Note:

All statements should be commented. You have to submit .py file for each question. Plagiarism will get straight zero.

Question 1

A leap year is a calendar year that contains an additional day (29th of February) added to keep the calendar year synchronised with the astronomical year or seasonal year (which contains roughly 365¼ days or 365.242375 days to be more accurate).

An easy way to work out if a year is a leap year or not is to check if the year (e.g. 2020) **is a multiple of 4**. If it is, then it is most likely a leap year. Indeed, the rule is slightly more complex than this and can be summarised in three statements:

- Leap years are any year that can be exactly divided by 4 (such as 2004, 2008, 2012, 2016, 2020, 2024, etc)
- except if it can be exactly divided by 100, **then it isn't a leap year** (such as 2100, 2200, etc)
- except if it can be exactly divided by 400, **then it is a leap year** (such as 2000, 2400, 2800, etc)

Question 2:

The highest common factor (H.C.F) or greatest common divisor (G.C.D) of two numbers is the largest positive integer that perfectly divides the two given numbers. For example, the H.C.F of 12 and 14 is 2.