

# 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 codes required
```

```
        int count = 0;
```

```
        // Generate all 3-digit numbers using nested loops
```

```
        for (int i = 1; i <= 9 && count < N; i++) { // hundreds place
```

```
            for (int j = 0; j <= 9 && count < N; j++) { // tens place
```

```
                for (int k = 0; k <= 9 && count < N; k++) { // ones place
```

```
                    // Ensure unique digits
```

```
                    if (i != j && j != k && i != k) {
```

```
                        int num = i * 100 + j * 10 + k;
```

```
                        // Check divisibility by 3
```

```
                        if (num % 3 == 0) {
```

```
                            System.out.println(num);
```

```
                            count++;
```

```
                            if (count == N) break;
```

```
                        }
```

```
                    }
```

```
                }
```

```
            }
```

```
        }
```

```
    sc.close();  
  }  
}
```

**Status :** Correct

**Marks : 10/10**