Internship Python Task: DSA Practice

Part 1: Remove Duplicates from a String

Problem Statement:

Write a Python function to remove all duplicate characters from a string while preserving the original order of appearance.

Instructions:

- 1. Do not use any external library.
- 2. Use basic data structures (list, set, dictionary if needed).
- 3. Preserve the first occurrence of each character.
- 4. Write a function named `remove_duplicates(input_string)`.

Example:

Input: "programming"

Output: "progamin"

Part 2: Count Frequency of Each Number in a List

Problem Statement:

Write a Python function that takes a list of integers and returns a dictionary showing the frequency of each number.

Instructions:

- 1. Use a dictionary to store the frequencies.
- 2. Do not use libraries like `collections.Counter`.
- 3. Write a function named `count_frequency(numbers_list)`.

Example:

Input: [1, 2, 2, 3, 4, 4, 4, 5]

Output: {1: 1, 2: 2, 3: 1, 4: 3, 5: 1}

Submission Instructions

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- Write both functions in a single `.py` file.
- Add comments to explain your logic.
- Submit the file via the internship portal or email as instructed.