**Exercise No: 14**

**Date: 18.11.2020**

**Aim:** 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 areBracketsBalenced(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 areBracketsBalenced(expr):

print("output:valid")

else:

print("output:invalid")

**Link:** [http://103.53.53.18/mod/vpl/forms/edit.php?id=327 HYPERLINK "http://103.53.53.18/mod/vpl/forms/edit.php?id=327&userid=1649#"& HYPERLINK "http://103.53.53.18/mod/vpl/forms/edit.php?id=327&userid=1649#"userid=1649#](http://103.53.53.18/mod/vpl/forms/edit.php?id=327&userid=1649#)

**Output**: input:()()

output:valid

**Result:** Program to has been successfully verified.