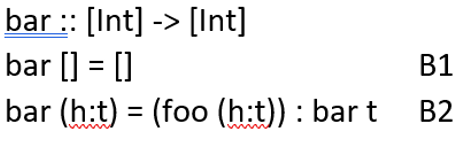
Kenji Isak Laguan 101160737

Knowledge Base:

Text

Description automatically generatedText

Description automatically generated 

Inductive Case (IA): xyz (qux (bar (h:t))) = = (foo (h:t)) \* (foo (h:t) + 1)

Prove this by structural induction: xyz (qux (bar x)) = = (foo x) \* (foo x + 1)

**Base Case**: xyz (qux (bar [])) = = (foo []) \* (foo [] + 1)

Text

Description automatically generatedA picture containing table

Description automatically generated0 == 0 Q.E.D

**Inductive Assumption** (IA): xyz (qux (bar t)) = = (foo t) \* (foo t + 1)

**Inductive Case** (IC): xyz (qux (bar (h:t))) = = (foo (h:t)) \* (foo (h:t) + 1)

Text, letter

Description automatically generatedText, letter

Description automatically generated

(1 + (foo t)) \* (2 + (foo t)) == (1 + (foo t)) \* (2 + (foo t)) Q.E.D