

# CS502: Compiler Design

Fall 2021 (Due Sep 24th, 2021)

## Assignment A2: Making Honey Eatable

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### 1 Assignment Objective

Use JTB+JavaCC to type-check programs written using a subset of Java.

### 2 Making Honey Eatable

After we helped Pooh finish his grammar in the last assignment, he is eager to have pots full of honey. However, the doctor advises against honey that may have *semantic errors*. While Pooh scratches his head wondering what at all does it mean, let us help him once more by handing over *healthy, ready-to-eat* honey pots, max by 24th September.

### 3 Detailed Specification

You are provided with the grammar for a language **PoohPJ**. You need to type-check PoohPJ programs, and print:

- “Program type-checked successfully.”, if it does.
- “Type checking failed.”, otherwise.

The input programs will neither have syntax errors nor any errors related to undeclared or multiply declared identifiers.

Please find on Moodle a `TypeCheckVisitor.java` file containing the demo from the lab, a couple of testcases, and a sample `Main.java` file, apart from the grammar file `poohpj.jj`.

#### 3.1 Evaluation

Your submission must be named `rollnum-a2.zip`, where `rollnum` is your roll-number in small letters. Upon unzipping the submission, we should get a directory named `rollnum-a2`. The main class inside this directory should be named `Main.java`. Your program should read from the standard input and print to the standard output. You can leave all the visitors and syntax-tree nodes as it is, but remember to remove all the `.class` or `.jar` files.

We would run the following commands in the evaluation script:

- `javac Main.java`
- `java Main < test > out`

If the contents of `out` match with the expected output for the testcase, you would get marks for the corresponding testcase.

## 4 Plagiarism Warning

You are allowed to discuss publicly on the Slack channel, but are supposed to do the assignment completely individually. We would be using sophisticated plagiarism checkers, and if similarity is found, the penalty used in the course would be as follows:

- First instance: 0 marks in the assignment
- Second instance: F grade in the course

-\*-\*- Do the assignment honestly, enjoy learning the course. -\*-\*-