

Assignment 14

Programming Languages

1. [20 pts, proof assistant]

For the expression below write the Coq predicate as a lemma, use universal quantifier.

$$n = n + 0$$

2. [10 pts, Coq]

Using the Coq framework, input your lemma, use inductive approach and start the proof.

3. [20 pts, Coq]

Continue the proof, introduce the variable. Explain the reason, and expected behavior.

4. [20 pts, Coq]

Continue the proof, eliminate the variable. Explain the reason, and expected behavior.

5. [20 pts, Coq]

Continue the proof, simplify and use automatic commands. Explain the reason, and expected behavior.

6. [10 pts, Coq]

Finish the proof. Explain how, the reason, and expected behavior.

