**Introduction to JAVA (Continued) – Part 3**

# C001 — Inputting Integers from the Keyboard

Programs would not be very useful if you could only use variables that were predefined in the program, so we need a way to assign the value from other locations such the keyboard or from a file.

Ready comes bundled with "wrapper classes" that allow both, but for now we will concentrate on inputting from the keyboard.

To make things easy, the Console class (which we are already using for output) also includes ***methods*** that allow this very thing.

To enter an integer from the keyboard, we simply use a statement such as: radius = c.readInt();

Notice the capitalization of the "I" and the parentheses. These are important, otherwise you will get an error.

# Assignment:

Write a program that prompts for the height and width of a rectangle, then outputs the area in a user-friendly format. When testing the program, be sure you enter integers, otherwise you will get an error (try it and see).

Save as "C001.java".

# C002 — Inputting Real Numbers from the Keyboard

Based on the method used the input integers from the keyboard, you could probably guess the method used to read real numbers ("double") from the keyboard.

If you guessed readDouble(), you would be correct.

Remember that the input methods come from the Console class, so the entire syntax used read a real number from the keyboard is:

doubleVar = c.readDouble();

# Assignment:

Rewrite C001 so it uses doubles instead of integers. For the output statement make sure to put a message that the area of the rectangle is and then format the results to 2 decimal places.

Save as "C002.java".

# C002a — Force, Mass, Acceleration

**Assignment:**

Prompt for an object's mass (in kg) and acceleration (in m/s2), then calculate and print force (in N). Formula: F=ma

When you prompt the user make sure you identify that the object’s mass should be in kg, the acceleration in m/s^2 and the resulting force in N.

When you provide the output make sure you are clear what the result of the program is and since we are dealing with real numbers, make sure you format your results to print out to only 2 decimal places. This will apply to all the programs that you write with real numbers.

# C002b — Hours to Days and Hours

**Assignment:**

Write a program that prompts for the number of hours and outputs the equivalent number of days for the given hours. You will need to figure out the formula for this conversion. Make sure to test your data for different outputs. (.i.e. that the results are correct)

# C002c — Minutes to Days, Hours, Minutes

**Assignment:**

Write a program that prompts for the number of minutes and outputs the equivalent numbers of days, hours, and minutes. You will need to figure out the formula for this conversion. Use logic to determine the conversion. Make sure to test your data for different outputs to make sure your results are correct.

# C003 — Inputting Strings from the Keyboard (1)

The syntax to read an entire line of text from the keyboard is as follows: address = c.readLine();

# Assignment:

Rewrite program B004 so the variables are entered from the keyboard, not from within the program.

Save as "C003.java".

# C004 — Inputting Strings from the Keyboard (2)

The syntax to read a string from the keyboard is as follows: FName = c.readString();

# Assignment:

Rewrite program B003 so the variables are entered from the keyboard, not from within the program.

Save as "C004.java".