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Review on Dynamic Query Forms for Database Queries

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Abstract: Now a days the scientific databases and web databases maintain huge and different type of data. Due to the enhancement of web databases and scientific databases user is not able to get required results with the predefined static query forms. To avoid such a problem in this paper proposed the Dynamic Query Forms (DQF). In this newly defined Dynamic Query Form user can execute the query by selecting the desired form component and then he/she should submit the query for execution. At the time when user searching for the required result the system is able to catch the user interest by using the users feedback and according to that system recommend a ranked list of query form component to user. So user will be able to find the desired result as early as possible. A user can perform the form component selection and query submission operation iteratively until he/she is satisfies with the query results.

Keywords: Query Form, Query Execution, Users feedback, Dynamic Query Forms (DQF).

I. INTRODUCTION

Usefulness of database is depends on its query interface. If a user unable to express to the database what he/she desire from it, even the richest data store will provides little or no value. So for retrieving the required information from the database user needs to write the well-structured queries and those queries need to write in languages such as SQL and XQuery, but writing such a queries is not an easy task because all users don't have the query language knowledge and the user's ignorance of the underlying schema. So solution for such a condition is a form based query interface, which user can use for searching from the database. In form based searching user only requires filling blanks, so user can easily search the information without any knowledge of official query language or the database schema. But the applicability of those predefined query forms is restricted to a small set of fixed queries. With the rapid development of web informatics and scientific databases, the modern databases have become very huge and complex. There are over hundreds of entities for biological and chemical data resources in the databases in natural sciences, such as diseases and genomics. The web databases, like DBPedia and Freebase, usually have over thousands of structured web entities. So

Retrieving information with static query forms is difficult. Also it is not possible to design static query form with too many attributes to handle. Many database management tools provide mechanisms to design predefined query forms. The process is complex because user must manually edit to design predefined query forms. If a user is unaware of the database schema then handling attributes in the process of designing predefined query forms becomes too complex to handle. This paper proposes a Dynamic Query Form (DQF) system, an interface which is capable for generating query forms for user at runtime. Different from traditional document retrieval, prior to identify the final candidate, the users in database retrieval need to execute several rounds of action. The important feature of DQF is that it can Capture the user interest during the user interaction and iteratively adapt the query forms.

II. RELATED WORK

Currently the challenge is that the not-expert users who don't have any knowledge regarding to the query language should be able to use easily the relational databases. So a lot of research is focus on database interfaces which assisting the users for querying on relational databases without the use of SQL or any query language. Normally there are two interfaces for querying on databases one is Query –By-Example(QBE)[9]. Query-by-Example is a high-level data base management language that provides a convenient and unified style to query, update, define, and control a relational data base and another one is Query Form. Currently Query Forms used for interfacing with scientific and web databases. In this paper main focus is on generation of query forms.

Query Form Customization:

The database tools such as Easy Query [4], Cold Fusion, and Microsoft Access and so on helps the user to design and generate the query form. Only professional users can use these tools so the users who are unaware with the database

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schema are unable to find the required entities and attribute for generation of needed query form.

Automatic Static Query Form:
In [5] proposed the automatic generation of query forms without the participation of the user. It initially finds the data attributes which are queried based on the database schema and data instances. Based on the selected attributes the Query form is generated. In [2] the workload driven method is used where the clustering algorithm used on historical queries for finding the representative queries. These representative queries used for form generation. One problem in this method that when database is large and complex then user is unable to create the required query. So solve this if no of query forms generated previously and user will select the required query form at runtime. Problem with that if database is large then it will required to create the large no of forms, which becomes very complicated for user to search the required query form. To solve such a problem in [6] proposed the keyword based search where user can enter the keyword and system will suggest the query form to user according to the keyword.

Query Refinement:
When we are searching on the search engines we can see this query refinement technique. When user searching for information then system suggests something relevant to the query or modifies the suggested terms when there is change in the users search. Such a query refinement technique used normally for query retrieval systems.[7].

Dynamic Faceted Search:
This mechanism gives the relevant facets to user according to their navigation path. Dynamic faceted are like DQF when considering only the selection operation of query form. In Dynamic Query Form along with the selection component projection component also plays the main role for the query results [8].

III. FLOW OF DYNAMIC QUERY FORM

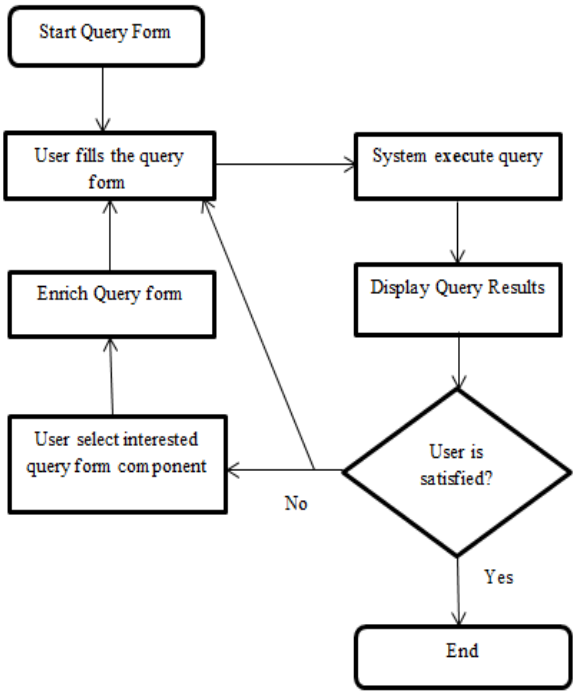

Fig. Flow of Dynamic Query Form

IV. CONCLUSION

Dynamic Query Form generation approach will helps users to dynamically generate query forms. Dynamic approach will give higher success rate and simpler query forms compared with static approach. Probabilistic form component model will be used to rank form component based on user preferences. The ranking of form components will makes it easier for users to customize query forms.

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