Week 2 Assignment of Varun Gupta

Q-1 Word frequency counter

```
def count_word_frequencies(text):
    word_list = text.split()
    word_freq = {}
    for word in word_list:
        word_freq[word] = word_freq.get(word, 0) + 1
    return word_freq

input_text = "Apple Mango Orange Mango Banana Banana Mango"
frequencies = count_word_frequencies(input_text)
for word, freq in frequencies.items():
    print(f"Frequency of {word} is: {freq}")
```

```
Frequency of Apple is: 1
Frequency of Mango is: 3
Frequency of Orange is: 1
Frequency of Banana is: 2
```

Q-2 Palindrome Checker

```
def palindrome(word):
    reversed_word = ''.join(reversed(word))
    return word == reversed_word

user_word = input("Enter a Word: ")
if palindrome(user_word):
    print(f"Yes, {user_word} is a palindrome.")
else:
    print(f"No, {user_word} is not a palindrome.")
```

```
Yes, madam is a palindrome.
```

Q-3 List Manipulation

```
List_1 = [1,2,3,4,5,6,7,8,9,10,20,30,40,50,60,70,80,90,100]

for i in range (0,len(List_1)):
    print(List_1[i]*List_1[i])
```

```
1
4
9
16
25
36
49
64
81
100
400
900
1600
2500
3600
4900
6400
8100
10000
```