[3:02 pm, 01/10/2022] Vipul Sir CDAC: 1] **Write a function that returns true if a particular year is a leap year**

**Input: 2000**

**Output: true**

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2] **Write a function that prints out a breakdown of an integer**

**Input: 43018,**

**Output: 40000 + 3000 + 10 + 8**

[3:03 pm, 01/10/2022] Vipul Sir CDAC: Assignments que for practise:

1. **Create a class Box that uses a parameterized method to initialize the dimensions of a box.(dimensions are width, height, depth of double type). The class should have a method that can return volume. Obtain an object and print the corresponding volume in main () function**.

2. **Create a new class called “Calculator” which contains the following:**

**A static method called powerInt(int num1,int num2) that accepts two integers and returns num1 to the power of num2 (num1 power num2).**

**A static method called powerDouble(double num1,int num2) that accepts one double and one integer and returns num1 to the power of num2 (num1 power num2).**

**Call your method from another class without instantiating the class (i.e. call it like Calculator.powerInt(12,10) since your methods are defined to be static) Hint: Use Math.pow(double,double) to calculate the power.**

3. **Design a class that can be used by a health care professional to keep track of a patient’s vital statistics. Here’s what the class should do:**

**Construct a class called Patient**

**Store a String name for the patient**

**Store weight and height for patient as doubles**

**Construct a new patient using these values**

**Write a method called BMI which returns the patient’s BMI as a double. BMI can be calculated as BMI = ( Weight in Pounds / ( Height in inches x Height in inches ) ) x 703**

**Next, construct a class called “Patients” and create a main method. Create a Patient object and assign some height and weight to that object. Display the BMI of that patient.**