Pandas Series Assignment-1

Q1. Write a python program which mask a Series based on conditions (condition: > 5) with the number n (input) and modify the masked values:

Test case 1:

Input: Series ([10, 5, 8, 12, 4, 3, 7, 1]), n: 99

Output: Series ([99, 5, 99, 99, 4, 3, 7, 1])

Q2. Identify missing values in a Series and replace them with the median:

Test case 1:

Input: Series([2, 5, NaN, 3, 9, NaN, 4])

Output: Series([2, 5, 4.0, 3, 9, 4.0, 4])

Q3. Map values from another Series based on a condition:

Test case 1:

Input: Series([10, 20, 30, 40]), mapping: {10: 'A', 30: 'B'}

Output: Series(['A', 20, 'B', 40])

Q4. Calculate cumulative product of values, ignoring zeroes:

Test case 1:

Input: Series([1, 2, 0, 4, 5])

Output: Series([1, 2, 2, 8, 40])

Q5. Write a python program which Shift elements of a Series and fill shifted positions with custom values:

Test case 1:

Input: Series([10, 20, 30, 40]), shift: 2, fill_value: -1

Output: Series([-1, -1, 10, 20])

Q6. Generate random numbers in a Series and count how many are greater than the standard deviation:

Test case 1:

Input: Series([1.2, 2.5, 3.6, 4.1, 5.9])

Output: 2

Q7. Convert negative values in a Series to absolute values:

Test case 1:

Input: Series([-10, 5, -3, 2, -7])

Output: Series([10, 5, 3, 2, 7])

Q8. Find positions of prime numbers in a Series and return the count:

Test case 1:

Input: Series([10, 7, 3, 15, 17])

Output: 3