

# Rajalakshmi Engineering College

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Batch: 2028

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## 2024\_28\_III\_OOPS Using Java Lab

### 2028\_REC\_OOPS using Java\_Week 2\_Q8

Attempt : 1

Total Mark : 10

Marks Obtained : 10

#### **Section 1 : Coding**

##### **1. Problem Statement**

A bank generates secure codes using 3-digit numbers where each digit is unique, and the code must be divisible by 3. You are tasked with generating the first N such codes based on user input, ensuring the digits are unique and the number is divisible by 3.

Note: Use nested for loops to solve.

##### ***Input Format***

The first line contains an integer N representing the number of valid codes to generate.

##### ***Output Format***

The output prints N lines, each line contains a valid 3-digit code.

Refer to the sample output for formatting specifications.

### **Sample Test Case**

Input: 5

Output: 102

105

108

120

123

### **Answer**

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int N = sc.nextInt(); // Number of valid codes to generate

        int count = 0;

        // Nested loops for each digit
        for (int i = 1; i <= 9 && count < N; i++) { // hundreds place (non-zero)
            for (int j = 0; j <= 9 && count < N; j++) { // tens place
                for (int k = 0; k <= 9 && count < N; k++) { // units place
                    // Ensure digits are unique
                    if (i != j && i != k && j != k) {
                        int num = i * 100 + j * 10 + k;
                        // Check divisibility by 3
                        if (num % 3 == 0) {
                            System.out.print(num + " ");
                            count++;
                        }
                    }
                    if (count == N) break; // stop if we reached N codes
                }
            }
        }
    }
}
```

}

**Status : Correct**

**Marks : 10/10**