PROGRAM-ORIENTED LOGICS

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In this paper we investigate properties of program-oriented algebras and logics defined for classes of nominative predicates. Informally speaking, such predicates are partial/non-deterministic predicates defined over partial states (partial assignments) of variables. Conventional n-ary predicates can be treated as a special case of nominative predicates. We define different first-order algebras and logics of such predicates. Various consequence relations are considered and their properties are investigated. Such logics aim to propose more adequate formalism for reasoning about program properties [1, 2]. These logics are defined in semantic-syntactic style. It means that we first define algebras of nominative predicates, then define the language of a logic and interpretation mappings. At last, we propose calculi formalizing consequence relations.

References

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