**#1.Write a program count word frequencies in a given text**

text = "This is a sample text. This text is for testing the word frequency. This text should produce correct word frequencies."

words = text.lower().split()

word\_freqs = {}

for word in words:

if word not in word\_freqs:

word\_freqs[word] = 1

else:

word\_freqs[word] += 1

for word, freq in word\_freqs.items():

print(f"{word}: {freq}")

#Output

this: 3

is: 2

a: 1

sample: 1

text.: 1

text: 2

for: 1

testing: 1

the: 1

word: 2

frequency.: 1

should: 1

produce: 1

correct: 1

frequencies.: 1

**#2.palindrome checker**

**#Write a program that checks if a given word is a palindrome.**

word = input("Enter a word: ")

word = ''.join(c for c in word if c.isalnum()).lower()

if word == word[::-1]:

print(f"{word} is a palindrome")

else:

print(f"{word} is not a palindrome")

#output

Enter a word: level

level is a palindrome

Enter a word: happy

happy is not a palindrome

**#3.list manipulation**

**#Create a list of numbers, then write a program that prints the square of each number in the list**

numbers = [ 2, 4, 6, 9,24,45,100]

for num in numbers:

print(num \*\* 2)

#Output

4

16

36

81

576

2025

10000