

Lab (30mins): (Attempt any 2)

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.

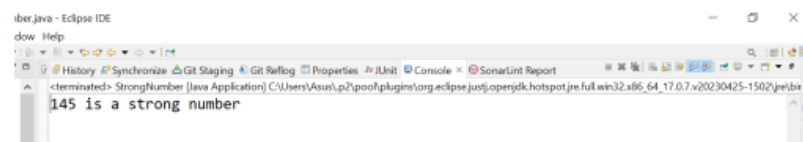
For example: 145 is a strong number. Since, $1! + 4! + 5! = 145$

[Hint: conditional operator, method, use parameterized method to take input]

Sample Input 1:

145

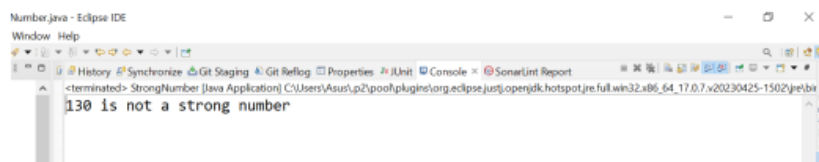
Expected Output:



Sample Input 1:

130

Expected Output:



2. Write a program to check leap year using if else. How to check whether a given year is a leap year or not.

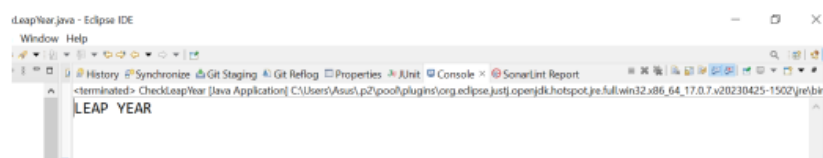
[Hint: Take an input of any number. Store it in some variable say **year**.

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.]

Sample Input 1:

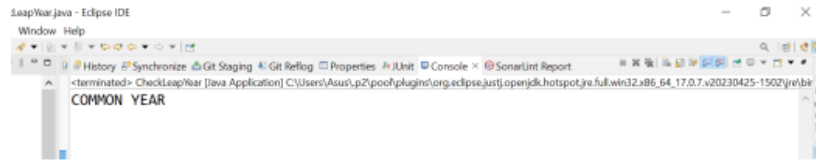
2004

Expected Output:



Sample Input 2:

Sample Input 2:



3. Create a program to calculate the annual salary of an employee by using inheritance.

Create a class named **"User"** with the following properties and methods:

Properties:

id(int): representing the id of the User

name(String): representing the name of the User

Constructor:

Declare parameterized constructor to initialize id and name.

Create a subclass named **"Employee"** that inherits from the **"User"** class. Add the following additional properties and methods:

Properties:

salary(double): representing the monthly salary of the employee

Method:

double calculateAnnualSalary(): to calculate the annual salary earned by the employee.

In the main method, create an object of **"Employee"** class. Calculate the annual salary of the employee and display it..

[Hint: Use constructor or setter methods to set the value]

Sample Input:

Id:1

name: john

salary: 20000

Expected output:

