

FbSR to FbOb translation

We are just going to encode objects on the fly as opposed to actually using classes. This is because the lifetime of the state or records is only the time of the expression itself.

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1. $toFbOb(\{label_1 = expression_1; \dots; label_n = expression_n\}) =$

Object

Inst

$label_1 = toFbOb(expression_1)$

\dots

$label_n = toFbOb(expression_n)$

Meth

$getlabel_1 = \dots$ (* getters for all the labels *)

\dots

$getlabel_n = \dots$

2. $toFbOb(e.label_k) = toFbOb(e).getlabel_k$
(* The "R" section of the FbSR to FbOb translator is done *)

3. $toFbOb(Ref\ e) =$

Object

Inst

$Reference = toFbOb(e)$

Meth

$getReference = \dots$ (* Returns the reference*)

$setReference = \dots$ (* Assigns a value to reference*)

4. $toFbOb(!\ e) = toFbOb(e).getReference$

5. $toFbOb(e_1 := e_2) = toFbOb(e_1).setReference(toFbOb(e_2))$

6. *All other rules for any expression are the same aka homomorphic*