

Survey on Dynamic Query Forms for Database Queries

Subhash Pingale¹, Swapnaja A. Ubale,² Anandrao G. Deshmukh³

M.E(Computer), Assistant Professor, Department of Computer Science Engineering,
SKN Singhgad College of Engineering, Korti, Pandharpur, Solapur University, Solapur.^{1,2}

M.E (Computer), Department of Computer Science Engineering,
SKN Singhgad College of Engineering, Korti, Pandharpur, Solapur University, Solapur³

Abstract: Query form is most widely used user interfaces for querying databases. Traditional query forms are designed and pre-defined by developers or DBA in various information management systems. With the rapid development of web information and scientific databases, modern databases become very large and complex. Therefore, it is difficult to design a set of static query forms to satisfy various ad-hoc database queries on those complex databases. In this Paper, the system proposes a Dynamic Query Form system: DQF, a query interface which is capable of dynamically generating query forms for users. The essence of DQF is to captures users preference and ranks the query components, assisting him/her to make decision. The generation of query forms is an iterative process and is guided by the user. At each iteration the system automatically generates ranking list of components and the user adds desired form component's into the query form. The ranking of forms components is based on the capture user preference. A user can fill the query form and submit queries to view the query result at each iteration. In this way a query form could be dynamically refined till the user satisfies with query views . A probabilistic model is developed for estimating the goodness of query form in DQF.

Keywords: Query Form, User Interaction, Query Form Generation.

I. INTRODUCTION

A database is only as functional as query interface allows it to be. If a user is not capable to communicate to the database what user wishes from it, even the richest data store provides petite or no value. Writing well-structured queries, in languages such as SQL and XQuery, can be challenging due to a number of reasons, including the user's lack of familiarity with the query language and the user's ignorance of the underlying schema. A form based query interface, which only requires filling blanks to identify query parameters, is precious since it helps make data users with no knowledge of official query languages or the database schema. In practice, form-based interfaces are used frequently, but usually each form is designed in an adhoc way and its applicability is restricted to a small set of fixed queries.

Query form is one of the majority used user interfaces for querying databases. Traditional query forms are designed and predefined by developers or DBA in various information management systems. With the rapid development of web information and scientific databases, modern databases become very large and complex. Dynamic question type system: DQF, a question interface that is capable of dynamically generating question forms for users. Different from ancient document retrieval, users in information retrieval area unit usually willing to perform several rounds of actions (i.e., refinement question conditions) before distinctive the final candidates. The essence of DQF is to capture user interests throughout user interactions and to adapt the question type

iteratively. Every iteration consists of two sorts of user interactions: it contains only a few primary attributes of the information. The essential question type is then enriched iteratively via the interactions between the user and our system till the user is satisfying with the question results.

II.RELATED WORKS

Non Expert users have an important topic related to relational data. Lot of research work done which implies to the user to query the structured data.

1 .Automatic Static Query Form:

In this paper, they proposed generation of the Query form without user involvement. It finds the data attributes which are almost similar to the database schema [1]. It applies the cluster algorithm also on the historical data of queries. The problem with the previous mentioned query forms is user feel difficulty when the composition of queries is complex. Considering all these things still there are some issues on user query forms.

2. Keyword search with query form generation:

In this paper they proposes to create good deal of query forms. The user has to provide some keywords [2] to get the query forms from the large databases. The database that contains information in the form of rich text as data schemas and tuples works well. Again we can understand one difficulty with this user doesn't have appropriate keywords to start.

Sr.no	Paper name	Author name	Description	Disadvantage
1	Automating the design and generation of Query Forms	H.V. Jagadish And M. Jayapandian	Customized Query forms: They provide visual interface for developers to create query forms. Ex. Eaisy query ,cold fusion SAP etc.	They are providing query interface only for professional developers
2	Automating the design and generation of Query Forms	H.V. Jagadish And M. Jayapandian	Static Query forms : The main approach of static query form is to generate the database query without user interface	If the database schema is large, user queries could not be diverse
3	Dynamic Query forms for database Queries	Liang Tang, Tao Li, Yexi Jiang, and Zhiyuan Chen	Query form enrichment: a) DQF recommends a ranked list of query form components to the user. b)The user selects the desired form components into the query form	This system support only structured data.
4	Probabilistic information retrieval approach for ranking of database query results	S. Chaudhuri, G. Das, V. Hristidis, and G. Weikum	This model based on the premise that terms which will previously retrieved relevant documents	This model will face the many answer problems.

3. Dynamic Faceted Search:

This mechanism is an arrangement of search engines as per the user navigation paths where important things come into picture. Dynamic faceted are like DQF when we select the components in a query. Other than this selection of components the structure of the database query has important components. Based on this components he manipulation of query forms have been done.

4. Database Query recommendation:

Recently studies there are many ways to explore the database in order to recommend the query forms. SQL queries play a vital role to recommend the user related queries as per their intendment. However they are not considering the quality of query forms much. Here is another method to recommend based on query results. The differences between these two strategies are each and every loop will provide the query component but in the other hand of previous recommendation is providing complete query.

III.SYSTEM ARCHITECTURE

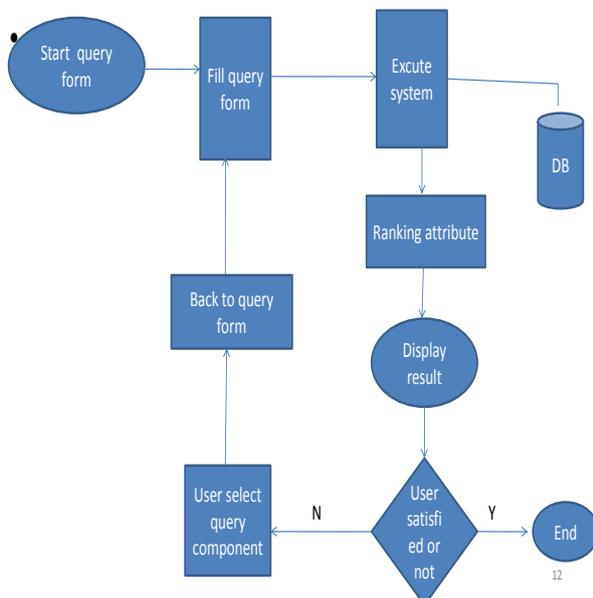


Fig. System Architecture

IV.CONCLUSION

It is possible to dynamically generate the query forms for database queries. Here the main idea is to the rank the query form components based on user interest. it is possible to capture the user interests based on historical queries and click through feedback. The experimental results show that dynamic query form leads higher success than static query forms. It is also possible to provide the ranking for the user selection in the query forms attributed.

REFERENCES

- [1] Liang Tang, Tao Li, Yexi Jiang, and Zhiyuan Chen “Dynamic Query Forms for Database Queries”, IEEE Trans. On Knowledge and Data Engg. Vol:PP No:99 Year 2014
- [2] C. C. Agawam, J. Han, J. Wang, and P. S. Yu. “A framework for clustering evolving data streams”. In Proceedings of VLDB, pages 81–92, Berlin, Germany, September 2003.
- [3] S. Agrawal, S. Chaudhuri, G. Das, and A. “Gionis.Automated ranking of database query results.” In CIDR, 2003.
- [4] S. Chaudhuri, G. Das, V. Hristidis, and G. Weikum, “Probabilistic information retrieval approach for ranking of database query results” ,ACM Trans. Database Syst., vol. 31, no. 3, pp. 1134–1168,2006.
- [5] Jayapandian and H. V. Jagadish, “Automated creation of a forms-based database query interface” ,Proc. VLDB, vol. 1, no. 1, Aug. 2008, pp. 695–709.
- [6] R. Agrawal, S. Gollapudi, A. Halverson, and S. Ieong. “Diversifying search results in Proceedings of WSDM”, pages 5–14, Barcelona, Spain, February 2009.
- [7] E. Chu, A. Baid, X. Chai, A. Doan, and J. F. Naughton, “Combining keyword search and forms for ad hoc querying of databases”, in Proc. ACM SIGMOD, Providence, RI, USA, Jun.