

## Abstract

Deductive database is a database system that has the ability to define rules derived (deductive) that can provide the conclusion in the form of an additional information about facts that are stored in it. Deductive database is expected to overcome the weaknesses of logic programming in terms of data storage and computing processes in large numbers. Searching in deductive database involves interpretation of the rules so that reduces the existing performance. That's why, appropriate searching techniques are required.

In the deductive database was known two search methods or inferention that is Bottom-Up and Top-Down. Bottom-Up technique does scanning started from the facts to achieve specified goals. Top-Down technique does scanning started from goals which is reduced into a number of subgoals or more simple problem.

This is done in this final exam are how to make the implementation of deductive database in the RDBMS and analysis how performance of these two techniques, Top-Down and Bottom-Up, when applied in deductive database. Performance calculation is based on then amount of response time (processing time) and computing that is measured when searching data using each method.

Generally, the results of the study indicate search techniques by using Top-Down has a better performance level compared to Bottom-Up technique. With Top-Down techniques, information search requires a relatively shorter time and more minimal iterations.

**Keywords:** *bottom-up, top-down, rules, deductive database.*