DATABASE BACKUP RECOVERY

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ABSTRACT

Microsoft SQL Server is produced by Microsoft. It is a relational database management system (RDBMS)[1].Transact-SQL, is the primary language , putting into Microsoft and sybase is used to ANSI/ISO standard SQL for the implementation. Database administrations will be performs a restore operation by using online restore with SQL server 2005.it improves the availability of SQL server. Because only data being restored is unavaible pending database remains available and online. A new recovery option will improve availabilty of SQL Server database. After the transaction log has been rolled forward administrator will be able to reconnect to recovering database .To adopt efficient backup policy. I try to develop software named as "Database Backup utility". In this utility I am able to import and export data as well as user security is provided through proper authentication by filling user id and password in proper manner. Backup is in zip format i.e. is in compressed form which is one of the striking feature of my utility. The extension of backup file is .Dat file.

As well as we are able to generate script, Backup is stored at any drive, Proper backup recovery are done by considering various options like Restore object structures, Restore data, Delete existing data, Drop existing data, Appending existing data. The system is evaluated by using performance metrics and it gives satisfactory results.

I. INTRODUCTION

1.1SQL server

SQL Server Still No.1 in Databases no doubt. I found that 75 percent of companies   use it because it is much, much easier to use with ADO.NET than Oracle is at the moment. It is just another tool and is integrated with Visual Studio & It is more than adequate for our needs, easy to administer, works well with Visual Studio and runs fine on an x86 server.Along with advantages there are lots of disadvantages like there is no proper mechanism to take and restore database & backup is not in compressed form or in encrypted form. So these all drawbacks motivate me to develop a utility i.e. "Database Backup Utility".

Features of SQL-Server

• **High Availability** Failover clustering and database mirroring technology in SQL Server 2005 enables enterprises to deliver highly reliable, available applications to employees, customers, and partners.

• **Management Tools** SQL Server 2005 inception an integrated suite of management tools and management application programming interfaces (APIs) .It provide ease of use,and manageability for operating large-scale SQL Server deployments.implements.

- **Security Enhancements** SQL Server 2005 has provide the highest level of security for busniss data through features such as database encryption[2, password, granular permissions control, and security model.
- **Scalability** Scalability advancements in SQL Server 2005 conatin dividing talbe, enhancements replication,

II. BACKUP AND RECOVERY IN SQL SERVER

Backup and recovery is one of the most important facet of database administration. If a database losted and there was no mehod to recover it, the bust output to a business could involve lost data, lost revenue and customer disappointment.

Companies share common thing whether compaines used a single or multiple database storing even terabytes of data.The need to backup data and save themsleves from crashed by developing a backup and recovry method.
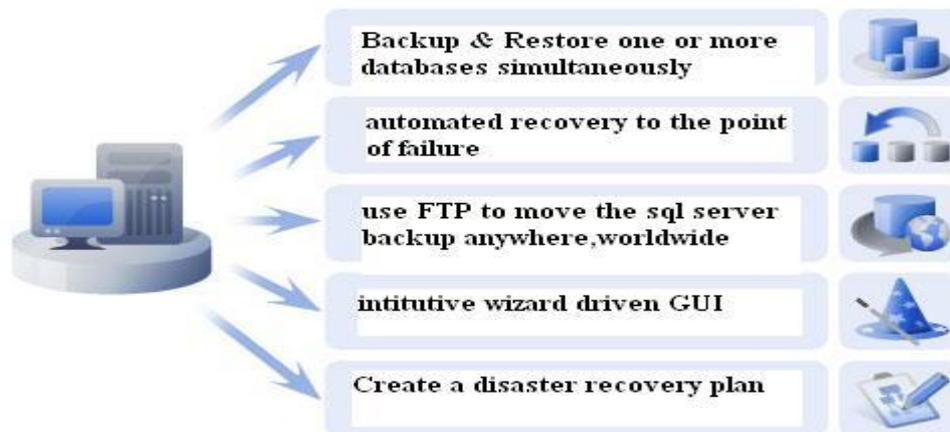
Fig.1   Backup and recovery in SQL Server.

2.1 Working of Modules

The implementation of Database Backup Utility is done by using SQL Server & .net After splash window the login screen appears.

Which is consist of several forms Modules like

(a) Login Module.

(b) Data Backup Module.

(c) Data Restore Module.

Login Module. After filling correct username and password .Press Login button as shown in fig Firstly when this software run then we will face login screen for the security purpose. After login. The MDI form will appear.

Data Backup Module. We can take back up by clicking on back up icon of through the menu Data Backup Module. In this module you can take database Backup, First of all fill the user name and password for authentication, so that unauthorized person is unable to access the database .After filling the username and

password click on login button .Then dialogue box appears where you have to just enter your server name, database name, username and password and at end press Backup button.

Data Restore Form Module

In this modules dialogue box appears where you have to just enter your server name, database name, username and password and at end press Backup button. We can restore our backup in any drive quickly and easily

2.2.Working of Backup Utility

After filling correct username and password .Press Login button as shown in Fig 2. Firstly when this software run then we will face login screen for the security purpose.
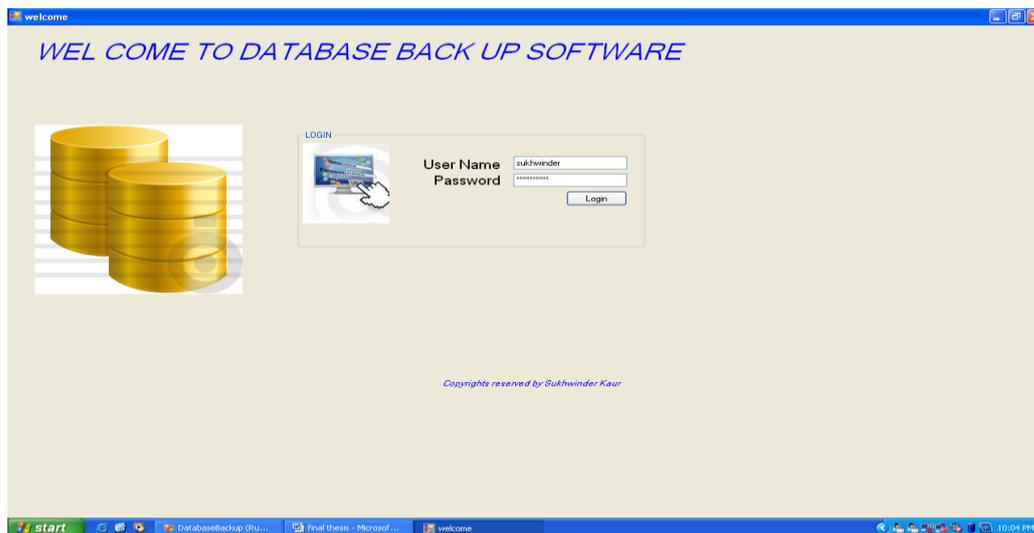
Fig 2: Login Screen

After login. The MDI form will appear. We can take back up by clicking on back up icon of through the menu.

2.3. SQL Server backup utility using VB.Net and SQL-DMO

In the back up form we have to enter server name i.e. is the name of the server where we want to take back of database. If may local or on the computer server.

There are one option of database user name and password here we have to fill user name of server and the password which we have defined in the sql server 2005. Just click on connect button, if the user name and password is correct then we can directly take the back up of database by click on 'start backup'. The wonderful option in the utility is that we can take back up of required tables. Moreover the back up utility generates two files one is .dat file.

And other is script file in compressed format. The connectivity happens due to 'sql client' class used in vb.net you connect with sql server. And another is SQL DMO class that helps to table back up of sqlserver 2005 [4].The big advantage is that we can take back up at desired location. On exit we can see MDI form. In the back up option we can take the back from where the user had stored the back up files. As shown in fig .3.
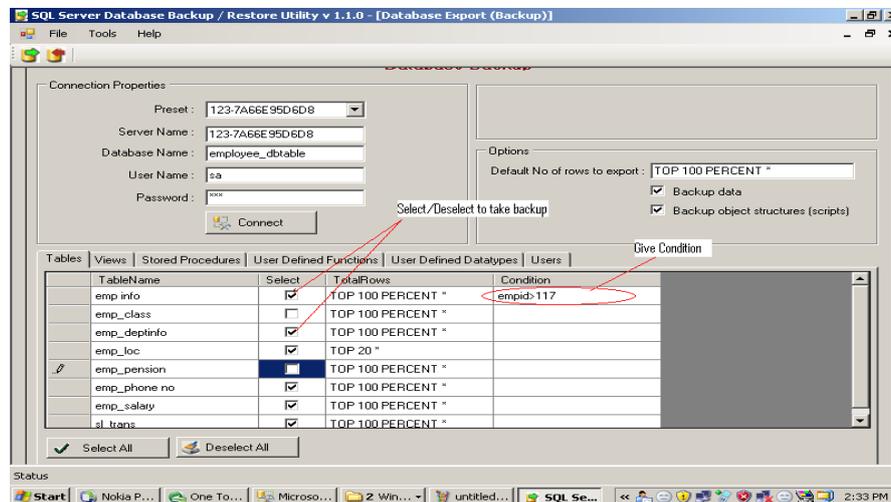
Fig 3 SQL Server backup utility using VB.Net and SQL-DMO

2.4 To backup database

• Open database backup casement.

• Enter user name , password , sa name and db name for SQL Server.

• Open the Connect button. This will showes all tables, views, and user defined data types and users from database.

• If you want to only backup then you, check Backup data whatever you want to backup. Select that objects .In this all objects are selected by default. In above picture, emp_class and emp_pension tables will be excluded from backup.

• Use any condition on table data. For example 'User ID > 10 in above picture. It will be shown only that data which is suitable to this condition.

• Modify number of rows to shown on a particular 'table'. For example in above image upper 20, means only upper 20 rows will be shown for 'emp_loc'table.

• Click on Start button . enter a file name and location. Remember this is not a standard sql server backup file. It's just a zip file which contains scripts for tables, views, stored procedures etc. It also includes data in row (.dat) files.

III. TO RESTORE BACKUP

• Open Database restore menu .
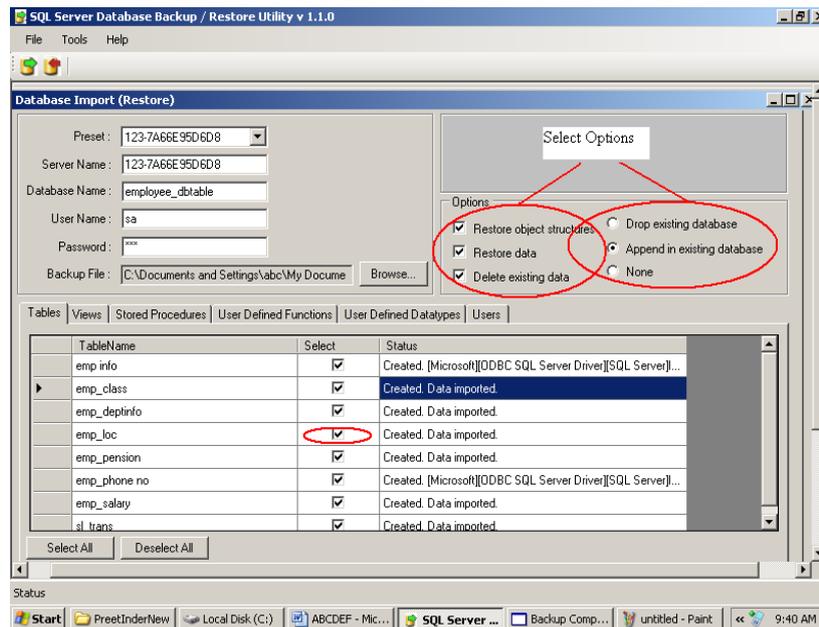
Fig4 : Restore Backup

- Enter server name, database name, user name and password for SQL Server.As shown in Fig 4

- Select database backup file(*.zip) [5]that you want to restore. It cannot restore regular sql server backup file.

- When you select backup file, it displays all objects available in backup.

- If you want to create a new database, check Create New Database option.

- If you want to drop existing database and recreate it, check Drop Existing Database option.

- Select objects that you want to restore from list. By default all objects are selected.

- Click on Start Restore.

Proper backup recovery is done by considering various options like:-

Restore object structures:-using this option we are able to save the restore the object structures.

Restore data: - using this option we are able to take database,

Delete existing data:-using this option we are able to delete the already present database as well as its structure

 Drop existing data using this option we are able to drop the already present database,but its structure exist.

Appending existing data using this option we are able to append the already present database.

CONCLUSION AND FUTURE SCOPE

IV. CONCLUSION

A new recovery option will improve availabilty of SQL Server database.After the transacition log has been rolled forward administator will be able to reconnect to recovering database .. But the main problem in banks is its backup i.e. what happen if its data center is lost? So by considering these situations I try to develop software named as "Database

Backup utility" .In this utility I am able to import and export data as well as user security is provided through proper authentication by filling user id and password in proper manner .Backup is in zip format i.e. is in compressed form which is one of the striking feature of my utility ,Even Microsoft cannot use this concept in its Database Backup.

The extension of backup file is .Dat file .As well as we are able to generate script, Backup is stored at any drive, Proper backup recovery are done by considering various options like Restore object structures:-using this option we are able to save the restore the object structures, Restore data:- using this option we are able to take database, Delete existing data:- using this option we are able to delete the already present database, Drop existing data using this option we are able to drop the already present database, Appending existing data using this option we are able to append the already present database.

Future Scope of Work

SQL Server database full backup and differential backup, transaction log backup, Data compression & encryption supports Log shipping supports in professional edition, Backup SQL Server database to local hard disk USB removable disk, Remote Network driver etc, online backup of MS SQL Server databases without interrupting Running MS SQL Server services, it considers Media Failure. If one or more drives Used by the database fail, the DBA should restore the database & move its related Files to another driver or a new disk .As well as catastrophic event are handled. A major Event destroys the data center. if such an event occurs then DBA will be responsible for saving the data From restoring, recovering the databases Backup ms sql server is an important way to protect core data of a company.

REFERENCES

[1] Alexander Woehrer and Peter Brezany "A Monitoring service for Relational Databases to Support data Data Integration "Proceeding of first conference IEEE2007[ACCESSED : MARCH 14,2008]

[2] Ann L.Chervenak Vivekanand Vellanki,Zachary Kurmas ,Vivek, kurmaszg "Protecting File Systems:A Survey of Backup Techniques"[ACCESSED : MARCH 20,2008]

[3] David J. Stang "Defend Your Data!: ICSA's Guide to Data Recovery" International Computer Security Association, International Computer Security Association - Computers pp 1991 - 317

[4] MySQL AB., MySQL AB"MySQL Administrator's Guide and Language Reference" Published by Sams Publishing, 2006 Avaliable http://books.google.co.in/books?id=btfeDZZdiC4C.

[5] John miano"An introduction to file compression" www.file compression .com