### Exercise 1:  Arrange string characters such that lowercase letters should come first

Given string contains a combination of the lower and upper case letters. Write a program to arrange the characters of a string so that all lowercase letters should come first.

**Given**:

str1 = PyThOnIndIA

**Expected Output**:

yhnndPTOIIA

Code:

def arrange\_characters(str1):

lowercase = []

uppercase = []

for char in str1:

if char.islower():

lowercase.append(char)

else:

uppercase.append(char)

sorted\_str = ''.join(lowercase + uppercase)

return sorted\_str

str1 = "PyThOnIndIA"

result = arrange\_characters(str1)

print("Original string:", str1)

print("Arranged string:", result)

### Exercise 2:  Count all letters, digits, and special symbols from a given string

**Given**:

str1 = "P@#yt26ho^&n5ve"

**Expected Outcome**:

Total counts of chars, digits, and symbols

Chars = 8

Digits = 3

Symbol = 4

Code:

def count\_chars\_digits\_symbols(str1):

chars = 0

digits = 0

symbols = 0

for char in str1:

if char.isalpha():

chars += 1

elif char.isdigit():

digits += 1

else:

symbols += 1

return chars, digits, symbols

str1 = "P@#yt26ho^&n5ve"

chars, digits, symbols = count\_chars\_digits\_symbols(str1)

print("Total counts of chars, digits, and symbols:")

print(f"Chars = {chars}")

print(f"Digits = {digits}")

print(f"Symbols = {symbols}")

### Exercise :3 Remove empty strings from a list of strings

**Given**:

str\_list = ["Emma", "Jon", "", "Kelly", None, "Eric", ""]

Original list of sting

['Emma', 'Jon', '', 'Kelly', None, 'Eric', '']

After removing empty strings

['Emma', 'Jon', 'Kelly', 'Eric']

Code:

def remove\_empty\_strings(str\_list):

cleaned\_list = [string for string in str\_list if string.strip()]

return cleaned\_list

str\_list = ["Emma", "Jon", "", "Kelly", "", "Eric", ""]

cleaned\_list = remove\_empty\_strings(str\_list)

print("Original list of strings:")

print(str\_list)

print("\nAfter removing empty strings and None:")

print(cleaned\_list)