Structure of Programming Languages I: Denotational Semantics

Assignments

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Please return the completed results by February 1. Put them in an envelope, address it to me, and put it into some university mail box. If there are problems, feel free to contact me per email. Do not forget to denote your name, Matrikelnummer and Studienkennzahl (SKZ).

1. Extend the file editor discussed in class to be a text editor: define the internal structure of the *Record* semantic domain and device operations for manipulating the words in a record. Augment the syntax of the language so that a user may do manipulations on the words within individual records and define the denotational semantics of the extensions.

2. Prove the equivalence of

   ```
   while B do C end
   ```

   and

   ```
   if B then
     C; while B do C end
   end
   ```

   in denotational semantics.