

# Hashing Assignment

**Instructions:** Follow the same pattern as before —

1. Dry run each input on paper,
2. Write and test your code,
3. Submit both your dry run and final working code.

## Question 1: Count Frequency of Elements

**Problem:**

Given an array of integers, use hashing to count the frequency of each element.

**Input 1:**

[ 1, 2, 2, 3, 1, 4 ]

**Input 2:**

[ 5, 5, 5, 7, 7, 9 ]

**Expected Output:**

For Input 1: { 1: 2, 2: 2, 3: 1, 4: 1 }

For Input 2: { 5: 3, 7: 2, 9: 1 }

## Question 2: Find the First Non-Repeating Element

**Problem:**

Given an array, find the first element that occurs only once using hashing.

**Input 1:**

[ 4, 5, 1, 2, 0, 4 ]

**Input 2:**

[ 9, 4, 9, 6, 7, 4 ]

**Expected Output:**

For Input 1: 5

For Input 2: 6

### Question 3: Check for Duplicates in Array

**Problem:**

Given an array, use hashing to check whether it contains any duplicate element.

**Input 1:**

[1, 2, 3, 4, 5]

**Input 2:**

[10, 20, 10, 30, 40]

**Expected Output:**

For Input 1: No duplicates found

For Input 2: Duplicate found: 10