**PROJECT REPORT**

ON

**ONLINE VOTING SYSTEM**

**FOR AN ORGANISATION**

**ONLINE VOTING SYSTEM**

A tool written in C# to manage student information.

**SYNOPSIS**

**AIM**

To build an Online Voting System for an organization for decision making process.

**DESCRIPTION**

The main objective of the online voting system in an organization is to involve all its employees at each level in decision making process. This process assist the managers at top level to make decision and helps them to know their employee and understand their point of view.

Hence this type of decision making could put forward different ideas and employee will have say in decision making.

**TEAM DETAILS**

*Total team strength: 4*

The process of development is naturally involved. Each member of the team has a role to contribute to whole of the project. Each member constantly discuss, reviews and write code for the project. Though to keep track of progress and completion, each member is assigned a section, though her/his work is available throughout.

**Ankita Jain** [14I6005] Developer Designer

**Mayank Jain** [14I6021] Developer, Designer

**Nishi Malviya** [14I6029] Developer

**Nitish Kumar Dwivedi** [14I6030] Database Administrator

**TECHNOLOGIES USED**

The following technologies are planned to be used to implement

the project :

C# and asp.net as platform.

HTML and CSS for front end

Visual Studio as IDE.

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**ABSTRACT:**

**Online voting system:**

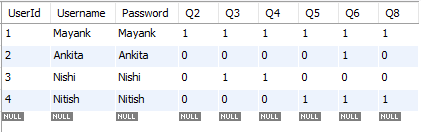
In online voting system people can cast their vote through the internet. While this online voting system is for an organization which finds a better way , which involve all its employees at each level, to development. When any decision is to be taken in the organization it is presented as a question with some options decided by the managers (admin) and put for voting . Each and every employee of organization have the right to vote and choose among the option. This helps the manager to take decision and maintains unity in the organization with fair procedures.

In order to prevent frauds simple security is used. The data entered by the user is verified with the contents of the database, if the data entered is correct then he allowed to access his profile and cast vote.

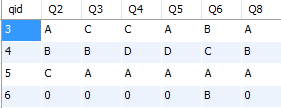
**List of Database Tables**

Three basic tables are used in this application which are as follows:

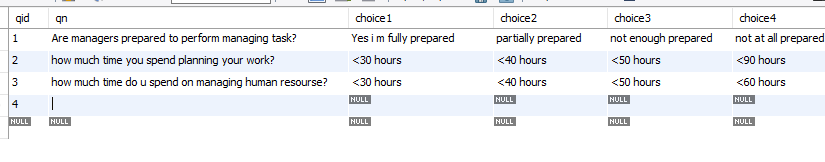
1. **Users Table** : This table stores the information of legitimate employees of the organization The users who have entry in this table can access the website and cast the poll



1. **Votes Table** : This table stores the votes casted to a particular question from a particular user



1. **Question table**: This table stores all the poll questions of the organization along with the possible options to it. It also stores the output of the particular question



**List of Figures:**

Control flow diagram of complete organization

Control flow diagram of login module

Control flow diagram of client module

Control flow diagram of admin module

**CHAPTERS:**

1. **DEVELOPING THE APPLICATION**

Microsoft Active Server Pages (ASP) is a server-side scripting technology. ASP is a technology that Microsoft created to ease the development of interactive Web applications. With ASP you can use client-side scripts as well as server-side scripts. Maybe you want to validate user input or access a database. ASP provides solutions for transaction processing and managing session state. ASP is one of the most successful language used in web development.

* 1. **Problems with Traditional ASP:**

There are many problems with ASP if you think of needs for Today's powerful Web applications.

Interpreted and Loosely-Typed Code:

ASP scripting code is usually written in languages such as JScript or VBScript. The script-execution engine that Active Server Pages relies on interprets the code line by line, every time the page is called. In addition, although variables are supported, they are all loosely typed as variants and bound to particular types only when the code is run. Both these factors impede performance, and late binding of types makes it harder to catch errors when you are writing code.

Mixes layout (HTML) and logic (scripting code):

ASP files frequently combine script code with HTML. This results in ASP scripts that are lengthy, difficult to read, and switch frequently between code and HTML. The interspersion of HTML with ASP code is particularly problematic for larger web applications, where content must be kept separate from business logic.

Limited Development and Debugging Tools:

Microsoft Visual InterDev, Macromedia Visual UltraDev, and other tools have attempted to increase the productivity of ASP programmers by providing graphical development environments. However, these tools never achieved the ease of use or the level of acceptance achieved by Microsoft Windows application development tools, such as Visual Basic or Microsoft Access. ASP developers still rely heavily or exclusively on Notepad.

Debugging is an unavoidable part of any software development process, and the debugging tools for ASP have been minimal. Most ASP programmers resort to embedding temporary Response. Write statements in their code to trace the progress of its execution.

No real state management:

Session state is only maintained if the client browser supports cookies. Session state information can only be held by using the ASP Session object. And you have to implement additional code if you, for example, want to identify a user.

Update files only when server is down:

If your Web application makes use of components, copying new files to your application should only be done when the Web server is stopped. Otherwise it is like

pulling the rug from under your application's feet, because the components may be in use (and locked) and must be registered.

**Obscure Configuration Settings:**

The configuration information for an ASP web application (such as session state and server timeouts) is stored in the IIS metabase. Because the metabase is stored in a proprietary format, it can only be modified on the server machine with utilities such as the Internet Service Manager. With limited support for programmatically manipulating or extracting these settings, it is often an arduous task to port an ASP application from one server to another.

**1.2 ASP.NET:**

ASP.NET was developed in direct response to the problems that developers had with classic ASP. Since ASP is in such wide use, however, Microsoft ensured that ASP scripts execute without modification on a machine with the .NET Framework (the ASP engine, ASP.DLL, is not modified when installing the .NET Framework). Thus, IIS can house both ASP and ASP.NET scripts on the same machine.

**Advantages of ASP.NET:**

* ***Separation of Code from HTML*:**

To make a clean sweep, with ASP.NET you have the ability to completely separate layout and business logic. This makes it much easier for teams of programmers and designers to collaborate efficiently. This makes it much easier for teams of programmers and designers to collaborate efficiently.

* ***Support for compiled languages:***

Developer can use VB.NET and access features such as strong typing and object-oriented programming. Using compiled languages also means that ASP.NET pages do not suffer the performance penalties associated with interpreted code. ASP.NET pages are precompiled to byte-code and Just In Time (JIT) compiled when first requested. Subsequent requests are directed to the fully compiled code, which is cached until the source changes.

* ***Use services provided by the .NET Framework:***

The .NET Framework provides class libraries that can be used by your application. Some of the key classes help you with input/output, access to operating system services, data access, or even debugging. We will go into more detail on some of them in this module.

* ***Graphical Development Environment:***

Visual Studio .NET provides a very rich development environment for Web developers. You can drag and drop controls and set properties the way you do in Visual Basic 6. And you have full IntelliSense support, not only for your code, but also for HTML and XML.

* ***State management:***

To refer to the problems mentioned before, ASP.NET provides solutions for session and application state management. State information can, for example, be kept in memory or stored in a database. It can be shared across Web farms, and state information can be recovered, even if the server fails or the connection breaks down

* ***Update files while the server is running:***

Components of your application can be updated while the server is online and clients are connected. The Framework will use the new files as soon as they are copied to the application. Removed or old files that are still in use are kept in memory until the clients have finished.

* ***XML-Based Configuration Files:***

Configuration settings in ASP.NET are stored in XML files that you can easily read and edit. You can also easily copy these to another server, along with the other files that comprise your application.

* ***ASP.NET Overview:***

Here are some point that gives the quick overview of ASP.NET:

ASP.NET provides services to allow the creation, deployment, and execution of Web Applications and Web Services.

* ***Like ASP, ASP.NET is a server-side technology*** .
  + Web Applications are built using Web Forms. ASP.NET comes with built-in Web Forms controls, which are responsible for generating the user interface. They mirror typical HTML widgets like text boxes or buttons. If these controls do not fit your needs, you are free to create your own user controls.
  + Web Forms are designed to make building web-based applications as easy as building Visual Basic applications

1. **The .NET architecture:**

At the bottom of the Architecture is Common Language Runtime. NET Framework common language runtime resides on top of the operating system services. The common language runtime loads and executes code that targets the runtime. This code is therefore called managed code. The runtime gives you, for example, the ability for cross-language integration.

.NET Framework provides a rich set of class libraries. These include base classes, like networking and input/output classes, a data class library for data access, and classes for use by programming tools, such as debugging services. All of them are brought together by the Services Framework, which sits on top of the common language runtime.

ASP.NET comes with built-in Web Forms controls, which are responsible for generating the user interface. They mirror typical HTML widgets like text boxes or buttons. If these controls do not fit your needs, you are free to create your own user controls. Web Services brings you a model to bind different applications over the Internet. This model is based on existing infrastructure and applications and is therefore standard-based, simple, and adaptable. Web Services are software solutions delivered via Internet to any device. Today, that means Web browsers on computers, for the most part, but the device-agnostic design of .NET will eliminate this limitation.

One of the obvious themes of .NET is unification and interoperability between various programming languages. In order to achieve this; certain rules must be laid and all the languages must follow these rules. In other words we can not have languages running around creating their own extensions and their own fancy new data types. CLS is the collection of the rules and constraints that every language (that seeks to achieve .NET compatibility) must follow.

The CLR and the .NET Frameworks in general, however, are designed in such a way that code written in one language can be seamlessly be used by another language. Hence ASP.NET can be programmed in any of the .NET compatible language whether it is VB.NET, C#, Managed C++ or JScript.NET.

Web applications written with ASP.NET will consist of many files with different file name extensions. The most common are listed here. Native ASP.NET files by default have the extension .aspx (which is, of course, an extension to .asp) or .ascx. Web Services normally have the extension .asmx.Your file names containing the business logic will depend on the language you use. So, for example, a C# file would have the extension .aspx.cs. Another one worth mentioning is the ASP.NET application file is Global.asax - in the ASP world formerly known as Global.asa. But now there is also a code behind file Global.asax.vb, for example, if the file contains Visual Basic.NET code. Global.asax is an optional file that resides in the root directory of your application, and it contains global logic for your application.

The easiest way to start with ASP.NET is to take a simple ASP page and change the file name extension to .aspx.

**1.4 Introduction of syntax used in ASP.NET**

**Directives:**

We can use directives to specify optional settings used by the page compiler when processing ASP.NET files. For each directive you can set different attributes. One example is the language directive at the beginning of a page defining the default programming language.

**Code Declaration Blocks**:

Code declaration blocks are lines of code enclosed in <script> tags. They contain the runat=server attribute, which tells ASP.NET that these controls can be accessed on the server and on the client. Optionally you can specify the language for the block. The code block itself consists of the definition of member variables and methods.

**Code Render Blocks:**

Render blocks contain inline code or inline expressions enclosed by the character sequences shown here. The language used inside those blocks could be specified through a directive like the one shown before.

**HTML Control Syntax:**

You can declare several standard HTML elements as HTML server controls. Use the element as you are familiar with in HTML and add the attribute runat=server. This causes the HTML element to be treated as a server control. It is now programmatically accessible by using a unique ID. HTML server controls must reside within a <form> section that also has the attribute runat=server.

**Custom Control Syntax**:

There are two different kinds of custom controls. On the one hand there are the controls that ship with .NET, and on the other hand you can create your own custom controls. Using custom server controls is the best way to encapsulate common programmatic functionality.

Just specify elements as you did with HTML elements, but add a tag prefix, which is an alias for the fully qualified namespace of the control. Again you must include the runat=server attribute. If you want to get programmatic access to the control, just add an Id attribute.

You can include properties for each server control to characterize its behavior. For example, you can set the maximum length of a Textbox. Those properties might have sub properties; you know this principle from HTML. Now you have the ability to specify, for example, the size and type of the font you use (font-size and font-type).

The last attribute is dedicated to event binding. This can be used to bind the control to a specific event. If you implement your own method MyClick, this method will be executed when the corresponding button is clicked if you use the server control event binding shown in the slide.

**Data Binding Expression:**

You can create bindings between server controls and data sources. The data binding expression is enclosed by the character sequences <%# and %>. The data-binding model provided by ASP.NET is hierarchical. That means you can create bindings between server control properties and superior data sources.

The application was developed using the visual studio integrated development environment. The application is first linked with the IIS server present in the host system. The login form consists of two textboxes and a button. The first and second textbox is used to enter the username and password respectively. The get and set properties of these text boxes have to be modified accordingly. Then the coding for connecting with the database is written inside the button Onclick ( ) module. The connection with the database is established by using the sqlconnection class. The query to the database is sent using the sqldataadapter class. Then authentication of the user is verified by comparing the values entered in the textboxes with those in the database. If the user name and password are valid the page is redirected to another page where the user is prompted to send the picture of his face by using the web camera. The database also has the information about the constituency of the particular person and the names of the candidates contesting in it. The details of the candidates are displayed as radio buttons in the voting page.

**2) Introduction:**

The project “Online voting system a ASP.Net Project” aims at creating a system through which the voting process is made easier in cooperative societies. In the current system, voting is performed by using ballot paper and then the counting is executed manually. This is a time consuming process and involves manual effort. It might also lead to the possibility of invalid votes. All the above tedious tasks are eliminated in the above process. In the system discussed here, the counting of votes is done by using a computer. This saves time and also avoids the errors that might occur during the election process. The system is designed with the coding language ASP.Net with C# and the database is SQL Server 2005.

**ASP.Net Online Voting Project description**: Online voting system in an organization is to involve all its employees at each level in decision making process. This process assist the managers at top level to make decision and helps them to know their employee and understand their point of view.

The project counts the number of votes and thereby calculate the percentage of votes. Also the number of vote an option obtains is also obtained. It then decides the winner in every section. The project is designed with a modular approach and the number of modules is decided as per the requirements of the organization. The two modules are administrator module and the user module. The administrator has total authority of the organization and maintains all the aspects. The user has the provision to view the list of all question and answers and results as well as vote for the desired solution to a problem

**Scope :**

Although decision making in an any organization is responsibility of managers but involving its every employee not only supports in decision making but also creates awareness among everyone in organization about what is going on. And a better results can be obtained in terms of development.

**3) Developing the main theme of the project work**

**2.1 Modules**

We have devised the following modules according to the requirements of the organization. •Administrator Module: Administrator has the whole authority of the organization .He is the one who maintains all the aspects of voters. His functionalities include insertion, updation, and deletion of any question. He is the one who displays result.

2.1.1 **User Module** :

User's have the provision to view the list question, options and results and to vote for their desired answer.

Clients

Types of Users

Admins

**2.1.2 Login Module**:

Login page allows user as well as admin to gain access to this website by identifying and authenticating themselves .The credentials are “username” and “password”. If username and password are correct or user is authentic, it allows one to use this website else error message is displayed “Invalid username or password”.

Login Module

Redirect to Client Panel

If(valid)

Allow Access

if (username = Admin && password is password)

grant access to Admin

If (user is part of organization and is not admin)

Redirect to Admin Panel

Redirect to client module

If(valid)

Allow Access

Check Database

If(valid)

Allow Access

If(valid)

Allow Access

2.1.3 **Signup Module**:

Signup allows user to register themselves with this site so that they can use this site further and can cast polls. After registering they are now eligible for logging . They can now vote and can make a difference in decision making in their organization.

Enter details for user

Redirect to signup page

Signup link on login page

Redirect user to login page

Save Details in User Table of DB

Enter details for user

2.1.4 **Client Module**

After user logged in successfully they are transferred to “Client ” page. Here they have different options like “Cast Result” , ”Show Result”. This page displays all Recent polls that user have not answered yet. And also by clicking on these unanswered questions they will be directed to a page where they can cast there polls.

Cast Poll

Client Module

View Result Module

View All Polls

**2.1.5 Admin Module**

We have 4 admins for this website after an admin logs in He She are given many authority where they have all control over polling system. They can declare Result , View all the questions. This page also shows the questions whose results are not declared yet.

Terminate Poll Duration

Show Result

View All Polls

Add a Poll

Admin Page

**2.1.6 Add Question Module**

Only admin can access this page. Any of the 4 Admins can Add questions and corresponding options from which users can choose as there answer which they feel appropriate.

Question posted to all clients

Add a row in Question table of Database

Admin Panel

{Add Question}

Interface to enter question and its corresponding options

**2.1.7 View Polls Module**

This Page Displays all the questions with their answers if generated

**2.1.8 Cast Polls Module**

This Page allow employees to cast the polls

**4)SYSTEM SPECIFICATION:**

**Software Specification**:

* Operating system    : Windows XP
* Coding Language    : ASP.Net with C#
* Data Base                 : SQL Server 2005

**Hardware Specification**:

* System                : Pentium IV 2.4 GHz
* Ram                     : 512 MB
* Hard Disk          : 40 GB
* Floppy Drive     : 1.44 Mb
* Monitor              : 15 VGA Color
* Mouse                 : Logitech

**5) CONCLUSION:**

The system can be used to perform the function of counting the number of votes casted and announcing the results immediately. Administrator mode in which the user details can be updated dynamically through the application only. The system will involve every employee in decision making.

**6) FUTURE ENHANCEMENT:**

**This system will not only help in organization processes but also with better user verification (face recognition) can be used in online election voting.**

At present our government is spending more than 125 crores for conducting a Lok Sabha election. This money is spent on issues such as security, electoral ballots etc. The average percentage of voting is a less than 60% .Moreover voting fraud can be easily done in the present system. Also the percentage of literates coming to vote is very less. But with our system the money spent on election can be reduced to less than 10 crores.

Also there is no chance of voter frauds and the money spent on security can be drastically decreased. Persons who have an internet connection at home can vote without taking the strain to come to voting booths.