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AI

LAB ASSIGNMENT - 4

AIM:- Implement unification algorithm.

OBJECTIVE:- To study and implement unification algo.

THEORY:-

Unification Algorithm:-

It is used when we need to determine contradiction. It computes 2 literals and decides whether there exists a set of substitutions that make them identical. In this case, literal is represented as a list, where 1st element is name of a predicate.

Resolution proof procedure:-

Allows compile interference mechanism in prepositional logic. the procedure to proof by resolution of proposition then to select 2 clauses and calculate each parent clause. It's resolve is empty clause the contradiction is found.

INPUT:- two literals L_1 & L_2

OUTPUT:- A set of substitution.

FAQ'S

Q1) Why resolution is required?

Resolution procedure is inference algorithm when put with any complex search rules. It works by using the principle of proof by contradiction.

The procedure continues until no more clauses can be added as an application of resolution rule derives the empty clause.

Q.2 Pre requisites of applying unification Algorithm.

- 1) Predicate symbol must be same.
- 2) No. of arguments in both expression must be identical.

Q.3 What are applications of unification Algorithm.
Automated reasoning is a main application of this algorithm. It is also used in logic programs & cryptographic analysis.