

The correctness-by-construction approach to programming

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20409956&lokasi=lokal>

Abstrak

Kourie and Watson advocate an approach known as “correctness-by-construction,” a technique to derive algorithms that relies on formal theory, but that requires such theory to be deployed in a very systematic and pragmatic way. First they provide the key theoretical background (like first-order predicate logic or refinement laws) that is needed to understand and apply the method. They then detail a series of graded examples ranging from binary search to lattice cover graph construction and finite automata minimization in order to show how it can be applied to increasingly complex algorithmic problems.