

Proposal for Innovative Work

Database Management System

Dynamic Query Forms for Database Queries

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Proposal - Implementation of the above mentioned Research Paper

1. Introduction

1. Query form is one of the most widely used user interfaces for querying databases, traditional query forms are designed and predefined by developers or DBA in various information management systems.

2. Problem Faced -

- a. With the rapid development of web information and scientific databases, modern databases become very large and complex.
- b. It is difficult to design a set of static query forms to satisfy various ad-hoc database queries on those complex databases.

2. Approach of the research paper implemented

1. This paper proposes a Dynamic Query Form system: DQF, a query interface which is capable of dynamically generating query forms for users.

2. The essence of DQF is to capture user interests during user interactions and to adapt the query form iteratively. Each iteration consists of two types of user interactions: Query Form Enrichment and Query Execution.

3. It starts with a basic query form which contains very few primary attributes of the database. The basic query form is then enriched iteratively via the interactions between the user and our system until the user is satisfied with the query results. In this paper, we mainly study the ranking of query form components and the dynamic generation of query forms.

3. Working Steps

1. This Paper proposes a dynamic query form system which generates the query forms according to the user's desire at run time. The system provides a solution for the query interface in large and complex databases.
2. We apply F-measure to estimate the goodness of a query form. F-measure is a typical metric to evaluate query results, the goodness of a query form is determined by the query results generated from the query form.
3. Based on the proposed metric, we develop efficient algorithms to estimate the goodness of the projection and selection form components. Here efficiency is important because QF is an online system where users often expect quick responses.

4. Evaluation Parameters

1. We present a compressed result table to show a high-level view of the query results first. Each instance in the compressed table represents a cluster of actual data instances.
2. Ranking Metric :- Query forms are designed to return the user's desired result. There are two traditional measures to evaluate the quality of the query results: precision and recall.
3. We test whether DQF is more usable, more effective for rank projection and efficient for ranking as compared to the existing approaches.