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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
// 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;
        if (sc.hasNextInt()) {
            N = sc.nextInt();
        } else {
            sc.close();
            return;
        }

        int count = 0;
        // Hundreds digit: 1-9 (cannot be 0)
        for (int d1 = 1; d1 <= 9 && count < N; d1++) {
            // Tens digit: 0-9, must be different from d1
            for (int d2 = 0; d2 <= 9 && count < N; d2++) {
                if (d2 == d1) continue;

                // Units digit: 0-9, must be different from d1 and d2
                for (int d3 = 0; d3 <= 9 && count < N; d3++) {
                    if (d3 == d1 || d3 == d2) continue;

                    int num = d1 * 100 + d2 * 10 + d3;
                    if (num % 3 == 0) {
```

```
                System.out.println(num);
                count++;
                // If we've printed N numbers, the loops will exit due to count < N
checks
            }
        }
    }
}
    sc.close();
    }
}
```

Status : Correct   *Marks : 10/10*