## Question:

Write an algorithm of swapping two numbers without using third variable in java. Also apply white box testing techniques on the algorithm.

### Code:

import java.util.Scanner;

import java.util.InputMismatchException;

public class SwapTwoIntegersWithoutUsingThirdVariable {

public static void swapNumbers(int num1, int num2) {

if (num1 == num2) {

System.out.println("Both numbers are same. No need for swapping");

} else {

System.out.println("Numbers before swapping are:\nnum1 = " + num1 + " , " + "num2 = " + num2);

num1 = num1 + num2;

num2 = num1 - num2;

num1 = num1 - num2;

System.out.println("\nNumbers after swapping is:\nnum1 = "+ num1 + " , " + "num2 = " + num2);

}

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

try {

int num1;

int num2;

System.out.println("Enter first number:");

num1 = scanner.nextInt();

System.out.println("Enter second number:");

num2 = scanner.nextInt();

swapNumbers(num1 , num2);

} catch (InputMismatchException e) {

System.out.println("Inavlid Input please enter a integer value.");

}

scanner.close();

}

}

### CFG:

### Path Identification:

### Test Cases:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Testcase\_ID | Description | Input Data | Expected Outcome | Actual Outcome | Status |
| SN\_01 | Enter same inputs of num1 and num2 | num1 = 5,  num2 = 5 | Same Numbers, No need for swapping. | Same numbers, No need for swapping. | Pass |
| SN\_02 | Enter different inputs of num1 and num 2. | num 1 = 6,  num2 = 4 | Swapping numbers are:  num 1 = 4,  num 2 = 6 | Swapping numbers are:  num1 = 4,  num 2 = 6 | Pass |