Rajalakshmi Engineering College

Name: Mohamed Najib M
Email: 241001136@rajalakshmi.edu.in
Roll no:
Phone: null
Branch: REC
Department: IT - Section 5
Batch: 2028
Degree: B.E - IT

Scan to verify results

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

```
// You are using Java
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 to generate

      int count = 0; // To keep track of generated codes

      // Loop through all 3-digit numbers
      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++) { // Units place
               // Check for 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++;
                  }
                  // Stop if we already have N numbers
                  if (count == N) {
                     break;
                  }
               }
```

```
            }
        }
    }

    sc.close();
  }
}
```

Status : Correct ***Marks : 10/10***