**PYTHON DEVELOPER – Skill Test (Round 1) Sr**

**Duration of the test: 60 mins**

**Please develop the code using Python to solve the following problem statement and arrive at the solution / output mentioned below. Examples provided for your reference:**

**Problem Statement:**

Given a string expression containing brackets the program must validate if the given expression is valid or otherwise. There can exist three types of brackets () or {} or []. They can appear in various combinations. In between these brackets there can be any alphanumeric character or the entire expression can just be a combination of brackets.

Eligibility for the expression to be valid:

* Every open bracket must have a corresponding closing bracket
* Open bracket must precede closing bracket

If the given expression is valid then the program must print the message “Valid expression”. If the given expression is invalid then

* It must print the message “Invalid expression”
* it must point the first character that is responsible for the expression to be invalid

**Sample Input and output:**

(){  - Invalid expression. Character { at position 3 is responsible

(abc)[{123}] – Valid expression

[1+2(ab] – Invalid Expression. Character ( at position 5 is responsible

Ans:

inp = input()

stack = []

op = ["(",")","[","]","{","}"]

stack = [x for x in inp if x.isalnum() == False and x in op]

stack="".join(stack)

valid\_stack=""

for i in range(len(stack)-1):

for j in range(i+1,len(stack),2):

if stack[i] == chr(ord(stack[j])-1) or stack[i] == chr(ord(stack[j])-2):

valid\_stack += stack[i]

if len(stack) ==2\*len(valid\_stack):

print("valid")

else:

print("invalid")