

QUERY PROCESSING BY USING VIRTUAL QUERY ENGINE TOOL

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ABSTRACT

This tool can be used to browse any query of any database such as Oracle, MSSql Server, Mysql & Access etc. So user does not have to use different tools for different databases. If we want to perform different operation such as insert, update, delete data & create new table for such operation we have to use editor of that particular database. But we don't have option to access all types of databases through single editor. And Virtual Query Engine is such type of editor by which we can get connected with different types of databases & perform various DML operation on it. This tool will internally use JDBC to perform low level DBMS operations on db. We have to use same connectivity code for all types db & give different DSN for different dbs. This tool will initially ask for connection information such as DriverName, DSN, USERID, PASSWORD. Once it's connected we can interactively perform dbms operations.

KEYWORDS: Data Source Names, Inextricable, Referential Integrity, Enterprise Managers, Driver name, VQE.

I. INTRODUCTION

Virtual Query Engine is a simple tool that can be used to browse any database such as Oracle, Sql Server, and Access etc so user does not have to use different tools for different database. A Virtual Query Engine (VQE) is a UDA [8] middleware format that transparently brings local and or remote heterogeneous databases together using logical database references called Data Source Names (DSN's). A VQE Engine exposes Metadata and Data held within these heterogeneous DSN's to client's applications and services homogeneously. VQE [2] presume the existence of a number of Database Engines and Data Access Drivers provided by a variety of database vendors within an organization. VQE provide transparent access to these heterogeneous databases via DSN's associated with the relevant data access drivers without exposing end-users or developers to the intricacies of heterogeneous data access.

VQE internally uses JDBC to perform low level DATABASE MANAGEMENT SYSTEMS operations on database. It connects to the database and enables us to perform various operations on the database. It connects to the database and enables us to perform various operations on the database. Prior to establishing connection with the database, VQE initially asks for some information such as Data Source Name (DSN), USERID, and PASSWORD and will connect with that particular database. Once it is connected we can interactively perform operations such as browsing database tables, getting table structures, inserting, updating, deleting data, executing sql statements, etc. Data from database can be displayed in tabular format as well as Form format. VQE provides modules – SQL Plus, Browser, Forms and Table Wizard. SQL Plus enables us to perform operations on databases using sql queries. Browser displays the information stored in the database in tabular form. On the hand Forms displays the data stored in database in a more user friendly format. It also provides with facility to go forward, backward, first and last in the record. It also enables us to search a particular entry in record. Virtual Query Engine is used for multiple databases such as Access, Mysql, Ms-Sql Server, Sybase, DB-2 [4], etc. so there is no particular software requirement for this project. Also Virtual Query

Engine make use of the 'ODBC manager' for creating DSN's which are used while establishing connection to the databases ODBC manager is an application that comes windows.

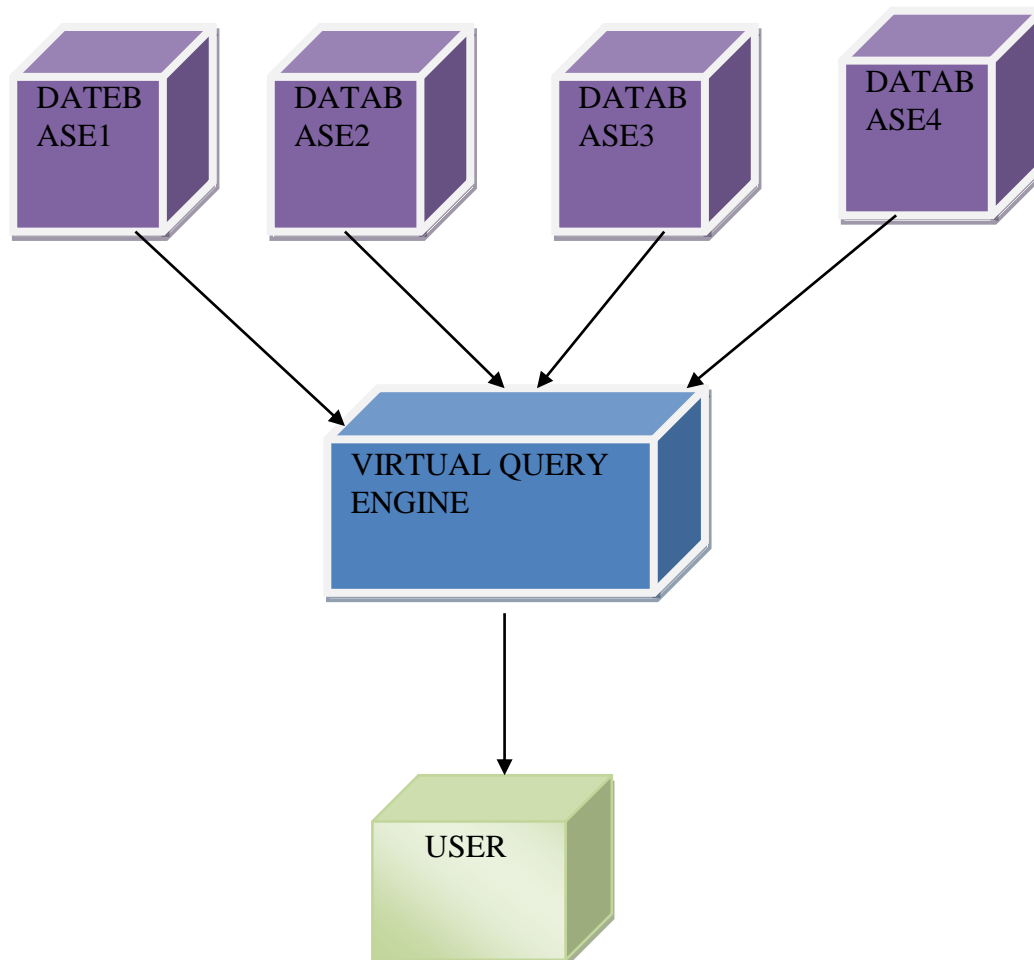


Figure 1. Architecture

II. MOTIVATION

In traditional scenario we have to use different database editor for different databases. So, it is inconvenient to perform operation with different database. We have to open different tool every time whenever we use other database, due to this we have to require more time to perform different operations on database and we require more efforts so to overcome this problem we try to build such an efficient editor through which we can communicate with various databases through a single editor which is easy and convenient to use.

Query processing[5] is to find information in one or more databases and deliver it to the user quickly and efficiently. Traditional techniques work well for single databases. If we want to perform different operation such as insert data, update data, delete data and create new table for such operation we have to use editor of that particular database. But we don't have option to access all types of databases through single editor. And Virtual Query Engine is such type of editor by which we can get connected with different types of databases and perform various DML operation on it.

Thus the proposed system will not only save the time, energy and money of the user but also provide flexibility, mobility and efficiency to acquire knowledge and information. In this way the system provides all related study material with quicker, better and efficient manner.

III. PROPOSED WORK

Virtual Query Engine [1] will initially ask for connection information such as Driver Name, DSN, USERID, and PASSWORD for connecting different databases. Once it's connected we can interactively perform dbms operations. How the processing of information or query takes place through database are represent using data flow diagram.

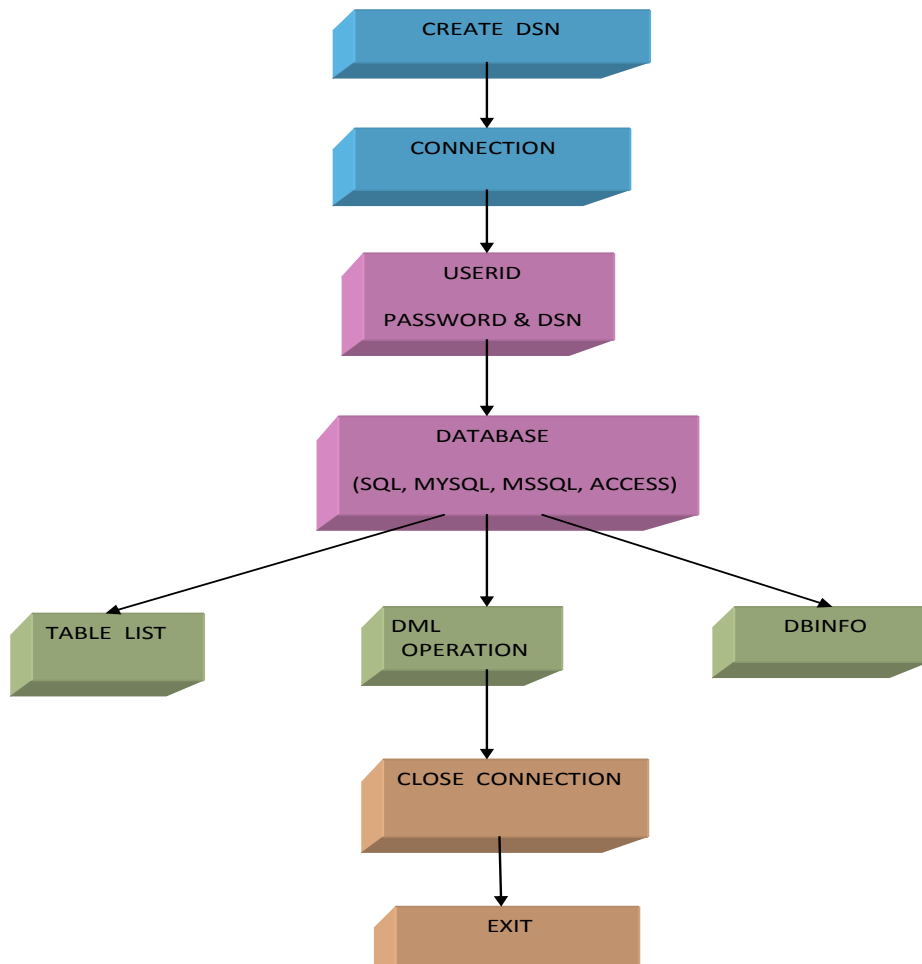


Figure 2. DataFlow Diagram

Create main page of window which includes six buttons connection, create DSN, Setting, Help, Close connection, Exit. **On clicking**

1. Connection button we can get connect with database.
2. Create DSN button we create DSN for connection.
3. Help button we get help to access project.
4. Close connection button we can close connection.
5. Exit button we get exit from program.

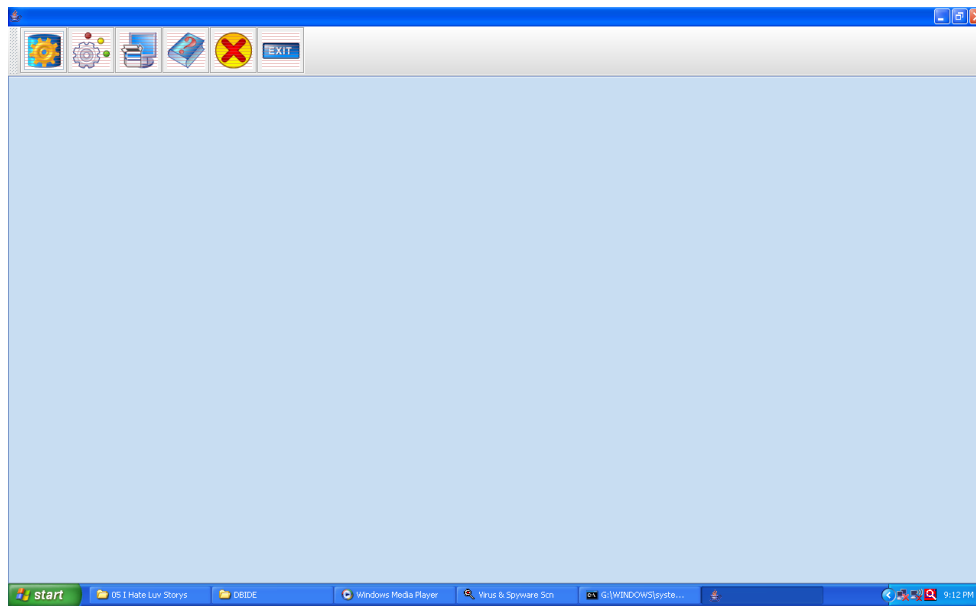


Figure 3. Main Page

3.1 Create DSN

A Data Source Name [9] is a logical reference that exposes database to standards compliant or native data access drivers. DSN's provide a flexible naming and binding service for database driven applications developers and end-users alike. Applications no longer need to be inextricably linked to specific database names or specific database engines.

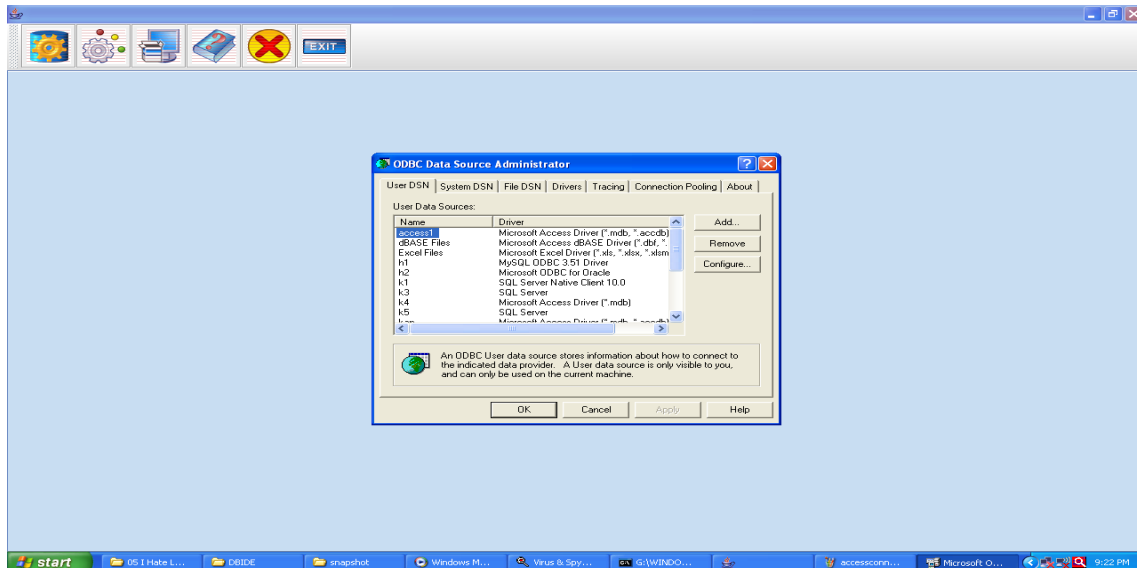


Figure 4. Create DSN

This is Create DSN page of virtual query engine. After clicking on Create DSN button we get one window in which we have add one DSN then select Database for that DSN. And click OK button your DSN created successfully. You can reconfigure your DSN by clicking on configure button.

3.2 Make Connection & Establish Connection

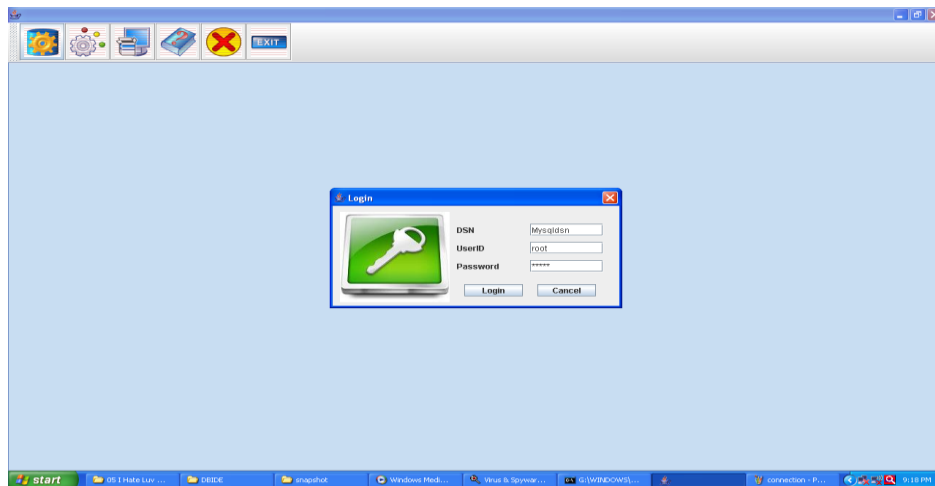


Figure 5. Establish connection

In login page you have to first give Data source name, User id and password. If DSN given by user is invalid then connection will not establish it will throws an exception, you have to first create DSN then move on login page. If user id and password is specified for particular database then use it otherwise not. For ex. Access has not user id and password so login without user id and password. Oracle has user id Scott and password is tiger so use it while login. User id and password are not case sensitive.

After giving valid DSN name correct user id and password connection established with your JDBC/ODBC Driver which is bridge type driver used for establishing connection with your database driver. After successful establishment of connection you can connect with respective database that you want.

3.2 CreateTable1

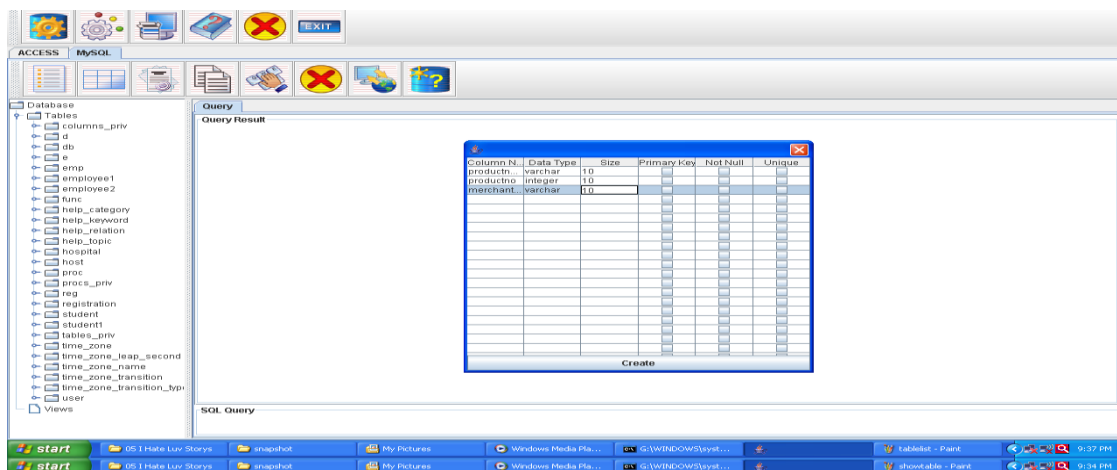


Figure 6. CreateTable1

Create table wizard helps us for creating tables in your database. You can use this tool for creating table without firing SQL queries. So it is a user friendly wizard for those who feel that firing query is tedious task. In that tool data types of particular databases are specified. But you can use data types which supports that particular database. After successful inserting column name, Data Types, size and different referential integrity such as primary key, not null ,unique then one window comes in front of you in which you have to give table name after clicking on OK button your table is create successfully. For e.g. after inserting column name, Data Types, size and different referential integrity such as primary key, not null ,unique table created successfully.

3.3 Query Wizards

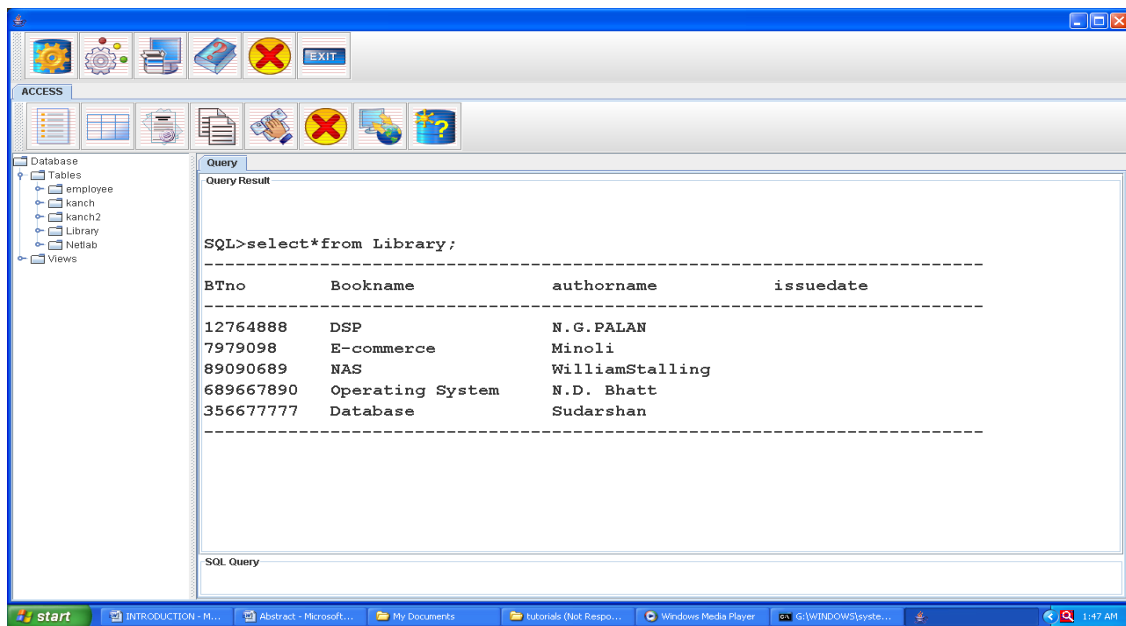


Figure 7. Query Result

3.4 Table

This wizard is used for showing different tables used in your database. Tables are stored on Database tree which is located on the left hand of Query result. After clicking on a particular table of the database, there is a window that comes in front of you. A message box asks you to show the tablename. After clicking on the yes button, you can view the particular table that you want.

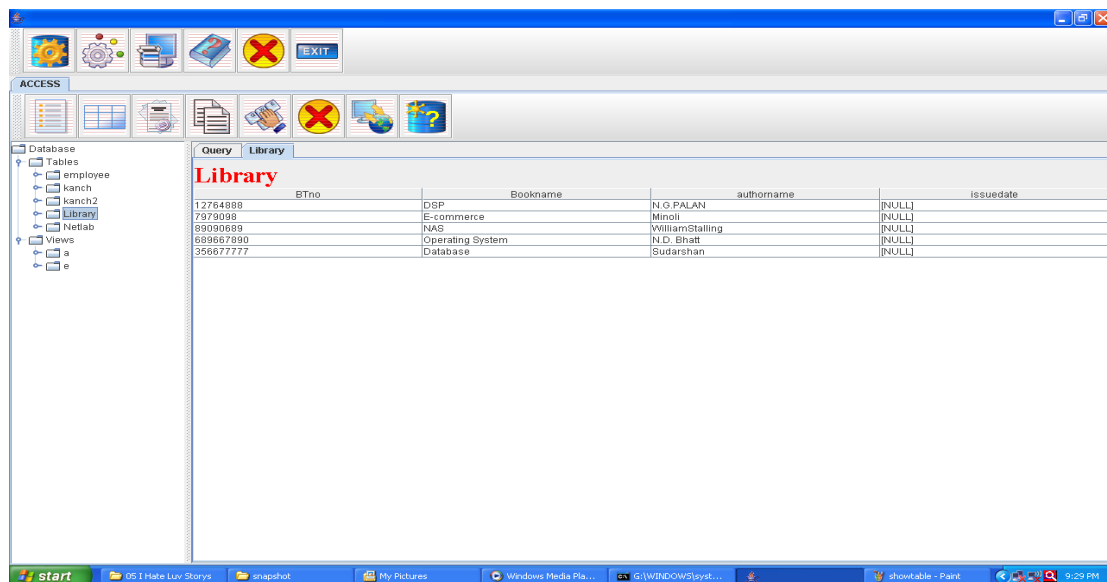


Figure 8. Displaying Table

This wizard is used for showing different columns in tables used in your database. Tables are stored on the Database tree which is located on the left hand of Query result. After clicking on a table, you can view the different rows present on it and can perform different operations on it through the query tab.

3.5 VQE use in LAN

Virtual Query Engine editor is also used in LAN connection. In this case, if this tool is present on the server machine, then all the client machines can access all the information which is present in the LAN.

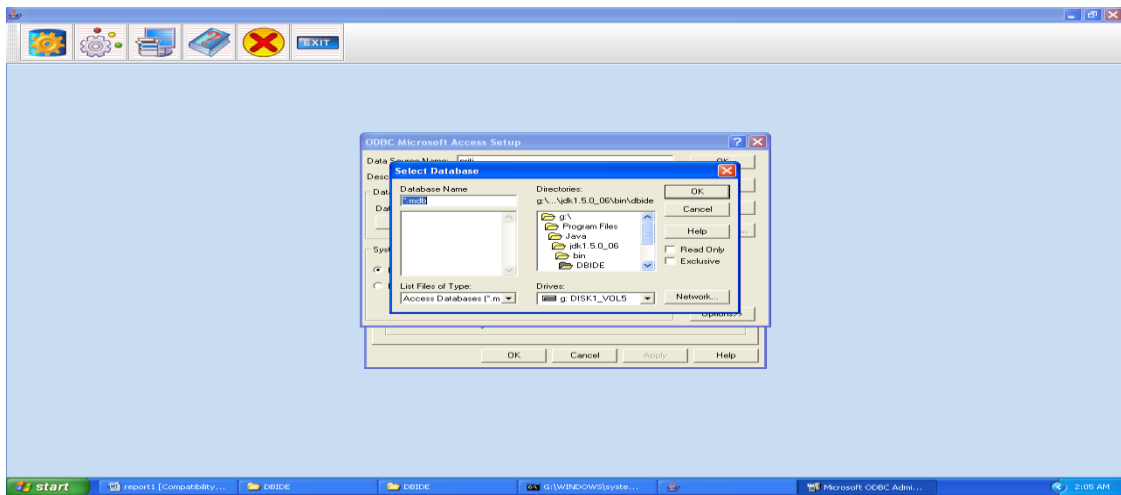


Figure 9. For LAN Connection

For LAN connection we have to click on network button, after that we have to select a shared network folder. On clicking ok button folder get shared with client system.

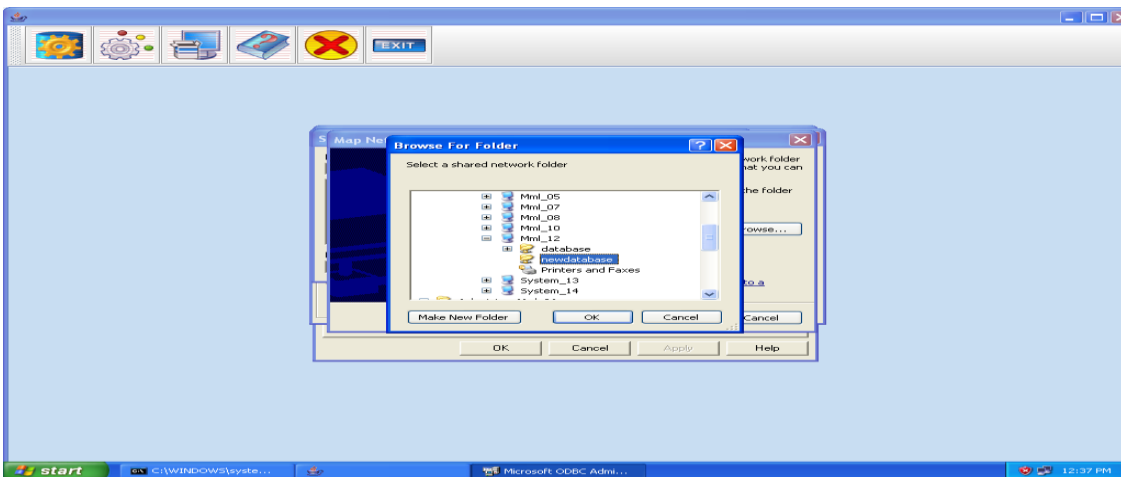


Figure 10. Select Remote System Fold

From this window we have to select folder which contains databases of remote system, provided that should be shared one.

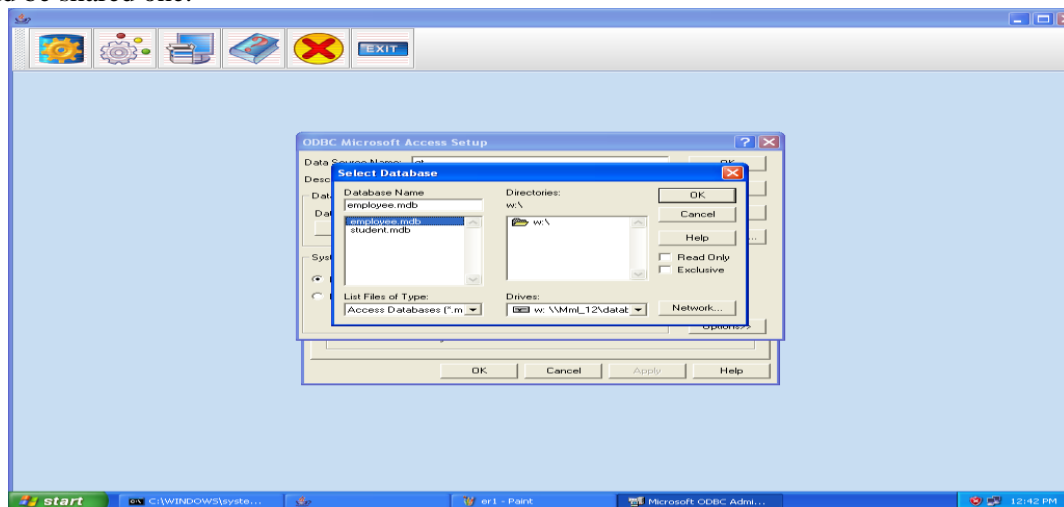


Figure 11. Select Database from Remote System

In this window we have to select database of remote system on which we want to perform different DML operations.

IV. FEATURES

1. We can use it in network, to access databases of remote system.
2. After installing VQE on system there is no need to install different enterprise managers for different databases on local system so there is no any wastage of memory in tem o different managers [3].
3. VQE provides user friendly interface to interact with user.
4. VQE can also use on any platform such as windows, Linux, Solaris because coding is done in JAVA.
5. We can get information of database which is being connected.
6. Virtual Query Engine is use for all kind of databases such as MySQL, MySQL-Server, and Access, versions of oracle such as Oracle-8i, Oracle-9i, and Oracle-10 g.

V. COMMERCIAL VALUE

VQE is unique in its own way. It is quite a useful application. There is no such enterprise manager available in market which is database independent. All the enterprise managers that are available are designed to work for only a particular database. All the databases available in the market have their own enterprise managers. Enterprise manager of one database don't work for another database. VQE is database independent and it can be used for any database. We just have to create a DSN for that particular database and our application gets connected to that database and we can perform various operations on that database.

VI. FUTURE WORK

Every Database that is available in the market comes with its own enterprise manager which is used to perform various database management systems operations on that particular database. For example, Oracle provides its own enterprise manager for oracle database operations. The problems are that every database has a separate enterprise, manager and the enterprise manager of one database won't for another database. Here we've tried to design an enterprise manager which is database independent. i.e, it can be used with any database .If we've using VQE then we can connect to virtually any database and perform operations on that database. We don't have to worry about type of database being used.

VQE doesn't support relational database operations. If we add this feature to VQE then it will be viable. With some modifications this project can be successfully implemented with commercial success.

VII. CONCLUSION

Virtual Query Engine that we designed is a simple tool that can be used to browse any database such as Oracle, SqlServer, and Access. Mysql acts user does not have to use different tools for different databases. VQE internally uses JDBC to perform low level Database Management Systems operations on database .It connects to the database and enables us to perform various operations on the database. We can interactively perform database management systems operations such as browsing database tables, getting table structures, inserting, updating, deleting data, executing sql statement etc. Data from database can be displayed in tabular format as well as Form format.

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