VaultofCodes

Assignment -2

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

Program:

```
def count_word_frequencies(text):
# Remove punctuation and convert text to lowercase
    text = text.lower()
    punctuations = '''!()-[]{};:'"\,<>./?@#$%^&*_~'''
    for char in text:
        if char in punctuations:
            text = text.replace(char, "")

 # Split the text into words
    words = text.split()

# Count the frequency of each word
    word_frequencies = {}
    for word in words:
        if word in word_frequencies:
            word_frequencies[word] += 1
        else:
            word_frequencies[word] = 1

    return word_frequencies

def main():
# Get input from the user
    user_input = input("Please enter the text: ")

 # Count word frequencies
    frequencies = count_word_frequencies(user_input)

# Display the word frequencies
    for word, freq in frequencies.items():
```

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

if __name__ == "__main__":
    main()
```

Output:

```
Please enter the text: hi hello hi
hi:2
hello:1
```

2.Palindrome Checker

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

Program:

```
def is_palindrome(word):
# convert the word to lowercase to make the comparison case-insensitive
    word= word.lower()
# reverse the word
    reversed_word=word[::-1]
#check if the original word is equal to its reverse
    return word==reversed_word
 # Test the function
word=input("Enter the word:")
if(is_palindrome(word)):
    print(f"{word} is a palindrome")
else:
    print(f"{word} is not a palindrome")
```

Output:

```
Enter the word:Level
Level is a palindrome

Enter the word:keerthi
keerthi 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.

Program:

```
def print_square_of_numbers(numbers):
    for number in numbers:
        square=number**2
        print(f"The square of {number} is {square}")
def main():
    numbers=[1,2,3,4,5,6,7]
    print("original numbers:",numbers)
    print("\n squares of numbers:")
    print_square_of_numbers(numbers)
if __name__ == "__main__":
    main()
```

Output:

```
original numbers: [1,2,3,4,5,6,7]

squares of numbers:
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
The square of 6 is: 36
The square of 7 is: 49
```