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RESEARCH ARTICLE

AUTO GENERATION OF CODE AND TABLE TOOL

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Abstract-- The paper is about a windows application of which will generate initial code files, tables schema and stored procedures to deal with the tables generated. The generated codes will be used by the software developers of a company which can be integrated with any web/window application(s). This tool can connect with any database server on network and execute the script generated. In the proposed system, there must exist a database where the user can create table with the required number of fields. Every table created is be placed under the same database. The code can be generated by any top level manager/ project head (with basic knowledge of computers). The tool will even guarantee the level of abstraction to be maintained between the developers hierarchy.

Keywords: Code Generation, Table, Stored procedures, Database, Abstraction

I INTRODUCTION

In recent years technology has surpassed general human thoughts and task are needed to be completed in moments with minimal error; that too in a secured and controlled manner. In today's software development companies; they follow a new way to develop their software in faster and optimized way. For most of the web development, they create templates prior by which it gives the client a better understanding of the website outlook. The developer even have to work less to generate the code and most of task is already being done while creating the template.

Similarly for developing a software which may have too many tables in the database and it needs C# or java code to create the business logic to access it from front end and place to in the back end. More over triggers, stored procedures are also required for other support of the software. To avoid the hustle to repeating the above tasks again and again develops create auto generation code. So in development Industries the new era has began for auto generation of code, tables, scripts and documentation that can be helpful in creating products in moments and maintain the standard as well.

Every company creates their own way of code generation and are being used by the managers or the administrators who not maintain the level of hierarchy in distributing the task but also the creates a outline structure of the database, tables. Scripts to handle the database. Code to handle the tables. The functionality which must be used to access the database and so on. The project done me is creating some auto generation of code, tables, scripts and the functionality that must be used by developers to deal with the tables in the database.

II METHODOLOGY & OBJECTIVES

1. Basic Front end code (C#/Java/Android) Generated Automatically.
2. Basic Back end code (Tables, SQL triggers and stored procedure) Generated Automatically.
3. Level of Abstraction to done automatically

Methodology

The present study focuses on the secondary sources of data from Books, Journals, Articles, and interviews with eminent personalities from various departments of the University.

III EXISTING SYSTEMS

The existing system is to generate the code after making a lot of team effort. Continues interaction between team mates are mate as clash between the namespace are there. Sometimes some inexperienced developers does not create the hierarchy of management. Distribution of functional part in coding takes a lot of time. Even naming conventions creates problem. The Manager or Architect need to continuously monitor the code. Finally Project completion time becomes huge.

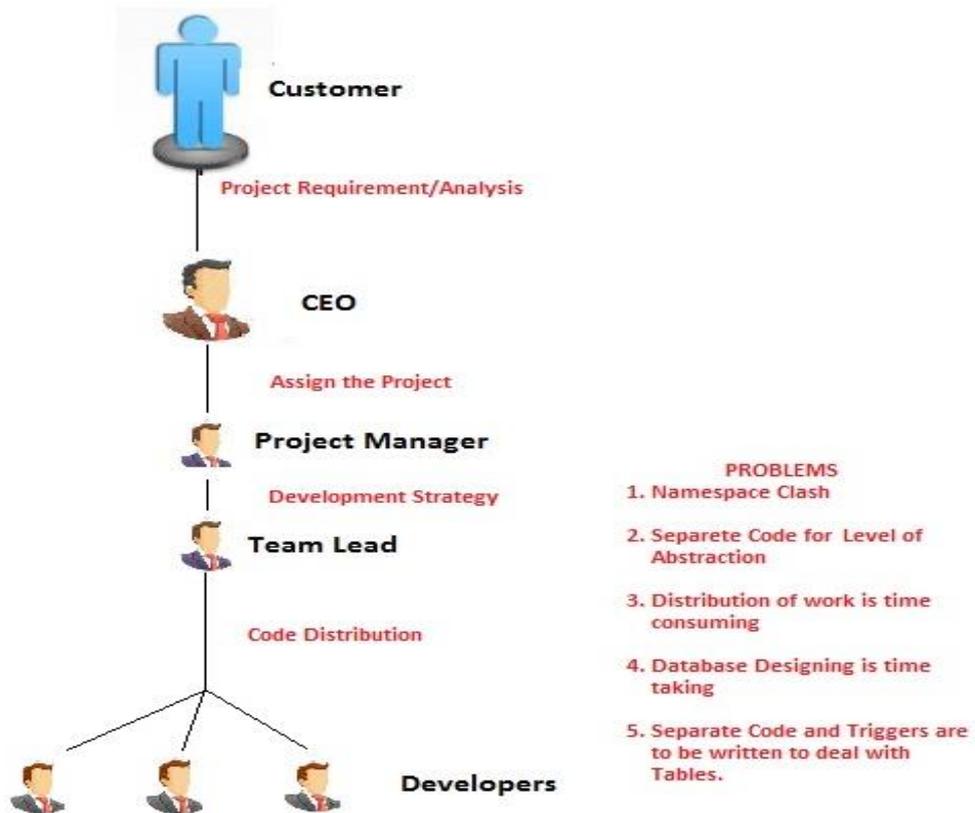


Figure 1: How hierarchy is used for developing a s/w project development

IV PROPOSED SYSTEM

Utility tools are commonly used now a days by developers to get optimized software in a faster way. Customization must be in high rather than coding. As most of the code are auto generated or created previously in the form of templates.

The proposed system solves the problems discussed above. The tool is very user friendly and with basic knowledge of computers the tool can be operated. The tool is developed for a project manager/ team lead to generate the required basic coding structure for the project development.

AUTO GENERATION OF CODE AND TABLE TOOL is built on dot net windows platform and executable with single mouse click. This tool creates web forms for ASP.Net web applications on Dotnet 4.0 and sql scripts for the respective table at the desired directory. Once the files are created script can be executed on the SQL server which is either on same server or on network when provided the credentials.

Solution Summary

The solution is a windows executable application.

The tool can be executed on any windows server without any dependencies.

The structure is as follows

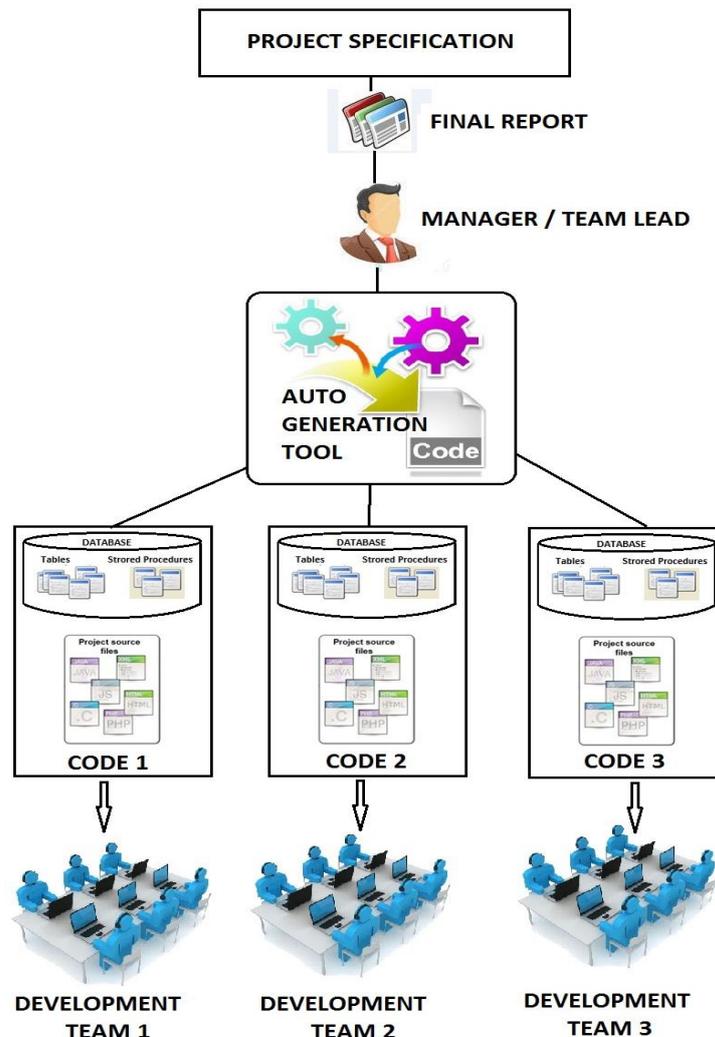


Figure 2 : Hierarchy to develop a s/w project development using the proposed tool

It solves the problem which was discussed in the existing system

1. Namespace problems raised for developers will be resolved.
2. The separate code generated for the developers will maintain the abstraction level. No need to write separate code or plan for maintaining the abstraction level.
3. Distribution of work to developers will be easier.
4. The database design and the structure will be created immediately.
5. Triggers/ Stored Procedures will be automatically created to handle the various requirement of the database.

Simple Application to show how to use the tool

A sample application is developed using Microsoft C# and SQL Server. The following window will be seen when the application is opened

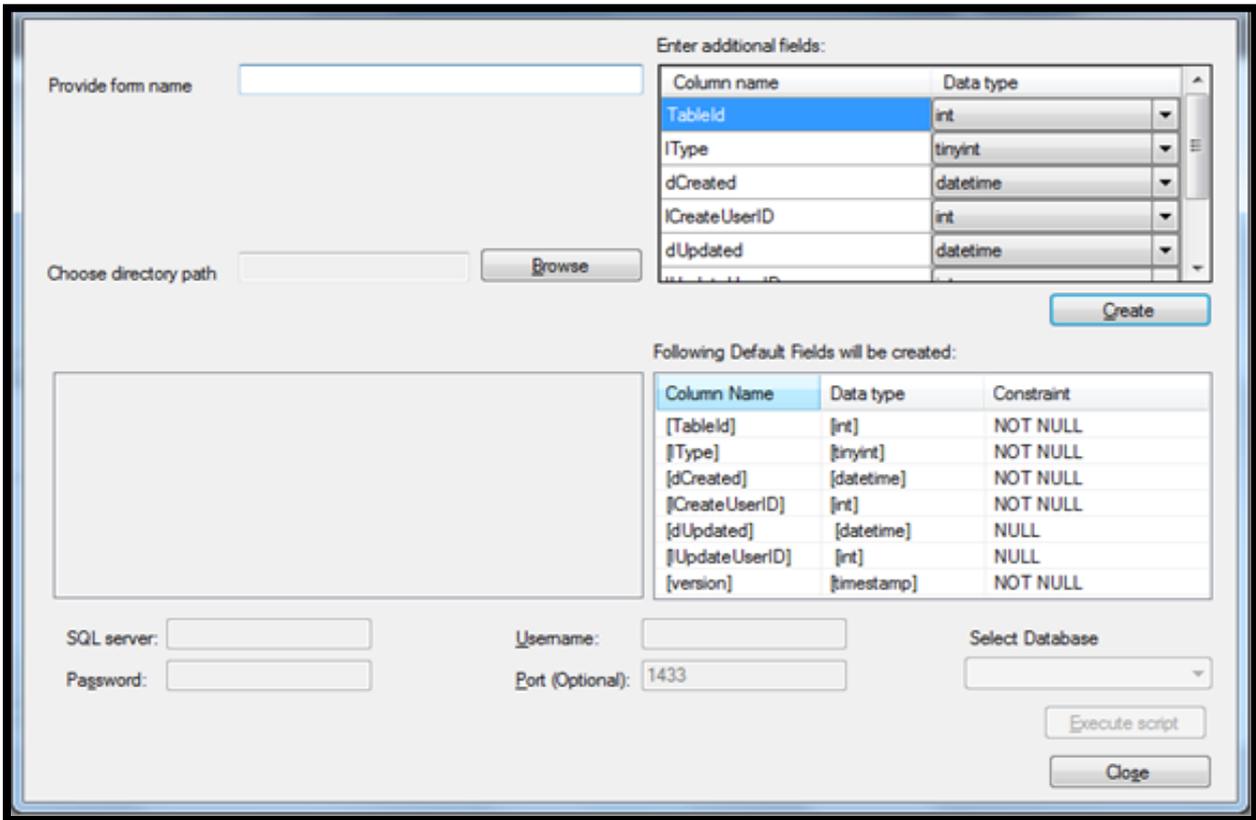


Figure 3: Sample Application Window

Provide name for the webpage in the text box provided for which code file and script file required. Default SQL table with 7 fields will be automatically created and modifications for them is not allowed but additional columns can be provided to the table by be inserted as new rows into the grid with the respective data type. Click on the “Browse” button which opens directory browsing dialog from which the destination directory is to be selected. A child directory with name CodeGenDirectory will be created inside it and files will be created inside it.

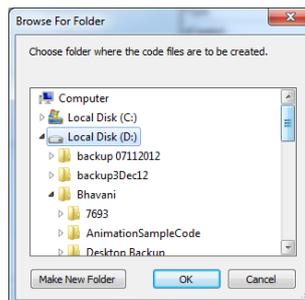


Figure 4: Directory browsing to store the generated files

V CONCLUSION

This project reduces the burden for managers to create namespaces for developers of same project; even the burden for levels of authorization is also reduced. Accessibility to the required is given to the developers. Table schema and insertion, deletion stored procedure is also created. The sample test shows how C# code is also generated for the tables and the stored procedures. So a lot of time is saved for the developers. Certain future enhancement is always necessary. But code generation is based on specific requirement only.

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