Semantics SV1

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November 2024

This set of work was partly adapted from David Berry's supervision questions.

1 Exam questions

1. 2013P6Q9

2. 2015P6Q9

2 Open-ended

In this section, some questions are intentionally vague. Please list your assumptions when answering them.

1. Create a calculator language which can handle integer addition, subtraction, multiplication and division. Specify its syntax.

2. Specify an operational semantics.

3. Specify a type system.

4. Prove it is type-safe, or give a counter example and think about how you would make it type-safe.

5. (Optional) Implement your operational semantics and your type system with your favourite **functional** language.