**Lab 09 – Seasons**

Open BlueJ, and create a new BlueJ project titled **Lab09-Seasons** in your CS\LABS folder (H:\CS\LABS).

Create a new class with this code skeleton:

//Name:

import java.util.\*;

public class PracticeProblems

{

public static void main(String[] args)

{

Scanner console = new Scanner(System.in);

}

}

REMEMBER – if statements are used for *conditional code execution.* Much more information can be found in the powerpoints and in [this](https://www.youtube.com/watch?v=JHIRCIwkXb8) excellent video; here is an example of basic if statement syntax:

int a = 12;

if (a > 10)

{

System.out.println("Must be over 10!");

}

**Would print:** Must be over 10!

**Before each problem, insert a COMMENT with the problem number.**

1. Declare integer variables called leftPressureand rightPressure that represent tire pressure, and get their values from the keyboard. Write an if statement that prints Warning! Low tire pressure if either variable’s value is below 36.
2. Get **new values** from the keyboard for leftPressureand rightPressure*.* Now, write if statements that will print Warning! Uneven tire pressureif their values **differ** by 4 or more.
3. (Riddle) Forward I am heavy, but backward I am not. What am I?
4. Declare a double variable called grade and get its value from the keyboard. Write if statements to print the ‘letter grade’ that corresponds to the value of grade.

90 – 100 == A, 80 – 89 == B, 70 – 79 == C. Lower than 70 is an F.

1. Read in an integer num from the keyboard and round that value to the nearest multiple of 10. If the rightmost digit is 5 or more, round up. If the rightmost digit is 4 or less, round down. For example, 15 will round up to 20, and 12 will round down to 10. Print the rounded version of the number entered by the user to the screen (to the console).

HINT – the modulus (%) operator will be useful here. Remember that we use a BASE 10 number system!

1. Complete the ‘Worksheet – If Statements #3’ (Excel file). Make sure to save it when done.

**Seasons app**

Create a new class with this code skeleton:

//Name:

import java.util.\*;

public class Seasons

{

public static void main(String[] args)

{

Scanner console = new Scanner(System.in);

}

}

Write a program that will determine the season given a month / day combination. First, declare two **integer** variables, month and day*,* that represent the month and day (e.g. 6 and 14 would correspond to June 14th). Get their values from the keyboard. Write if statements that will print the ‘season’ that the date falls under, as follows:

*If the date falls between 12/16 and 3/15, you should print "Winter".*

*If the date falls between 3/16 and 6/15, you should print "Spring".*

*If the date falls between 6/16 and 9/15, you should print "Summer".*

*If the date falls between 9/16 and 12/15, you should print "Fall".*

*/\* this problem is slightly harder than it appears. Write out your solution by hand before attempting to program it. MAKE SURE to test with many different month / day combinations to ensure it’s working \*/*

Sample runs (**user input shown in red**), use these to test your code:

Enter month >>> **12**

Enter day >>> **10**

Season: Fall

and another...

Enter month >>> **3**

Enter day >>> **11**

Season: Winter

Make sure you runs LOTS of test before turning it in. Find your own mistakes before I find them!