CSC 402-01 Assignment #5

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Original Due: 3:00 PM, Wednesday, April 27
    Extended: 3:00 PM, Wednesday, May 4
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You must complete this assignment by yourself. You cannot work with anyone else in the class or with someone outside of the class. You may not copy solutions from the world wide web. The code you write must be your own.

Provided Files:

- https://www.cs.wcupa.edu/jkim2/eclipse-semantic-analyzer-windows.zip – Eclipse JDT that contains a semantic analyzer for Windows users
- SemanticAnalyzer.zip – a JDT project that contains a semantic analyzer for macOS users. Follow a YouTube tutorial to import the semantic analyzer into an Eclipse JDT: https://youtu.be/mJd-WuWz3r4
- Examples.zip – example programs for testing.

Description: Write a program that displays class hierarchy of a Java program. Below describes the output your program shall produce:

- In each line, your program shall print out class names at the same level in a class hierarchy.
- Your program shall give a new line between a superclass and subclasses.
- Your program shall give a blank between each set of subclasses.
- Your program shall print out a hash tag when a superclass has not any subclasses.
- Your program shall give a blank line between distinct inheritance hierarchies.
- The output of each input program is separated by three hyphens (---).

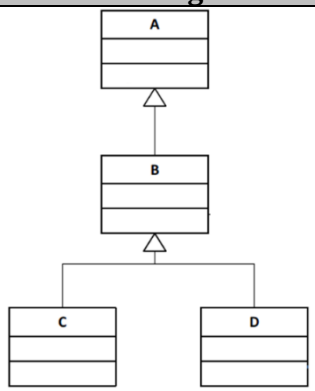
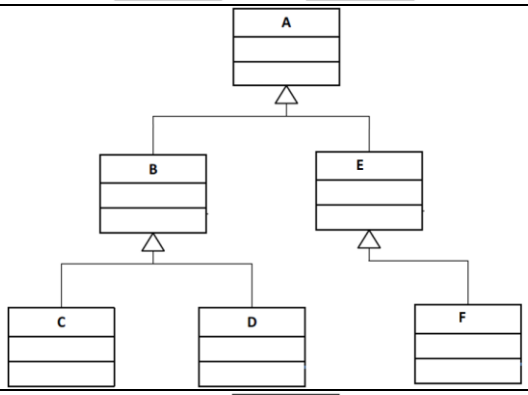
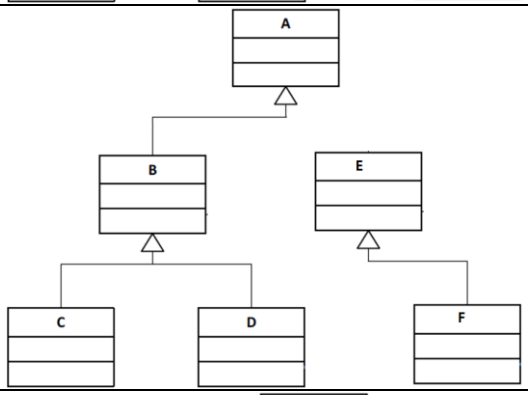
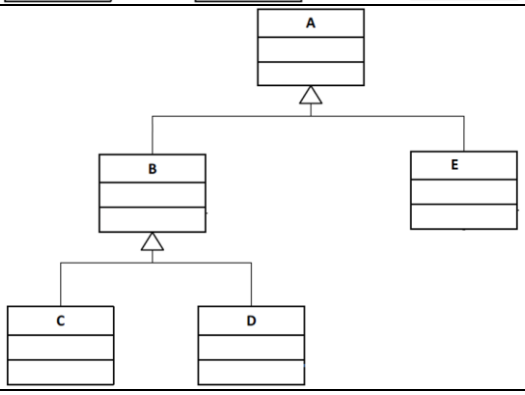
You may assume that:

1. The input program does not include any interfaces and/or nested classes.
2. All classes are included in the same package.
3. Each class name is a SINGLE English alphabet (e.g., A, B, C).

You must use the provided semantic analyzer for this assignment.

See the next page.

Below are example class diagrams and answer outputs.

	Class Diagram	Output
Example 1		A B CD # #
Example 2		A BE CD F # # #
Example 3		A B CD # # E F #
Example 4		A BE CD # # #

See the next page.

Submission: You **RunAction.java** and **ASTVisitorEx.java** files

General Programming Assignment Requirements:

- If your program that does not compile, you will lose all points.
- If you submit the wrong file, you will lose all points.
- You must fill in the header for every file you submit. Otherwise, you will lose all points.

Checklist: Did you remember to:

- worked on the programming assignment by yourself?
- add the header in your files?
- ensure your program does not suffer a compile error or runtime error?
- ensure your program creates the correct output and that it matches the expected output exactly?
- properly indent your source code so that your indenting is readable and consistent?
- use good names for variables to make your program easy to understand?
- turn in your **RunAction.java** and **ASTVisitorEx.java** files through D2L?