A balanced delimiter starts with an opening character ((, [, {), ends with a matching closing character (), ], } respectively), and has only other matching delimiters in between. A balanced delimiter may contain any number of balanced delimiters.

Examples

The following are examples of balanced delimiter strings:

()[]{}

([{}])

([]{})

The following are examples of invalid strings:

([)]

([]

[])

([})

Input is provided as a single string. Your output should be True or False according to whether the string is balanced. For example:

Input:

([{}])

Output:

True

**Ans:**

def is\_balanced\_delimiters(input\_str):

stack = []

opening\_chars = "([{"

closing\_chars = ")]}"

char\_map = {')': '(', ']': '[', '}': '{'}

for char in input\_str:

if char in opening\_chars:

stack.append(char)

elif char in closing\_chars:

if not stack or stack.pop() != char\_map[char]:

return False

return len(stack) == 0

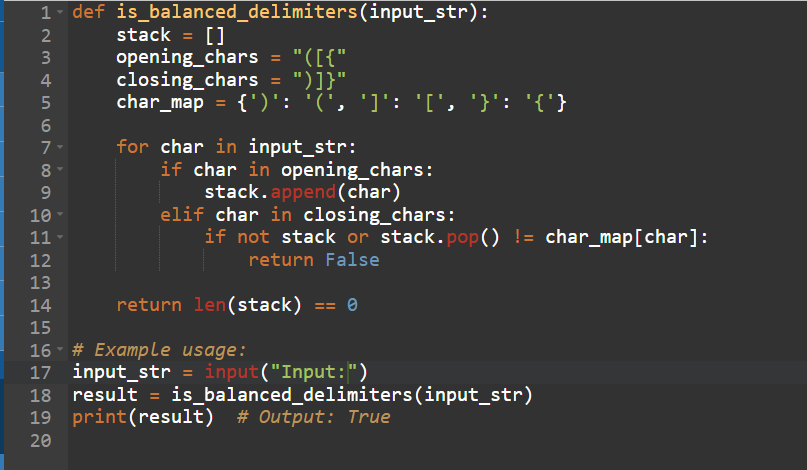
# Example usage:

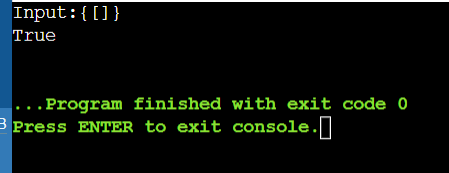
input\_str = input("Input:")

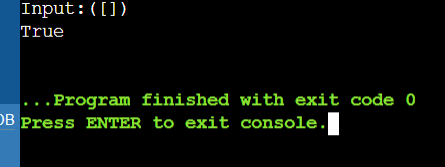
result = is\_balanced\_delimiters(input\_str)

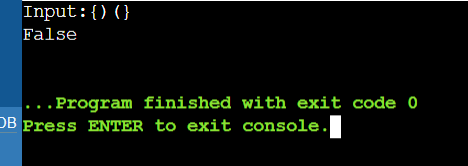
print(result) # Output: True

**OUTPUT:**

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