

# Rajalakshmi Engineering College

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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