

# Programming Assignment - Practice Questions

## Part 1: For Loop Practice

1. Write a program to use for loop to print the following reverse number pattern

```
5 4 3 2 1
4 3 2 1
3 2 1
2 1
1
```

2. Write a program to accept a number from a user and calculate the sum of all numbers from 1 to a given number

For example, if the user entered 10 the output should be 55 (1+2+3+4+5+6+7+8+9+10)

Expected Output:

```
Enter number 10
Sum is: 55
```

3. Write a Python program that takes a list of numbers as input and prints the square of each number using a for loop.

```
Example:
Input: [1, 2, 3, 4, 5],
Output: [1, 4, 9, 16, 25]
```

## Part 2: String Manipulation Practice

4. Write a Python program that takes a string as input and counts the number of vowels (a, e, i, o, u) in the string.

```
Example:
Input: "Hello World",
Output: 3
```

5. Write a Python program that takes a string as input and prints the string in reverse order.

```
Example:
Input: "Hello",
Output: "olleH"
```

6. Write a Python program that takes a list of strings as input and prints the length of each string using a for loop.

```
Example:
Input: ["Hello", "World", "Python"],
Output: [5, 5, 6]
```

## Bonus Question:

Calculate the sum and average of the digits present in a string

Given a string s1, write a program to return the sum and average of the digits that appear in the string, ignoring all other characters.

Given:

```
str1 = "PYnative29@#8496"
```

Expected Outcome:

```
Sum is: 38 Average is 6.333333333333333
```