

Remote Database Connectivity

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ABSTRACT

Much of the programming done today requires data access. With large amounts of data being maintained in databases, access mechanisms that allow manipulation of this data are vital. Visual Basic is a popular programming package because of its user-friendly interface and data access features. Two popular data access mechanisms are data bound controls with data access objects, and remote data controls with remote data objects.

The main difference between these methods are that data bound controls are usually used to connect to desktop databases, and remote data objects are used to connect to client/server data (for client database manipulation of a remote database).

Database Connectivity Refers to mechanisms through which application programs connect and communicate with data repositories. Database connectivity software is also known as database middleware. Data repository, also known

as data source, represents the data management application that will be used to store data generated by application program.

In this research we can attached with current database or previous database. At a time we can attach with only current database if we required some information before few years then what we should do? So my research is that if we required some information before few years then we will use this research and get the past information. I have explained this research with a form which is used to connect the current or previous database on the run time window or screen. We can modify this research according to our requirements. This research is completely based on coding.

Keywords: - Visual Basic 6.0 Programming, Database, Visual Basic Programming Tool i.e. DAO, RDO, ADO and ODBC.

INTRODUCTION

Database Connectivity Refers to mechanisms through which application programs connect and communicate with data repositories. Database connectivity software is also known as database middleware. Data repository, also known as data source, represents the data management application that will be used to store data generated by application program.

- Native SQL Connectivity Refers to connection interface that is provided by database vendor and is unique to that vendor
- Best example of that type of native interface is Oracle RDBMS
- To connect client application to Oracle database, you must install and configure Oracle's SQL*Net interface in client computer

Problem Formulation

Before developing research we keep following things in mind so that we can develop powerful and quality research.

PROBLEM STATEMENT

Problem statement was to design a module:

- Which will be user friendly?
- Which will restrict the user from accessing other user's data?
- Which will help the user in viewing his data and privileges?
- Which will help the administrator to handle all changes?

- In which further additions can be made without changing its design drastically.
- Which would restrict the server traffic?

Another problem was that the data should be accessed from the server and accordingly changes should be made on the data in the server only. The main problem comes with database connectivity. When the situation is that when we connect the database on run time and if we require the previous information from previous database then we are helpless at that time.

FUNCTIONS TO BE PROVIDED

The various features that the proposed system will possess will be:

- The system will be user friendly and completely menu-driven so that users shall have no problem in using all the options provided.
- The system will be efficient and fast in response by careful programming.
- The system will be customized according to the needs of the organization.
- It will provide overall security to database both from user as well as administrator side.

OBJECTIVE

According to the situation of the problem, a solution is provided to use a remote database connectivity connection which has been connect to current or previous database according to requirement of the user.

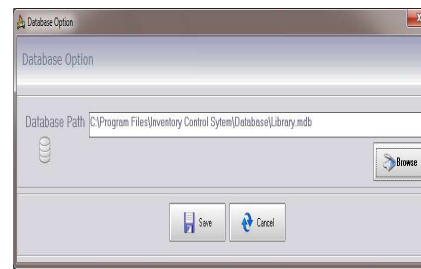
Unlike the databases of MS Access, SQL Server database and the Oracle database if we connect these database we use the different techniques used to connect these

database with the programming languages. But this technique or research helps us to connect the current database or previous database. And second solution is that any database which is Access, SQL Server and Oracle database has been used with the programming we also connect the same procedure used with the programming language and used any one with the same time.

Also, users do not require any addition software or tools for it to connect it accurately in order to provide authentication. This technique is helpful for database programming system and it save the extra time which is wasted for the connectivity with different database and we connect the current and previous database at the same time on the run time window of the project.

My Research is Remote Database Connectivity The research on Remote Database Connectivity is completely attached with current or previous database system. In this research we can attached with current database or previous database. At a time we can attach with only current database if we required some information before few years then what we should do? So my research is that if we required some information before few years then we will use this research and get the past information. I have explained this research with a form which is used to connect the current or previous database on the run time window or screen. We can modify this research according to our

requirements. This research is completely based on coding.



This Form connects the current database or previous database at a time on run time window

RESEARCH METHODOLOGY

What is Algorithm in Computer Science?

Algorithm is a process of problem-solving in step by step to get result. Algorithm is very importance for programmers to do computer programming because it figures out the programming process. Algorithm is a part of problem-solving techniques. After the problem has been raise, we have to analyze the problem first then the inputs and outputs are defined. After that we start to design the algorithm that is a process to transform inputs into outputs.

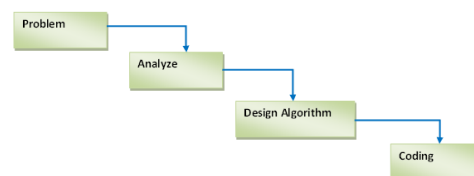


FIGURE. Problem – Solving Technique



FIGURE. Flow – Chart of a Problem

Problem: - First of all the main question arises that what is the problem? The problem is that we can connect a database with programming language at a time. If we want to connect the previous or another database with programming language then we return back to design time or coding window. Then we change the code or procedure to connect another database. So in this problem we waste a lot of time cost and increase the coding procedure. Without this procedure we are unable to connect the database with programming language.

Analyze: - I analyze this problem which is serious and it should have easy solution. Then I have made an algorithm which is necessary to solve this problem. With the help of this algorithm and database model diagram in my research I am able to connect the previous or another database on run time window without changing the code or other procedure.

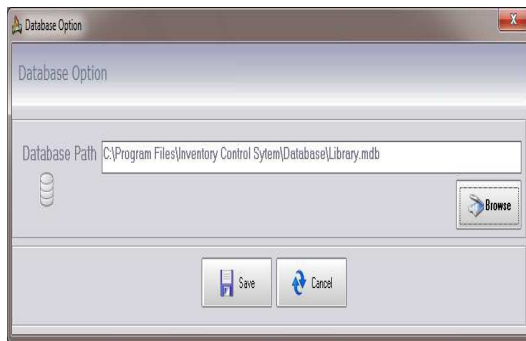
Design Algorithm: - The steps of this algorithm used in my research are as follow: -

1. Firstly I have made a database which is inventory.mdb in MS

Access. This database has several tables which are necessary for my research project.

2. My research project front-end is Visual Basic 6.0 and back-end is MS Access and platform used in this research is Window XP.
3. Then I have made the database form which is used in visual basic programming language and make a connection provider with ADO control which is used in VB components.
4. I connect this form with database and database table through the connection provider OLEDB.
5. The database form consist of a textbox, three command buttons which are browse, save and cancel. Then I write the code behind these buttons and some function used in this form.
6. Another form which is Create Session used to create the backup of all data of the database and blank the current data of the database.
7. Finally I am able to connect the current as well as previous database with the help of database form on run time or output window. This algorithm is used to reduce the time cost and another coding procedure.

Coding: - The following code used behind the database form and buttons is as follows: -



EXPERIMENTAL RESULTS

6.1 VISUAL BASIC FORM WITH CURRENT DATABASE

My Research is Remote Database Connectivity The research on Remote Database Connectivity is completely attached with current or previous database system. In this research we can attach with current database or previous database. At a time we can attach with only current database if we required some information before few years then what we should do? So my research is that if we required some information before few years then we will use this research and get the past information. I have explained this research with a form which is used to connect the current or previous database on the run time window or screen. We can modify this research according to our requirements. This research is completely based on coding.

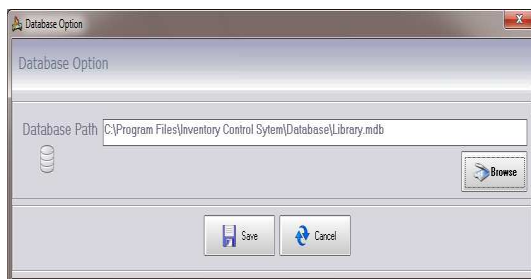


FIGURE 7.Database Option

Form Figure of Current database

This Form connects the current database at a time on run time window. The Stock Form shows the 5 stock categories on the run time window. The Stock form is shown in figure: -

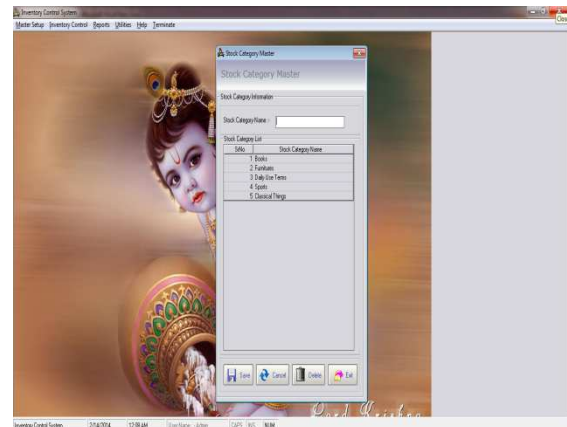


FIGURE 8.Stock Category

Form Figure of Current Database

6.2 VISUAL BASIC FORM WITH PREVIOUS DATABASE

If we required the past information from the previous database then we use this form for the previous database backup. Simply we use the command button "Browse" then we open the system window and select the previous database which is Library_backup database and press the save command button and then we connect the previous database and get the past information from the previous database. The previous database path is shown in figure similar to above the figure. Which show the current database path and below is connect to previous database path?

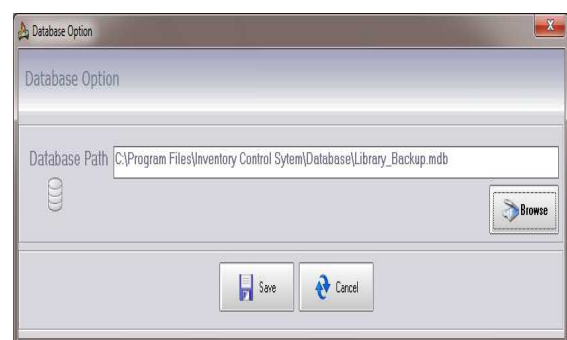


FIGURE 9. Database Option

Form Figure of Previous database

This Form connects the previous database at a time on run time window. The Stock Form shows the 6 stock categories on the run time window. The Stock form is shown in figure: -

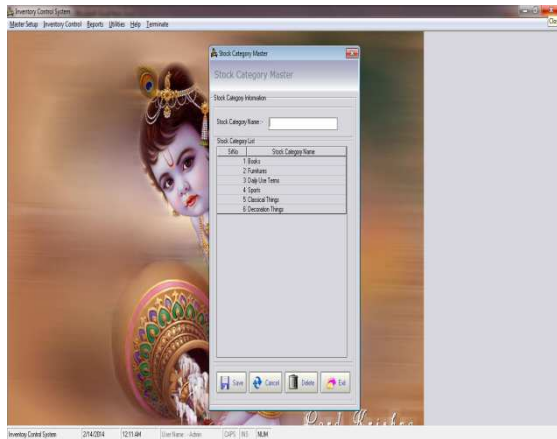


FIGURE 10. Stock Category Form Figure of Previous Database

Finally we get the experimental result is that we connect the current as well as previous database at a time on the run time window. We never go to designing of the software and coding of the software. At run time we change the database according to requirements of the user or clients.

CONCLUSION AND FUTURE WORK

Open Database Connectivity (ODBC) is Microsoft's strategic interface for accessing data in a heterogeneous environment of relational and non-relational database management systems. Based on the Call Level Interface specification of the SQL Access Group, ODBC provides an open, vendor-neutral way of accessing data

stored in a variety of proprietary personal computer, minicomputer, and main frame databases.

ODBC alleviates the need for independent software vendors and corporate developers to learn multiple application programming interfaces. ODBC now provides a universal data access interface. With ODBC, application developers can allow an application to concurrently access, view, and modify data from multiple, diverse databases.

ODBC is a core component of Microsoft Windows Open Services Architecture. Apple has endorsed ODBC as a key enabling technology by announcing support into System 7 in the future. With growing industry support, ODBC is quickly emerging as an important industry standard for data access for both Windows and Macintosh applications.

With the help of ADO, RDO and other programming tools in our experimental results we represent the conclusion of current and previous database with programming language at run time and the future work of this research will be useful for database connectivity and **reduce the time cost**. My research continued to try this to work with database connectivity with programming such as MS Access, SQL Server and Oracle database connect with programming with the similar way. There is

no need to connect these databases by using the different methods. There is only one method to connect the database with the programming languages.

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