Lesson - Week 6:

Course Objectives Alignment:
<<* The Course Objectives (CO##) are listed in the Course Outline *>>

- CO03 - You will use your IDE to test code in the chapter.
- CO04 - Chapter 12 includes the topics of Inheritance by introducing you to Exception Handling. You will learn about how the Java VM will create an object when an error occurs during your program's execution. You will learn more about the Scanner Class methods.
- CO05 - You will learn about Exception Handling which is your first introduction to Event-Driven programming.
- CO06 - You will be analyzing code in the chapter.
- CO07 - Key terms are found in the chapter.

Read in Your Textbooks:

- Chapter 12.

Chapter 12 is all about Exception Handling.

Object-Oriented Programming (OOP) does not have to be hard but you must understand the fundamentals of Class types and object variables from the very beginning. Using objects in Java is not something you can wing.

Chapter 7 introduced us to defining classes for objects. An object is a complex variable in that it is a pointer to a common set of variables as defined by the class they were created from. The class defines the template of data for each and every object of that class type. The later part of the class definition consists of methods. Static methods were introduced in the chapter. A non-static method belongs to the objects of the class type and must be invoked from a main program or within another method in the context of a specific object. A Constructor is a special kind of method used during the creation of an object. Within a Constructor we are given our first chance to actually assign values to the variables for the object. Creating methods that act on, assign, or return the value of the variables for the object is a break from traditional, linear programming. The code is not executed all at once like a regular program. Within a main program, we must invoke the method for a specific purpose referencing a specific object. This is what Java uses to associate specific data in the variables referenced in the invoked method from those values of another object. That is why we can explicitly use the identifier this in front of instance variables. The identifier this is hidden and is automatically assigned by Java as a reference to the invoking object.

Chapter 10 is all about Inheritance and Polymorphism. The concept can be compared to learning how to drive a car and then learning how to drive a truck. To drive a truck,

you do not have to learn about the basics of driving such as how to steer, how to accelerate and how to break, the rules of the road, etc. You simply have to familiarize yourself with any new features of the truck that may be specifically different than that of a car. You would also have to learn how to maneuver a larger vehicle and one that has a trailer.

Look for any help documents or knowledge assessment documents to appear under the Help section of this week's module.

Things to Look Out For:

- Exception Handling is an example of a Library created using the principles of Inheritance. If you are shaky in your understanding of Chapter 11 content, ask questions.
- A behaving program is one that does not crash abruptly causing the user to lose their work. The programmer's job related to Exception Handling is to catch Exceptions in your programs that may cause it to crash unexpectedly. Look at the sample programs in the chapter. You must understand the concept of Exception Handling before moving on with other material in the course.

Discussion Questions:

Muddiest Points Forum - Post to this forum as often as you need to when you run into trouble understanding a concept, something in the book, or just have a question. You may assist your classmates by answering. Emailing me is the fastest way to get a response from your instructor but your classmates may be able to offer you help when they are in the course. If your questions are of a personal nature, please email me instead of using this forum.

zyBooks Participation Assignment:

Look under the Assignments tab in your zyBooks textbook for "Participation Assignment for Week 06 – Chapter 12".

Project Assignment:

There is no project assignment this week.