**Programming Fundamentals Group Project**

Below is a list of sections within each chapter with a list of the concepts touched on within each section. There are twenty sections total between the two chapters, so we can make things easy on ourselves by asking one question per section. I advise we take some time tonight to go over each section more in depth and take any necessary notes to assure that we all understand the various concepts. I will have all the questions ready for us by class on Wednesday. If there is anything that you need help with understanding, I usually reply to my email within a couple of hours.

Chapters, Sections, and Concepts

* Chapter 2 – Java Syntax from the Ground Up
  + Lexical structure
    - Unicode character set, case sensitivity/whitespace, comments, reserved words, identifiers, literals, punctuation
  + Primitive data
    - Boolean, char, int, float, conversions
  + Expressions and operators
    - Arithmetic, string concatenation, increment/decrement operators, comparison, Boolean, bitwise/shift, assignment, conditional, instanceOf, other special operators
  + Statements
    - Local, if/else, switch, while, do, for, forEach, break, continue, return, synchronized, throw, try/catch/finally, try-with-resources, assert
  + Methods
    - Defining, modifying, checked/unchecked exceptions, variable-length argument lists
  + Classes and Objects
    - Defining objects, creating objects, using objects, object literals, lambda expressions
  + Arrays
    - Types, creating/initializing, using, multidimensionality
  + Reference Types
    - Reference vs primitive, manipulating objects and reference copies, comparing, boxing/unboxing
  + Packages and Namespace
    - Package declaration, globally unique package names, importing types, importing static members
  + Source File Structure
  + Defining/Running Programs
  + Summary
* Chapter 3 – Object Oriented Programming in Java
  + Classes/Records Overview
    - Basic OO, records, other reference types, class definition syntax
  + Fields and Methods
    - Field declaration syntax, class fields, class methods, instance fields, instance methods, how this reference works
  + Creating and Initializing Objects
    - Defining a constructor, defining multiple constructors, invoking constructors within constructors, field defaults/initializers, record constructors
  + Subclasses and Inheritance
    - Extending a class, superclasses/object/class hierarchy, subclass constructors, constructor chaining and default constructor, hiding superclass fields, overriding superclass methods, sealed classes
  + Data Hiding/Encapsulation
    - Access control, data accessor methods
  + Abstract Classes and Methods
    - Reference type conversions
  + Modifier Summary
  + Chapter Summary

I will provide a longer document with more in depth descriptions of each section listed above by class on Wednesday.

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