**LeapYears Computer Science I**

In leap years: February has a 29th day and the year has 366 days. Many people think that leap years come every four years. This is because it takes the earth takes approximately 365.25 days to revolve around the sun. But, things are a bit more complicated than that: leap years come slightly less often than once every four years. So, which Years are Leap Years? Below are the rules.

**In the Gregorian calendar three criteria must be considered to identify leap years:**

* **The year can be evenly divided by 4;**
* **If the year can be evenly divided by 100, it is NOT a leap year, unless; The year is also evenly divisible by 400. Then it is a leap year.**

Hint: You can determine if a year be evenly divided by some number (400 in this example) by using **mod**.

Examples:

* 1999 was NOT (not divisible 4)
* 2017 was NOT (not divisible 4)
* 1900 was NOT (is divisible evenly by 4 and 100 but not by 400)
* 1800 was NOT (is divisible evenly by 4 and 100 but not by 400)
* 2000 was a leap year (divisible evenly by 4 and both 100 and 400)
* 1600 was a leap year (divisible evenly by 4 and both 100 and 400)
* 1996 was a leap year (divisible evenly by 4 but neither 100 nor 400)
* 2016 was a leap year (divisible evenly by 4 but neither 100 nor 400)

Assignment:

* Ask a user to enter a year.
* Inform them if the year they entered is a leap year or not.
* Try to make you code as simple as possible.

Check out the examples on the next page.

Example 1: Computer: Please enter a year.

 User: 2000

 Computer: 2000 is a leap year.

Example 2: Computer: Please enter a year.

User: 1499

Computer: 1499 is NOT a leap year.

Try This Extra Challenge – If the year entered is NOT a leap year, also tell the user when the next leap year will occur after the year entered.

Example 3: Computer: Please enter a year.

User: 2010

Computer: 2010 is NOT a leap year.

 The next leap year after 2010 is 2012.

Save as LeapYears and show Haas the working program.