

CSE 3302/5307 Lab Assignment 2

Due November 10, 2015

Goals:

Understanding of JavaScript and compiler/interpreter concepts.

Requirements:

1. Change the dump of the run-time stack (e.g. `dumpRTS ()`) to mark the base of stack frames *on the static chain* by a string of stars as demonstrated in class.
2. Provide information regarding instruction coverage during executions of the instructions produced for a PL/0 program:
 - a. An additional textarea will be needed, i.e. the HTML will need minor changes.
 - b. The code for displaying the coverage information will be similar to `listcode ()` in the compiler.
 - c. Coverage information should be displayed at the same positions in the code where `dumpRTSclosure ()` is called.
 - d. Modify the interpreter to record that instructions (in `code[]`) have been processed by the interpreter:
 1. If an instruction besides a `jpc` is processed, it will be listed with “***” to the left.
 2. If a `jpc` is processed only by taking the branch, it will be listed with “+++” to the left.
 3. If a `jpc` is processed only by falling through to the next instruction, it will be listed with “---” to the left.
 4. If both options are eventually taken for a `jpc`, then it will be listed with “***” to the left.
 5. If an instruction is never processed during a sequence of executions, then it will be listed with “ ” to the left.
 6. Recording is maintained over multiple executions of the same object code. Only the “Compile” button discards.
 - e. The entire object code listing with the coverage indicators is to be followed by a summary of how many instructions fall in each of the four categories.
3. Submit your *zipped* files on Blackboard by 3:15 p.m. on Tuesday, November 10. Be sure to indicate the browser(s) you tested with.

Getting Started:

1. Useful files, including baseline code and HTML, are at <http://ranger.uta.edu/~weems/NOTES3302/BASELINE/>
2. Any interesting PL/0 program is likely to have some unreachable instructions.