Assignment on For Loop

Instructions:

Complete the following tasks using Python's **for loop**. Write your code for each question and test it to ensure it works correctly. Submit your solutions in screenshots.

Task 1: Print Squares of Numbers

Write a program that prints the squares of numbers from 1 to 10.

Example Output:
1, 4, 9, 16, 25, 36, 49, 64, 81, 100

Task 2: Sum of a List

Given a list of numbers `[10, 20, 30, 40, 50]`, write a program to calculate and print the sum of the numbers.

Task 3: Counting Items in a List

Write a program that counts how many items are in the list `['apple', 'banana', 'cherry', 'mango', 'orange']` using a for loop.

Task 4: Even Numbers in a Range

Using a for loop, print all even numbers from 2 to 20.

Example Output:
2, 4, 6, 8, 10, 12, 14, 16, 18, 20

Task 5: Multiplication Table

Write a program that prints the multiplication table of 5 using a for loop.

Example Output:
5 x 1 = 5
5 x 2 = 10
...
5 x 10 = 50

Task 6: Reverse a String

Write a program that reverses the string `"Python"` using a for loop and prints the reversed string.

Example Output:
`nohtyP`

Task 7: Filter Positive Numbers

Given the list `[-10, 15, -20, 25, 30, -5]`, use a for loop to print only the positive numbers.

Task 8: Calculate Factorial

Write a program to calculate the factorial of a number `n = 5` using a for loop.

Example Output:
Factorial of 5 is 120.

Task 9: Find the Largest Number

Given the list `[3, 8, 2, 9, 4, 7]`, write a program to find and print the largest number using a for loop.

Task 10: Nested For Loop - Print a Pattern

Write a program to print the following pattern using nested for loops:

```
*
* *
* * *
* * * *
* * * * *
```