**CIS 162 Lab 2**

**Conversions**

**Objectives**

After completing this lab, you should be able to:

* *create* a project and class
* *read* data from the keyboard using the Scanner class
* *make calculations* using assignment statements and variables
* *display results* using the print() and println() methods

**Lab Activity #1 – Convert to seconds**

1. Start BlueJ
2. In your CIS 162 Labs folder, create a new project called Lab2.
3. Create a new Class called “ConvertToSeconds”
4. Edit the top comment section to describe the class and add both of your names as authors.
5. Remove the two automatically generated methods.
6. Create a main method (see Activity 1.2.3 in book)
7. Prompt the user to enter three integers for hours, minutes and seconds.
8. Use variables with meaningful names
9. Calculate and display the number of equivalent seconds
10. When working correctly, copy to the corresponding zyLab in Chapter 3 for testing

**Sample Input / Output**

Hours: 4 Minutes: 1 Seconds: 0 14460 seconds

Input data

Printed result

**Lab Activity #2 – Convert from seconds**

**NOTE: See example code posted on Blackboard under documents.**

1. Create a new Class called “ConvertFromSeconds”
2. Prompt the user to enter one integer for the number of seconds.
3. Calculate and display the number of equivalent hours, minutes and seconds (refer to section 3.6 about integer division and the remainder operator)

hours = numSeconds / 3600;

numSeconds = numSeconds % 3600; // remainder seconds

1. When working correctly, copy to the corresponding zyLab in Chapter 3 for testing

**Sample Input/Output**

Seconds: **3661**

Hours: 1

Results printed in 3 lines

Minutes: 1

Seconds: 1

**Lab Activity #3 – Convert to dollars**

1. Create a new Class called “ConvertToDollars”
2. Prompt the user to enter four integers for quarters, dimes, nickels and pennies.
3. Calculate the total number of cents by combining quarters, dimes, nickels and pennies.
4. Divide by 100.0 and place in **a double**
5. Display the equivalent in dollars and cents.
6. When working correctly, copy to the corresponding zyLab in Chapter 3 for testing

**NOTES:**

* Work your solution taking into consideration that 1 dollar contains 100 pennies; 1 quarter contains 25 pennies, etc.
* We will learn how to format numbers and currencies later, for now use the following instruction to format the result.

System.out.println("Dollars: $" + );

Variable name used to do the calculation / 100.0

**Sample Output**

Quarters: 4 Dimes: 1 Nickels: 1 Pennies: 1 Dollars: $1.16

Printed result

Input data

**Lab Activity #4 – Mad Lib**

A mad lib is a simple game where you ask someone to name a few specific types of words and then you create a paragraph by inserting the words. The result is usually pretty silly but fun for ten year olds!

1. Find a mad lib on the Web or create one on your own.
2. Create a new class called MadLib with a main method.
3. Prompt the user for several words. Your mad lib should have at least five requested words. Remember to use the Scanner class to capture a word from the user. Use the next() method to read a String.
4. When working correctly, show your instructor or lab assistant.

**Simple Sample**

Enter a food: **hamburger**

Enter a color: **red**

Enter an emotion: **sad**

Eating red hamburger makes me sad.

Printed result

**Grading Criteria**

This lab is worth a possible 10 points.