

# Rajalakshmi Engineering College

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## NeoColab\_REC\_CS23231\_DATA STRUCTURES

### REC\_DS using C\_Week 7\_COD\_Question 1

Attempt : 1  
Total Mark : 10  
Marks Obtained : 0

#### Section 1 : Coding

##### 1. Problem Statement

Ravi is building a basic hash table to manage student roll numbers for quick lookup. He decides to use Linear Probing to handle collisions.

Implement a hash table using linear probing where:

The hash function is:  $\text{index} = \text{roll\_number} \% \text{table\_size}$  On collision, check subsequent indexes (i+1, i+2, ...) until an empty slot is found.

You need to:

Insert a list of n student roll numbers into the hash table. Print the final state of the hash table. If a slot is empty, print -1.

##### **Input Format**

The first line of the input contains two integers n and table\_size, where n is the

number of roll numbers to be inserted, and table\_size is the size of the hash table.

The second line contains n space-separated integers — the roll numbers to insert into the hash table.

**Output Format**

The output should print a single line with table\_size space-separated integers representing the final state of the hash table after all insertions.

If any slot remains unoccupied, it should be represented as -1.

Refer to the sample output for formatting specifications.

**Sample Test Case**

Input: 4 7

50 700 76 85

Output: 700 50 85 -1 -1 -1 76

**Answer**

-

**Status :** Skipped

**Marks :** 0/10