

Abstractions about concurrency for reasoning about programs. The abstraction function maps a representation of a program to a finite set of abstractions. The abstraction function is necessary to reason about the behavior of a program in a formal way.

\[ \text{Abstraction Function} \]

In order to prove that an abstraction function is well-defined, it is necessary to establish a correspondence between the abstract and concrete programs.

\[ \text{Program 1} \rightarrow \text{Abstract Program} \]

The abstract program is a model of the concrete program, which allows us to reason about the concrete program in a more abstract way.

\[ \text{Concrete Program} \rightarrow \text{Abstract Program} \]

The abstract program is constructed by applying the abstraction function to the concrete program.

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