

CSE 305 Programming Languages Spring, 2010

Homework 2

Maximum Points: 15

Due 10:30 AM, Friday, January 29, 2010

Professor Shapiro

January 22, 2010

Write the answers in a file named `hw2.txt`. Put your name and user name at the top of the file, and submit the file, using the UNIX command, `submit_cse305 hw1.txt`.

1. (3) Write any `<if statement>` that is legal according to the following grammar:

<code><statement></code>	→ <code><if statement></code> <code><assignment statement></code>
<code><if statement></code>	→ <code>if <expr> then <statement> else <statement> endif ;</code>
<code><assignment statement></code>	→ <code><id> := <expr> ;</code>
<code><expr></code>	→ <code><id></code>
<code><id></code>	→ <code>i j k x y z</code>

2. (3) Write a varid that is legal according to the Haskell grammar presented at

<http://haskell.org/onlinereport/lexemes.html>.

Your varid must have at least 6 characters, no two of which are the same.

3. (3) Consider a language in which an `<identifier>` can consist of one or more lower-case alphabetic characters followed by one or more decimal digits. Write a EBNF grammar for this language's `<identifier>`.
4. Ruby treats the end of the line as the end of a statement.
 - (a) (2) How can you put several Ruby statements on one line?
 - (b) (2) How can you continue a Ruby statement on the next line?
 - (c) (2) What is the source of your information?