

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;

class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int N = sc.nextInt();
        int count = 0;

        for (int i = 1; i <= 9; i++) {    // Hundreds place (non-zero)
            for (int j = 0; j <= 9; j++) { // Tens place
                if (j == i) continue;    // Digits must be unique
                for (int k = 0; k <= 9; k++) { // Units place
                    if (k == i || k == j) continue; // Unique digits check
                    int num = i * 100 + j * 10 + k;
                    if (num % 3 == 0) { // Divisible by 3
                        System.out.print(num + " ");
                        count++;
                        if (count == N) return; // Stop after N numbers
                    }
                }
            }
        }
        sc.close();
    }
}
```

Status : Correct

Marks : 10/10