**Exercise No:** 14

**Date:** 20/10/2020

**Aim:**

To write a Python class to find validity of a string of parentheses, '(', ')', '{', '}', '[' and '].

These brackets must be close in the correct order, for example "()" and "()[]{}" are valid

but "[)", "({[)]" and "{{{" are invalid.

**Program:**

def brackets(expr):

stack=[]

for c in expr:

if c in ["(","{","["]:

stack.append(c)

else:

if not stack:

return False

current\_c = stack.pop()

if current\_c =="(":

if c != ")":

return False

if current\_c =="{":

if c != "}":

return False

if current\_c == "[":

if c != "]":

return False

if stack:

return False

return True

if \_\_name\_\_ == "\_\_main\_\_" :

expr = input("input:")

if brackets(expr):

print("output:valid")

else:

print("output:invalid")

**Link:**

[**http://103.53.53.18/mod/vpl/forms/edit.php?id=327&userid=1745**](http://103.53.53.18/mod/vpl/forms/edit.php?id=327&userid=1745)

**Output:**

**Input:**

Input: ()

**Output:**

Output: valid

**Result:**

The output of the program is to write a Python class to find validity of a string of parentheses, '(', ')', '{', '}', '[' and '].