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**DSA LAB 01**

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**Task 1**

**Write a program to let the user enter a string of his own choice. Check whether the given string is a palindrome or not.**

**PROGRAM:**

Writing a python program that lets user enter a string and the checks whether it is a palindrome or not!

string=input('Enter the string: ')

#the condition below will reverse the string value

for character in string:

  if string==string[::-1]:

       #the double colon gets every 2nd last value (or letter in this case) of the string thereby reversing the string as the number -1 tells the program to slice the previous letter inserted.

    print("String is a palindrome!")

    break   #break statement breaks the loop if the string is a palindrome

  else :

    print("string is not a palindrome!")

    break    #break statement breaks the loop if the string is not a palindrome

**OUTPUT:**

Text

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Text

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**Task 2**

**Write a program to check the balanced parenthesis in the expression or not using stack**

**PROGRAM:**

balance=input("Enter: ")

stack=[]

for ch in balance:

  stack.append(ch)

if(stack.count('(')!=stack.count(')')):

  print("() Don't match!")

else:

  print("() are Balanced!")

if (stack.count('{')!=stack.count('}')):

  print("{} Don't match!")

else:

  print("{} are Balanced!")

if (stack.count('[')!=stack.count(']')):

  print("[] Don't match!")

else:

  print("[] are Balanced!")

**OUTPUT:**

Text

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