

CS 603 Exam 3 Study Guide

- Be able to trace a Prolog query to determine its output, and to draw the search tree that is traversed by the Prolog interpreter when answering a query.
- Be able to write definitions of Prolog predicates using facts and rules, and how to use a logic programming style.
- Be able to explain logic programming, resolution, unification, and related concepts. Also know how Prolog implements logic programming through searching and backtracking.
- Be able to evaluate or simplify a logical expression, and know how to apply logical identities.
- Be able to apply resolution and unification to answer a query or prove a conclusion using logic programming.
- Be able to write semantic rules for language constructs using axiomatic semantics. Also be able to select a proper loop invariant and write a correctness proof using axiomatic semantics.
- [Final exam only] Be able to write semantic rules for language constructs using denotational and translational semantics.