Pg. 306, Java Programming *A comprehensive Introduction*

**Section 1: Define / Answer**

interface-

1. A **Java interface** is a bit like a class, except a **Java interface** can only contain method signatures and fields. An **Java interface** cannot contain an implementation of the methods, only the signature (name, parameters and exceptions) of the method. You can use **interfaces** in**Java** as a way to achieve polymorphism.

implements-

implements is for implementing an interface

The difference between an interface and a regular class is that in an interface you can not implement any of the declared methods. Only the class that "implements" the interface can implement the methods. The C++ equivalent of an interface would be an abstract class (not EXACTLY the same but pretty much).

To declare a class that implements an interface, you include an implements clause in the class declaration. Your class can implement more than one interface, so the implementskeyword is followed by a comma-separated list of the interfaces implemented by the class. By convention, the implements clause follows the extends clause, if there is one.

abstract method-

An *abstract class* is a class that is declared abstract—it may or may not include abstract methods. Abstract classes cannot be instantiated, but they can be subclassed.

Task 1:

**USE OBJECT ORIENTATED PROGRAM DESIGN TO SOLVE PROBLEM**

Update Assignment #12, Task 1.

You can re-create your program in one package for this expansion.

Place all student information into a Text File.

Create 1 “Programmer Created” Class to read student data from the text file, and create student objects. (Objects will need to be stored in a data structure)

Create a Parent SuperClass Student. Containing First Name, Last Name, private DOB, Social Security Number.

Create a subclass containing protected class variables Street Address, and Zip Code

Create a subclass containing public Student ID number, Major.

Create a menu giving the user the ability to search student LastName.

If the student is in the text file print students First Name, Last Name, and Student ID number.

The program should execute in way that student objects are created.

Create private modifiers for sensitive materials.

Attach Snipping Photos Below

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**\* Main Menu: \***

**\* Enter # to run program or Quit \***

**\* 1) Search Student Last Name \***

**\* 4) Quit \***

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