**Exercise No:**14

**Date**:20.11.2020

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**Aim:**

Write a python program 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 areBracketsBalanced(expr):

stack=[]

open\_expressions=['{','[','(']

for i in range(len(expr)):

if(expr[i] in open\_expressions):

stack.append(expr[i])

else:

if not stack:

return False

curr=stack.pop()

if(curr=='{' and expr[i]!='}'):

return False

if(curr=='[' and expr[i]!=']'):

return False

if(curr=='(' and expr[i]!=')'):

return False

if stack:

return False

else:

return True

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=1779>

**Output:**

()[]{()}

valid

{{

invalid

**Result:**

Thus, validity of a string of parentheses is obtained