Loop-Based Logical Questions

Question 1: Hidden Palindrome Check

A number is called a **Hidden Palindrome** if, after removing all 0 digits from it, the remaining number becomes a palindrome.

Input

```
102030201
```

Output

```
YES
```

Explanation

After removing all zeros → 12321, which is a palindrome.

Question 2: Remove Repeated Digits (Logic Heavy)

Write a program that removes **repeated digits** from a number and forms a new number containing **only the first occurrence** of each digit (order preserved).

Input

```
12134215
```

Output

```
12345
```

Question 3: Mirror Sum

A number is said to satisfy the **Mirror Sum** condition if:

```
(number + reverse(number)) / 2 = number
```

Input

```
121
```

Output

```
YES
```

Question 4: Digit Frequency (Print Once)

Write a program that counts and prints how many times each digit appears in a number.
Each digit should be printed **only once**, in the order of its **first appearance**.

Input

```
12233421
```

Output

```
1 -> 2
2 -> 3
3 -> 2
4 -> 1
```