CS250 Intro to CSII
Classes Lab

Problem: A rational number is defined to be any number that can be expressed in the form p/q where p and q are each integers and q is not equal to 0.

In your **CS250S19** Solution, create a new project called **Rational**. Then do the following:

1) Create a class called Rational with two private members representing p (mNumerator) and q (mDenominator) in the above definition of a rational number. Further, create a constructor that accepts two ints (p and q) as parameters. Set the default values of these parameters to 0 and 1 for p and q respectively. The class Rational is to be created in a header file named Rational.h.

2) Implement the constructor for the class Rational in a file named Rational.cpp.

3) Write a driver in RationalDriver.cpp that creates two Rational objects where one is created using the default constructor and the other creates a Rational object representing the rational number 4 (p = 4, q = 1).

4) Add a public print function to **Rational** that will print a Rational object in the form p/q. The print method is to accept an ostream object. Print both rational numbers to the screen.

5) In the driver, create Rational objects to represent 2/3 and 4/5 and then print out each object.

6) Add a function **equals** to class Rational that returns true if both Rational objects are equal; otherwise, false is returned. Test your method.

7) Add a function **multiply** to class Rational that multiplies two Rational objects and returns a Rational object.