CECS 524 Unit 3 Assignments

Due Oct 1, 5pm

Reading Assignment : Chapter 3 through section 3.3 (skip the rest) of our text

Written Assignment:

Using the Java grammar provided, generate a Java parser and embed it a Java program. Accept an input file containing Java statements and print to the console this information:

1. the name of the class
2. the name of the parent class (if there is one) and any interface(s) implemented
3. the name of all data fields and their types and access delimiter
4. the name of all methods, their parameters (and types) and the return type of the method.

This information must be acquired from annotating the rules in the grammar that are responsible for parsing that information. The main goal of this assignment is to learn how annotate a grammar to collect or process. No ad hoc parsing is acceptable. You must use the grammar.

An example:

public class MyClass extends Base implements Class1 {

private int x, y;

public GrandSon(){}

public void hello(int ix, int iy){

x=ix;

y=iy;

}

}

**Output**

MyClass

Extends: Base

Implements: Class1

Data Members:

private int x

private int y

Method Members:

MyClass returns constructor is public

Parameters: int ix, int iy

hello returns void is public

A video is on Beachboard describing how to generate, embed and run the parser.

The grammar is here: https://www.antlr3.org/grammar/1152141644268/Java.g