Name of the Course : Ultimate Java Masterclass

Level : Easy

Tool Stack : Java8 and Junit5

Problem Statement : Provide a code solution to check sum of odd and even digits.

Description : Create two classes, one Number class with number field and with a parameterized constructor and another MainClass with two static methods

1. public static int checkSumOfOddEvenDigits(int number), which accepts an integer and returns 0 or 1. If sum of digits is odd then do sum of odd digits and check if sum of odd digits is odd. If sum of digits is even then do sum of even digits and check if sum of even digits is even.

2. pubic static void main method, for reading the number from input devices and call the checkSumOfOddEvenDigits method to test it.

Code:

**public** **class** Number {

**private** **int** number;

**public** **int** getNumber() {

**return** number;

}

**public** **void** setNumber(**int** number) {

**this**.number = number;

}

**public** Number(**int** number) {

**super**();

**this**.number = number;

}

}

**import** java.util.\*;

**public** **class** MainClass {

**public** **static** **int** checkSumOfOddEvenDigits(**int** number) {

**int** sum = 0, result = 0;

**int** number1 = number;

**while** (number != 0) {

**int** remainder = number % 10;

sum = sum + remainder;

number = number / 10;

}

**if** (sum % 2 != 0) {

number = number1;

sum = 0;

**while** (number != 0) {

**int** remainder = number % 10;

**if** (remainder % 2 != 0) {

sum = sum + remainder;

}

number = number / 10;

}

**if** (sum % 2 != 0) {

result = 0;

}

} **else** **if** (sum % 2 == 0) {

number = number1;

sum = 0;

**while** (number != 0) {

**int** remainder = number % 10;

**if** (remainder % 2 == 0) {

sum = sum + remainder;

}

number = number / 10;

}

**if** (sum % 2 == 0) {

result = 1;

}

}

**return** result;

}

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

Scanner scanner = **new** Scanner(System.***in***);

System.***out***.println("Enter a number");

**int** number1 = scanner.nextInt();

Number number = **new** Number(number1);

**if** (*checkSumOfOddEvenDigits*(number.getNumber()) == 0)

System.***out***.println("Sum of odd digits is odd");

**else**

System.***out***.println("Sum of even digits is even");

scanner.close();

}

}

Junit Testing

**import** **static** org.junit.jupiter.api.Assertions.\*;

**import** org.junit.jupiter.api.Assertions;

**import** org.junit.jupiter.api.Test;

**class** MainClassTest {

@Test

**void** testCheckSumOfOddEvenDigits() {

// Test will pass

Number number1 = **new** Number(56895);

Number number2 = **new** Number(56896);

Assertions.*assertEquals*(0, MainClass.*checkSumOfOddEvenDigits*(number1.getNumber()));

Assertions.*assertEquals*(1, MainClass.*checkSumOfOddEvenDigits*(number2.getNumber()));

}

}

Test Data1

Enter a number

56895

Sum of odd digits is odd

Test Data2

Enter a number

56896

Sum of even digits is even

Learning outcome: Participant would be able to know the use of control statement.