () } , then the output should print **“Balanced”**.

If the input: expression entered by user is [(]) , then the output is **“Not Balanced”**

Hint: Traverse the input string and use stack to push if you encounter an opening parenthesis and pop if you encounter a closing parenthesis of the same type.

The sample output is shown in the following screenshots:

```
Enter the parentheses expression:
[( ) ] { } { [ ( ) ( ) ] ( ) }
Balanced
```

```
Enter the parentheses expression:
[ ( ]
Not Balanced
```