Assignment #2:

Arithmetic Expressions, Static Methods & String Concatenation

Requirements:

1. Write a class named `AshWednesday` that implements Gauss's algorithm for calculating the month and day of Ash Wednesday Sunday for any specified year.
2. Generate complete Javadocs for the AshWednesday class and AshWednesdayTester class and place them in a folder named `docs` within the project.
3. The `AshWednesday` class has no attributes.

public interface of a class (The public constructors and **methods** of a class form the public interface of the class)

- There is a **private**, **no-argument constructor** with an empty implementation so the class can't be instantiated
- `calculateAshWednesday(int selectYear): String`

This is a class method that implements Gauss's algorithm, using the same local variables as in text (a thru e). **Must use string concatenation** to return a string (see sample output below)

4. Write a class named `AshWednesdayTester` that invokes the static method of the AshWednesday class for the following years: 2007, 2017. The program displays the following output, exactly as shown:

sample output

```
In 2007, Easter is: month = 4 and day = 8
In 2017, Easter is: month = 4 and day = 16

In 2007, Ash Wednesday is: month = 2 and day = 21
In 2017, Ash Wednesday is: month = 3 and day = 1
```

How to calculate Ash Wednesday:
Y = select year, M = 24, N = 5
a = Y mod 19
b = Y mod 4
c = Y mod 7
d = (19a + M) mod 30
e = (2b + 4c + 6d + N) mod 7
If d+e < 10, then Easter is on month = 3 and day = (d+e+22), else Easter is on month 4 and day (d+e-9).
Ash Wednesday is 40 days (Lord's day / Sunday is not included) before Easter.

Grading policy: There is a minimum deduction of 10 pts for any program that violates the public interface of the `AshWednesday` class. There is a 5 pt deduction for missing/incomplete javadocs, and a minimum deduction of 20 pts for an incorrectly submitted project. You will receive 60 pts if you only get `Easter` part done.

Submission: Your Eclipse project is named `yourStudentID_2.`The project is submitted as `yourStudentID_2.zip`. Submit via eCourse. No other submissions will be graded.

Deadline: Thursday, April 13th

Assignment #2 Design Model: