def longest\_word(input\_string):

words = input\_string.split()

return max(words, key=len)

def char\_frequency(input\_string, char):

return input\_string.count(char)

def is\_palindrome(input\_string):

return input\_string == input\_string[::-1]

def first\_appearance(input\_string, substring):

return input\_string.find(substring)

def word\_occurrences(input\_string):

words = input\_string.split()

word\_count = {}

for word in words:

word\_count[word] = word\_count.get(word, 0) + 1

return word\_count

input\_string = "Python programming is fun and python is easy"

print("Longest word:", longest\_word(input\_string))

print("Frequency of 'p' in the string:", char\_frequency(input\_string, 'p'))

print("Is the string a palindrome:", is\_palindrome(input\_string))

print("Index of 'is':", first\_appearance(input\_string, 'is'))

print("Word occurrences:", word\_occurrences(input\_string))