

ASSIGNMENT-2

1. Write a program to count word frequencies in a given text.

PROGRAM:

```
def count_word_frequencies(text):  
    words = text.split()  
    frequencies = {}  
    for word in words:  
        word = word.strip('.,!?').lower()  
        if word in frequencies:  
            frequencies[word] += 1  
        else:  
            frequencies[word] = 1  
    return frequencies  
  
text = "This is a test. This test is fun. Fun, fun, fun!"  
print(count_word_frequencies(text))
```

OUTPUT:

```
{'this': 2, 'is': 2, 'a': 1, 'test': 2, 'fun': 4}
```

2. Write a program that checks if a given word is a palindrome.

PROGRAM:

```
def is_palindrome(word):  
    word = word.strip('.,!?').lower()  
    return word == word[::-1]  
word = input("Enter a word: ")  
if is_palindrome(word):  
    print(word, "is a palindrome")  
else:  
    print(word, "is not a palindrome")
```

OUTPUT:

```
Enter a word: 212  
212 is a palindrome
```

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

PROGRAM:

```
numbers = [1, 2, 3, 4, 5]  
for num in numbers:  
    square = num ** 2  
    print(f"The square of {num} is {square}")
```

OUTPUT:

The square of 1 is 1

The square of 2 is 4

The square of 3 is 9

The square of 4 is 16

The square of 5 is 25
