

Symbolic Postcondition Computation for Skiplists app:skiplists

In this section, we outline a full account of the local postcondition computation for skiplist fragments, that was described by example in Section sec:fragment-abstraction.

We assume, using the notation of Section sec:fragment-abstraction that \mathcal{F} is the current set of fragments. Let \mathcal{F}_1 be set of level-1 fragments in \mathcal{F} , and let \mathcal{F}_2 be set of higher-level fragments in \mathcal{F} . For each program statement, let \mathcal{F}_{post} be the set of fragments after executing the statement. Let $\mathcal{F}_{post}, \mathcal{F}'$ be initialized as the empty set. The postcondition is structured according to different kinds of statements.

$x := y$ The postcondition computation is performed as follows: For each fragment $y \in \mathcal{F}_1$ where $y \in \mathcal{F}$, enumerate

f or each fragment $\in \mathcal{F}_1$ where $\hookrightarrow y$, create \mathcal{F}' which is same as \mathcal{F} except that itemize

variable x with $y \cup x$,