**Exercise No: 14**

**Date: 22-11-2020**

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

**PROGRAM:**

def isMatch(e1, e2):

if e1 == '(' and e2 == ')':

return True

elif e1 == '{' and e2 == '}':

return True

elif e1 == '[' and e2 == ']':

return True

else:

return False

def areBracketsBalanced(expr):

stack = []

index = 0

isBalanced = True

while index < len(expr) and isBalanced:

exp = expr[index]

if exp in '({[':

stack.append(exp)

else:

if stack == []:

return False

else:

top = stack.pop()

if not isMatch(top, exp):

isBalanced = False

index += 1

if stack == [] and isBalanced:

return True

else:

return False

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

expr = input()

if areBracketsBalanced(expr):

print("valid")

else:

print("invalid")

**LINK:**

[http://103.53.53.18/mod/vpl/forms/edit.php?id=327&userid=1802#](http://103.53.53.18/mod/vpl/forms/edit.php?id=327&userid=1802)

**OUTPUT:**

()[]{()}

Valid

{{

Invalid

**RESULT:** Thus, the python program to find validity of a string of parenthesis is executed.