

Enhanced UI Design Features for End User to Interact With Database Servers

Yarramreddy Prathyusha¹, Suhail Afroz²

¹Department of CSE, CVR College of Engineering & Technology, Ibrahimpatnam (M), Rangareddy (D), Telangana India

²Professor, Department of CSE, CVR College of Engineering & Technology, Ibrahimpatnam (M), Rangareddy (D), Telangana India

ABSTRACT

Database is tremendous interrelated data in light of specific requirements forced on the database objects. DBMS is programming that deals with a database. Usually utilized DBMS are MS-ACCESS, MS-SQL SERVER, ORACLE and MYSQL. Database server is utilized to play out all the database exchanges including DQL orders. Any database use of sort window/web/portable uses database server to interface backend. It can be either towards or far from database. GUI is associated with Database Server through Database Access Mechanisms like ADO, DAO, RDO, Native API, JDBC, ADO.NET and so forth. The individual with zero learning can likewise perform numerous perplexing operations in SQL server. Make, alter, or run SQL explanations utilizing the SQL Query Builder graphical interface, access to your database outline and protests so you can rapidly make or alter SQL articulations without really writing any SQL code, you likewise have the adaptability to include or adjust the SQL code in the manager window. The Main target of the web application is to play out a few SQL operations without knowing about any database server. The operations that should be possible by this application are making and erasing databases, tables, sees, files, put away methods and so forth and furthermore different operations like rough operations and information show and so on. Such a few operations should be possible without composing any single inquiry. The question will be consequently produced and the outcomes can be sent out by utilizing MS Excel sheet.

Keywords : SQL, RDBMS, Databases, Tables, Views, DDL, DML, DQL, TCL, DCL, File Database, Server Database, ADO, ADO.NET.

I. INTRODUCTION

Software developers working with small, medium or multinational companies would develop database applications with specific Database Servers like Access, Oracle, SQL Server, etc. Software organizations develop specific database objects like tables, views, stored procedures that would connect to respective front end like Java, VB and VB.Net etc. The existing system imposes the developers to customize the database any time as per the client request. Even for the small customization we need to connect with standard specific interfaces. Also, economically companies need to hire employees with multi skills on database.

This system is a web application that designs a virtual interface between an end user and SQL database server for remote access to perform database transactions. It can perform DDL, DML, DQL simple and conditional queries and also can perform several operations like creating, deleting, using of views, stored procedures, indexes etc. It mainly focuses towards the end user who is layman to SQL and also to professional developers. Our web portal offers services to the below users.

- ✓ Admin
- ✓ Employee

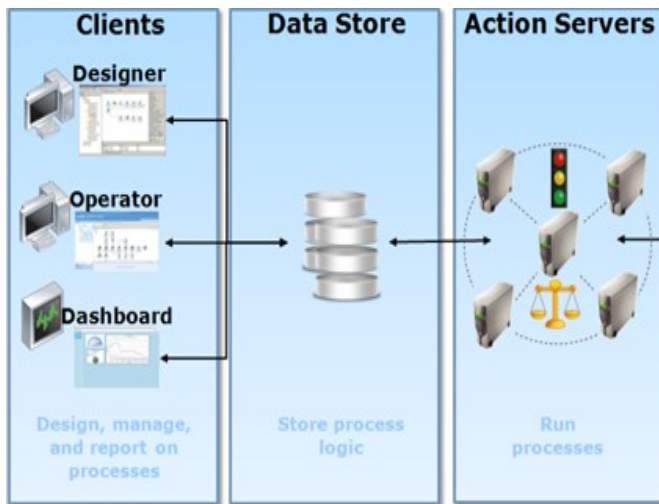


Figure 1. Proposed system framework

II. SYSTEM ANALYSIS

2.1 Introduction

The major objective of the web application is to develop a syntax free evaluation of database server and to perform several SQL operations without even having knowledge about any database server.

Existing System:

The current system need to have direct access to database servers like SQL Server, Oracle, MYSQL to perform any database transaction. Here an expert in SQL Language only can manage database transactions. Company need to hire database designers to develop and maintain database. Database is huge interrelated information based on certain constraints imposed on the database objects. DBMS is software that manages a database. Commonly used DBMS are MS-ACCESS, MS-SQL SERVER, ORACLE and MYSQL.

Database server is used to perform all the database transactions including DQL commands. Any database application of type window/web/mobile uses database server to connect backend. It can be either towards or away from database. GUI is connected to Database Server through Database Access Mechanisms like ADO, DAO, RDO, Native API, JDBC, ADO.NET etc.

2.1.1 Disadvantages of Existing System:

- ✓ Compulsory to have explicit direct access to respective database servers.
- ✓ Companies need to import/export databases in cross platform technologies.

- ✓ Companies need to hire multi skill employees on various database technologies.
- ✓ SQL Literates only can operate

2.2 Proposed System:

The proposed system has remote access to database servers like SQL Server to perform any database transaction. Here a Layman to SQL can even manage database transactions.

Company is economically profitable by not hiring employees on various database technologies.

Stencil Database provides an Interface through which an end user can easily perform various database transactions inclusive of DQL Select Commands with simple and conditional queries and also some complex operations like creating views, stored procedures etc. can be performed by using stencil database.

This system is used to perform several operations each operation contains specific importance in real time environment. The most commonly used operations in corporate world with SQL server are developed to use them without any SQL knowledge. The most commonly adapted datatypes are fixed in this system by providing scalability to add more operational modules and more datatypes.

2.2.1 Advantages of Proposed System:

The main advantage of this application is a user can interact with database objects.

A user need not have any knowledge about SQL queries.

Any number of database tables can be created and manipulated from this application.

The performance is very faster as compared to other applications in terms of connecting and retrieving data from database.

III. METHODOLOGY

SQL is Structured Query Language, which is a coding language for putting away, controlling and recovering information put away in a social database. SQL databases underscores on ACID properties (Atomicity,

Consistency, Isolation and Durability) for data administration.

- ✓ SQL is the standard dialect for Relational Database System. All the Relational Database Management Systems (RDMS) like MySQL, MS Access, Oracle, Sybase, Informix, Postgres and SQL Server utilize SQL as their standard database dialect.
- ✓ Likewise, they are utilizing diverse tongues, for example,
- ✓ MS SQL Server utilizing T-SQL,
- ✓ Oracle utilizing PL/SQL,
- ✓ MS Access adaptation of SQL is called JET SQL (local organization) and so on.
- ✓ SQL is broadly prevalent in light of the fact that it offers the accompanying focal points
- ✓ Allows clients to get to information in the social database administration frameworks.
- ✓ Allows clients to depict the information.
- ✓ Allows clients to characterize the information in a database and control that information.
- ✓ Allows to implant inside different dialects utilizing SQL modules, libraries and pre-compilers.
- ✓ Allows clients to make and drop databases and tables.
- ✓ Allows clients to make see, put away strategy, works in a database.

The above favorable circumstances are likewise given in our web application Stencil Database.

The most commonly used commands in SQL Server and other servers like MS Access, Oracle are

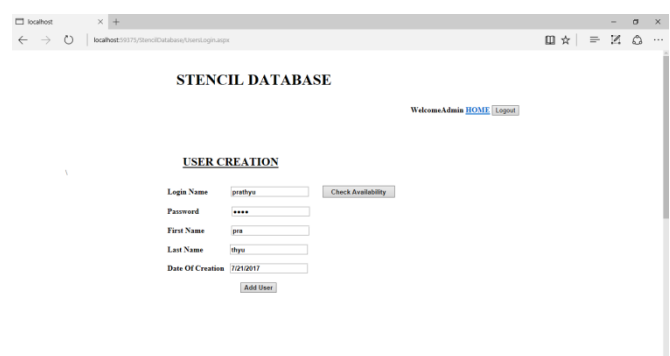
- ✓ Select - extracts data from a database
- ✓ Update - updates data in a database
- ✓ Delete - deletes data from a database
- ✓ Insert Into - inserts new data into a database
- ✓ Create Database - creates a new database
- ✓ Drop Database - modifies a database
- ✓ Create Table - creates a new table
- ✓ Alter Table – alters existing table
- ✓ Drop Table - deletes a table

In this web application the above ordinarily utilized summons is actualized and furthermore some other regularly utilized operations like files, sees and so on are additionally executed.

SQL databases are basically called as Relational Databases (RDBMS); though NoSQL database are fundamentally called as non-social or conveyed database. SQL databases are table based databases though NoSQL databases are record based, key-esteem sets, chart databases or wide-section stores. This implies SQL databases speak to information in type of tables which comprises of n number of lines of information though NoSQL databases are the gathering of key-esteem match, records, diagram databases or wide-segment stores which don't have standard pattern definitions which it needs to cling to. SQL databases have predefined pattern though NoSQL databases have dynamic construction for unstructured information.

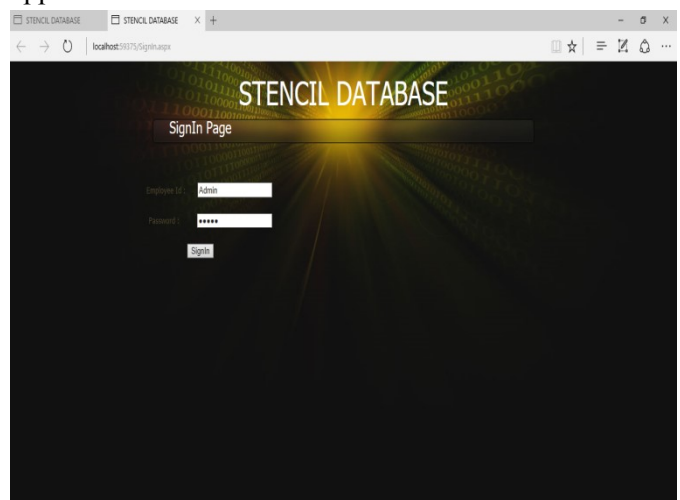
IV. IMPLEMENTATION & RESULTS

Below are some of the results of the project which demonstrates step by step process of entire application.



Output Screenshot 1 : User Creation page

In this page user can register to create an account by providing general information like username, password, email address and phone number to register. Once registration is completed, user can sign in the application.



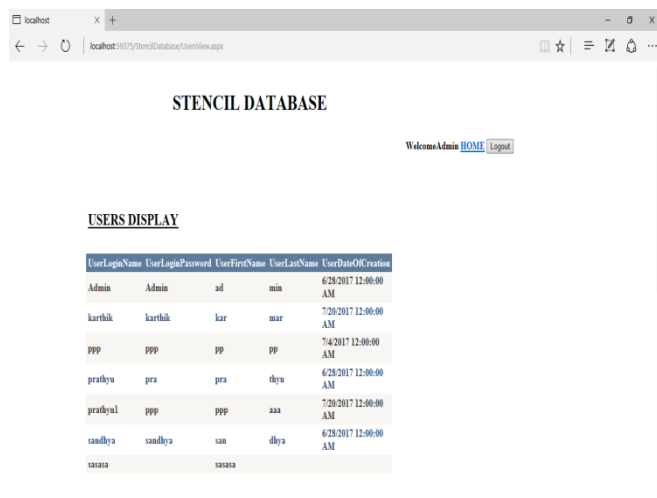
Output Screenshot 2 : Admin Login page

Admin login page provides admins to login in to the application and access it. Admin login page requires basic information to login like username, password. If the credentials are correct, then admins are authenticated.



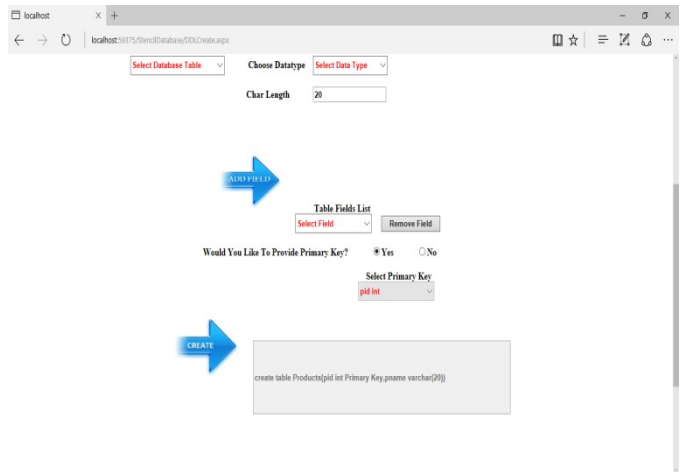
Output Screenshot 3 : Employee Page

After successful login in to the application server, employee page is displayed to perform SQL operations.



Output Screenshot 4: Users Details

the user's details page displays all the details about users in a grid. To access this page a user must be authenticated. Only admins can see all the details of users.



Output Screenshot 5: create table page

Here user can create database tables from front end application. Using this UI any number of tables can be created without writing SQL queries.

V. CONCLUSION

This web application allows software organizations from small scale to large scale to manage data from SQL server and export data from SQL server with comfort and user-friendly manner. The admin without any SQL knowledge can track the database as if the changes made directly in the server are also reflected in this application. There is no need of hiring many database administrators as by using this application any layman can do basic SQL operations and more. This application can be useful for any company to make easy transactions of data in visualized manner. This application provides security as authorized users can only do operations in this application. I conclude this system is easy and sophisticated way to use database server to do database applications.

VI. REFERENCES

- [1]. Jie.w., et al "Augmented modeling of SQL" in Information management and engineering(ICIME), 2010 the 2nd IEEE International Conference on 2010.
- [2]. Anley,C., "Advanced SQL injection in SQL server applications" in White Paper, Next Generation Software ltd 2002.
- [3]. Halfond, W.G.J.Aorso, P.Manolios "SQL Applications using positive tainting and syntax-free evaluation" in Software Engineering, IEEE transaction on 2008.

- [4]. YishanLi, SathiamoorthyManoharam "A performance comparision of SQL and NO SQL databases" in Communications, Computers and Signal processing(PACRIM), IEEE Pacific Rim Conference on Aug.2013.
- [5]. J.Han, E.Haihong, G.Le and J.Du "Survey on NoSQL database" in Pervasive Computing and Applications(ICPCA), International Conference on oct.2011.
- [6]. D.G.Cambell, G.Kakivaya, N.Ellis "Extreme scale with Full SQL language support in Microsoft SQL Server" in IEEE Data Eng.Bull vol.29, no.4 2006.
- [7]. Halfond, W.G.J.Aorso, P.Manolios "SQL Applications using positive tainting and syntax-free evaluation" in Software Engineering, IEEE transaction on 2008.
- [8]. PhilipA.Bernstien, Istvan Cseri, Nishant Dahi "Adapting microsoft SQL server for web computing" in IEEE Computer Engineering and Applications(ICCEA), 2010.
- [9]. Vasyl Romanchuk, Taras Andrukhiv "The main causes of failures of SQL Server" in IEEE Radio Engineering Telecommunications and Computer Science (IRCSET), 2012.
- [10]. DandanLi, LuHan, Yi Ding "SQL Query optimization methods of Relational database system" in IEEE Computer Engineering and Applications(ICCEA), Second International Conference on mar.2010.