Python Basic Exercise #3

Total Question: **10 Task**
Topic: **Conditional Statements, For-loop, While-loop,**

Task 1 - For-Loop and Lists

```
# Create a list of numbers from 1 to 5.
# Use a for-loop to print each number in the list.
# Calculate and print the sum of these numbers.
# Square each number in the list and print the results.
```

Task 2 - While-Loop and Conditionals

```
# Initialize a variable with the value 1.
# Use a while-loop to print the square of the variable until it reaches 10.
# If the square is an even number, print "Even"; otherwise, print "Odd".
```

Task 3 - Break Statement

```
# Create a loop that prints numbers from 1 to 10.
# Use a break statement to exit the loop when the number 5 is reached.
# Print "Loop completed" after the loop.
```

Task 4 - Continue Statement

```
# Create a loop that prints numbers from 1 to 10.
# Use a continue statement to skip printing the number 3.
# Print "Loop completed" after the loop.
```

Task 5 - Data Science Task

```
# Create a list of temperatures in Celsius (e.g., [20, 25, 30, 15, 22]).
# Use a loop to convert each temperature to Fahrenheit using the formula: F = (C * 9/5) + 32.
# Print out the original and converted temperatures.
```

Task 6 - For-Loop and Strings

```
# Create a string variable with your name.
# Use a for-loop to print each character in your name.
# Count and print the number of vowels (aeiou) in your name.
# Print the index of the first occurrence of the letter 'e' in your name.
```

Task 7 - While-Loop and Factorials

```
# Initialize a variable with the value 5.
# Use a while-loop to calculate and print the factorial of the variable.
# Factorial is the product of all positive integers up to that number.
# Example: 5! = 5 * 4 * 3 * 2 * 1
```

Task 8 - Break Statement and Prime Numbers

```
# Create a loop that prints prime numbers less than 20.
# Use a break statement to exit the loop if the number is greater than 10.
# Prime numbers are numbers greater than 1 that have no divisors other than 1 and themselves.
```

Task 9 - Continue Statement and Odd Numbers

```
# Create a loop that prints odd numbers between 1 and 10.
# Use a continue statement to skip printing any even numbers.
```

Task 10 - Data Science Task with For-Loop

```
# Create a list of integers.
# Use a for-loop to calculate and print the average of the numbers in the list.
# Hint: Use len() to get the length of the list.
```