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Employee claim reimbursement request and response system

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Abstract

The project is developed by using ASP. Net as the front end tool and SQL Server database as the back end tool. This application is very useful for claiming the reimbursement information of the employees requirement. This system is web application software which attempts to integrate all departments and functions across an organization onto a single computer system that can serve all those departments' particular needs. So that the various departments can more easily share information and communicate with each other. It maintains a centralized database, which can store the relevant Information about the general user, like employee details, claim details. This project is developed as user friendly software so that it meets the user needs at any time. Information can be created and altered by administrator. Through this application employee can claim their reimbursement amount in an organization.

Keywords: Employee, claim, reimbursement, response system, ASP, SQL

Introduction

The project is developed by using ASP.Net as the front end tool and SQL Server database as the back end tool. This application is very useful for claiming the reimbursement information of the employees requirement. This system is web application software which attempts to integrate all departments and functions across an organization onto a single computer system that can serve all those departments' particular needs. So that the various departments can more easily share information and communicate with each other. It maintains a centralized database, which can store the relevant Information about the general user, like employee details, claim details. This project is developed as user friendly software so that it meets the user needs at any time. Information can be created and altered by administrator. Through this application employee can claim their reimbursement amount in an organization.

Fig 1: What are common employee expenses reimbursed by businesses?

Modules ¬ Authentication Module • HR Account • Employee Account ¬ Employee Profile Registration Module ¬ Reimbursement Module ¬ Verification Module ¬ Status Module ¬ Confirmation Module.

Front End-Asp.Net

The Microsoft. NET Framework is a technology that is available with several Microsoft Windows operating systems. It includes a large library of pre-coded solutions to common programming problems and a virtual machine that manages the execution of programs written specifically for the framework. The. NET Framework is a key Microsoft offering and is intended to be used by most new applications created for the Windows platform. The pre-coded solutions that form the framework's Base Class Library cover a large range of programming needs in a number of areas, including user interface, data access, database connectivity, cryptography, web application development, numeric algorithms, and network communications. The class library is used by programmers, who combine it with their own code to produce applications. Server-side applications in the managed world are implemented in runtime hosts. Unmanaged applications host the common language runtime, which allows your custom managed code to control the behaviour of the server. This model provides you with all the features of the common language runtime and class library while gaining the performance and scalability of the host server. The following illustration shows a basic network schema with managed code running in different server environments. ASP.NET is the hosting environment that enables developers to use the. NET Framework to target Web-based applications. However, ASP.NET is more than just a runtime host; it is a complete architecture for developing Web sites and Internet distributed objects using managed code. Both Web Forms and XML Web services use IIS and ASP.NET as the publishing mechanism for applications, and both have a collection of supporting classes in the. NET Framework. 5 XML Web services, an important evolution in Web-based technology, are distributed, server-side application components similar to common Web sites. However, unlike Web-based applications, XML Web services components have no UI and are not targeted for browsers such as Internet Explorer and Netscape Navigator. Instead, XML Web services consist of reusable vehicle components designed to be consumed by other applications, such as traditional costumer applications, Web-based applications, or even other XML Web services. As a result, XML Web services technology is rapidly moving application development and deployment into the highly distributed environment of the Internet. If you have used earlier versions of ASP technology, you will immediately notice the improvements that ASP.NET and Web Forms offers. For example, you can develop Web Forms pages in any language that supports the. NET Framework. In addition, your code no longer needs to share the same file with your HTTP text (although it can continue to do so if you prefer). Web Forms pages execute in native machine language because, like any other managed application, they take full advantage of the runtime. In contrast, unmanaged ASP pages are always scripted and interpreted. ASP.NET pages are faster, more functional, and easier to develop than unmanaged.

ASP Net Architecture

The. NET Framework also provides a collection of classes and tools to aid in development and consumption of XML Web services applications. XML Web services are built on standards such as SOAP (a remote procedure-call protocol), XML (an extensible data format), and WSDL (the Web Services Description Language). The. NET Framework is built on these standards to promote interoperability with non-Microsoft solutions

Common Language Runtime

The common language runtime is the foundation of the. NET Framework. It manages code at execution time, providing important services such as memory management, thread management, and remoting and also ensures more security and robustness. NET CLASS LIBRARY It is a comprehensive, object-oriented collection of reusable types used to develop applications ranging from traditional command-line or graphical user interface (GUI) applications to applications based on the latest innovations provided by ASP.NET, such as Web Forms and XML Web services. FEATURES OF. NET. The. NET Framework is a new computing platform that simplifies application development in the highly distributed environment of the Internet. Managed Execution To understand how your VB.NET applications work, and just how much the code differs from the VB code that Dorothy wrote in Kansas, it's important to understand managed code and how it works. To use managed execution and get the benefits of the CLR, you must use a language that was built for, or targets, the runtime. Fortunately for you, this includes VB.NET. In fact, Microsoft wanted to make sure that VB.NET was a premier language on the. NET platform, meaning that Visual Basic could no longer be accused of being a "toy" language.

System Design and Development

Software design sits at the technical kernel of the software engineering process and is applied regardless of the development paradigm and area of application. Design is the first step in the development phase for any engineered product or system. The designer's goal is to produce a model or representation of an entity that will later be built. Beginning, once system requirement have been specified and analyzed, system design is the first of the three technical activities -design, code and test that is required to build and verify software. During design, progressive refinement of data structure, program structure, and procedural details are developed reviewed and documented. System design can be viewed from either technical or project management perspective. From the technical point of view, design is comprised of four activities – architectural design, data structure design, interface design and procedural design. Input Design Output Design Database Design 3.1 INPUT DESIGN The input design comprises the forms through which the data can be entered. A form is used to view and edit information in the database record by record. A form displays only the information we want to see in the way we want to see it. Forms use the familiar controls such as textboxes and checkboxes. This makes viewing and entering data easy. The form view displays the whole design of the form. 13 To build or modify the structure of a form, we work in forms design view. We can add control to the form

that are bound to fields in a table or query, includes textboxes, option buttons, grid view and pictures. There should be away of changing the initial state of the problem. This is most usually a person's knowledge or skill level. For instance, a computer programmer presented with a problem would utilize his or her knowledge of programming languages to transform the state of the problem. This can be rectified easily by the input design. The input forms in these projects are, Authentication Form This form indicates the authentication process for employee by giving user ID and password. Employee Registration Form This form indicates the new employee registration process, by register their own information. Claim Submission Form This form indicates the new claim request by employee. Status Form This form indicates, the employee can view their claim status.

Database Design

In the project, login table is designed to be unique in accepting the username and the length of the username and password should be greater than zero. The complete listing of the tables and their fields are provided in the annexure under the title 'Table Structure'. In the Second Normal Form, a relation must first fulfill the requirement to be in first Normal Form. Additional, each attribute in the relation must be functionality dependent upon the primary key. A table is said to be in third normal form and every non key attribute is functionality dependent only on the primary key. This normalization process is applied to this system and the normalized tables are used.

Normalization

Normalization is the process of strutting relational database schema such that most ambiguity is removed. The stage of normalization are referred to as forms and progress from the least restrictive (first normal form) through the most restrictive (Fifth normal form), generally, most database designers do not attempt to implement anything higher then normal form of Boyce code Normal Form.

System Testing

The method of designing the program to produce the desired result is accomplished to the section. Programs are written and tested by using sample data: if the output produces good result was that the actual required output. All the facilities required for developing the new system acquired and program preparation is started. System testing is actually a series of different tests whose primary purpose is to fully exercise the computer-based system. System testing is the stage of implementation that is aimed at assuring that the system works accurately and efficiently before live operation commerce. Testing is the vital to the successor of the system. System testing makes it logical assumption that if all the parts of the system are correct, the goal will be successfully achieved. The hr management system is subjected to variety of tests. A series of testing is performed for the proposed system before the system is ready for user acceptance test.

Unit Testing

In this testing, the testing of each module and the integration of the overall system is done. Unit testing becomes verification efforts on the smallest unit of software design in the module. This is also known as 'module testing'. The modules of the system are tested separately. This testing is carried out during the programming itself. In this testing step, each model is found to be working satisfactorily as regard to the expected output from the module. There are some validation checks for the fields. It is very easy to find error and debug the system. The procedure level testing is made first. By giving improper inputs, the errors occurred are noted and eliminated. Then the web form level testing is made.

Unit testing coverage testing are performed in the following forms, Welcome Form – check the employee login. If the login authentication performed for the user, it leads to welcome form.

Validation Testing

In validation testing the code is checked for validity i.e., whether the output obtained is valid source code file and it is efficient. Validation refers to the quality of the project. Testing is major quality control measure employed during software development. Its basic function is to detect errors. Sub functions when combined may not produce than it is desired. Global data structures can represent the problems. To uncover errors that are associated with interfacing the objective is to make test modules and built a program structure that has detected by design. In a non-incremental integration all the modules are combined in advance and the program is tested as a whole. Here error will appear in an end-less loop function. In this project, Required Field Validator, Range Validator and Regular Expression validation controls are used in tool controls placed in each page such as Employee Registration and Claim Request Details.

Test Case Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. If the testing conducted successfully, it will uncover errors in the software. As a secondary benefit, testing demonstrates that the software functions appear to be working according to specification and that performance requirements appear to have been made. System testing is the process of checking if the developed system is working according to the original objectives and requirements. All testing needs to be conducted in accordance to the test conditions specified earlier. This will ensure that the test coverage.

Conclusion

The package was designed in such a way that future modifications can be done easily. The following conclusions can be deduced from the development of the project. This project improves the efficiency. It provides a friendly graphical user interface which proves to be better when compared to the existing system. It gives appropriate access to the authorized users depending on their permissions. It effectively overcomes the delay in communications. Updating of information becomes so easier. System security, data security and reliability are the striking features. The System has adequate scope for modification in future if it is necessary.

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