Assignment IV: Pseudocode Semantics

A three-minute presentation to the class.

Describe the semantics of a small pseudocode fragment.

There is no generally agreed upon model of the semantics, or meaning, of computation. This assignment may require research and creativity.

1. Select a small pseudocode fragment.

2. Define the way it behaves at the register-transfer level. Ie: what interactions with memory occur; what parts are moved and to where; what processes change the configuration of memory. What are the exact changes? This is the *operational semantics*.

3. Describe the assurances that the fragment does what it is supposed to do. Develop a set of preconditions and postconditions. Attempt to use the postconditions to prove the preconditions, and thus to prove the correctness of the program fragment. This is the *axiomatic semantics*.

4. Think about other possible ways that you can clearly and unambiguously define or describe the intended functionality of your code fragment.