1. Write a program to check whether a number is a Strong number or not. Strong number is a special number whose sum of factorial of digits is equal to the original number. For example: 145 is a strong number. Since, 1! + 4! + 5! = 145

Solution:

import java.util.Scanner;

public class StrongNumber {

public static int factorial(int n) {

if (n == 0)

return 1;

else

return n \* factorial(n - 1);

}

public static boolean isStrong(int num) {

int originalNum = num;

int sum = 0;

while (num > 0) {

int digit = num % 10;

sum += factorial(digit);

num /= 10;

}

return sum == originalNum;

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a number: ");

int number = scanner.nextInt();

if (isStrong(number)) {

System.out.println(number + " is a Strong number.");

} else {

System.out.println(number + " is not a Strong number.");

}

scanner.close();

}

}

Output:

Enter a number: 121

121 is not a Strong

2. Write a program to check leap year using if else. How to check whether a given year is a leap year or not. [Hint:Take an input of any number. Store it in some variable say year. If a year is exactly divisible by 4 and not divisible by 100, then it is a leap year. Or if a year is exactly divisible by 400 then it is a leap year.]

Solution:

import java.util.Scanner;

public class LeapYearChecker {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter a year: ");

int year = scanner.nextInt();

if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {

System.out.println(year + " is a leap year.");

} else {

System.out.println(year + " is not a leap year.");

}

scanner.close();

}

}

Output:

1.Enter a year: 2003

2003 is not a leap year.

2.Enter a year: 2024

2024 is a leap year.