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 line,s 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

```java
import java.util.*;

public 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 && count < N; i++) { // hundreds place (cannot be 0)
            for (int j = 0; j <= 9 && count < N; j++) { // tens place
                for (int k = 0; k <= 9 && count < N; k++) { // units place
                    if (i != j && i != k && j != k) { // unique digits
                        int num = i * 100 + j * 10 + k;
                        if (num % 3 == 0) { // divisible by 3
                            System.out.print(num + " ");
                            count++;
                            if (count == N) break;
                        }
                    }
                }
            }
        }
    }
}
```

Status : Correct   *Marks : 10/10*