

COMPUTERIZED EDUCATION ENHANCEMENT SERVICES FOR STUDENTS WITH VISION LOSS

Submitted in partial fulfillment of the requirements for the award of

Bachelor of Science degree in Computer Science

By

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SCHOOL OF COMPUTING

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with Grade "A" by NAAC

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BONAFIDE CERTIFICATE

This is to certify that this Project Report is the Bonafide work of **BHARATH (Reg no 38290009)** and **NARESH KUMAR (Reg no 38290053)** who have done the project work as a team who carried out the project entitled "**COMPUTERIZED EDUCATION ENHANCEMENT SERIVES FOR STUDENTS WITH VISION LOSS**" under my supervision from November 2020 to March 2021

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DECLARATION

I, **BHARATH** hereby declare that the project report entitled **COMPUTERIZED EDUCATION ENHANCEMENT SERVICES FOR STUDENTS WITH VISION LOSS** done by me under the guidance of **Dr. R. AROUL CANESSANE, ME., PHD** is submitted in partial fulfillment of the requirements for the award of Bachelor of Science degree in Computer Science

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SIGNATURE OF THE CANDIDATE

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ABSTRACT

The subject of blindness and education has included evolving approaches and public perceptions of how best to address the special needs of blind students. The practice of institutionalizing the blind in asylums has a history extending back over a thousand years, but it was not until 18th century that authorities created schools for them where blind children, particularly those more privileged, were usually educated in such specialized settings. These institutions provided simple vocational and adaptive training, as well as grounding in academic subjects offered through alternative formats. Literature, for example, was being made available to blind students by way of embossed Roman letters.

Visual impairments change the way children obtain information about the world around them and limit opportunities to learn through observation of visual elements in the school curriculum and elsewhere. This means that, in addition to regular classroom studies, children who are blind or visually impaired need to learn specialized skills (frequently referred to as the Expanded Core Curriculum) from teachers and others who are properly trained to teach such skills, such as certified teachers of visually impaired must learn include: Technology and computer proficiency using computer equipment to read information on monitors.

To overcome the limitations and learn independently, this system is exclusively developed for blind students. The questions has been display on the screen and system also read that questions, the blind students type the options in the system. It finds the correct answer in the back-end database and provides the marks.

This project is developed using HTML5, CSS, jQuery, JavaScript, Boot strap4 as front-end with C# programming's language, Asp. Net, MVC, Entity Framework and MS SQL SERVER as back-end under windows 10.

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CHAPTER 1

1.INTRODUCTION

1.1 PROJECT OVERVIEW

The subject of blindness and education has included evolving approaches and public perceptions of how best to address the special needs of blind students. The practice of institutionalizing the blind in asylums has a history extending back over a thousand years, but it was not until 18th century that authorities created schools for them where blind children, particularly those more privileged, were usually educated in such specialized settings. These institutions provided simple vocational and adaptive training, as well as grounding in academic subjects offered through alternative formats. Literature, for example, was being made available to blind students by way of embossed Roman letters.

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To overcome the limitations and learn independently, this system is exclusively developed for blind students. The questions has been display on the screen and system also read that questions, the blind students type the options in the system.

This project is developed using C#.NET as front-end with Java script, jquery, bootstrap 4 and MS SQL SERVER as back-end under windows 10.

1.2 MODULE DESCRIPTION

1. Question Bank Feeder
2. Skill analyzer
3. Mark Keeper and Result generator
4. Question Bank Editor
5. Report Generation

QUESTION BANK FEEDER

Admin can feed different types of question bank on variety of subjects into the centralized database with number of options for each question. these questions will be fetched one by one to exam based on the subject has given to the student. Only admin has the rights to store the question bank to the centralized database. This right can be provided by secured login.

SKILL ANALYZER

As soon as the student press the enter button the exam will get started to fetch question from the centralized database based on the subject. The question with 4 options will be displayed and pronounced by automatic computer voice. Student can make the voice to repeat for hearing the options again by pressing the R key in the keyboard. The student has to press any one button to provide the answer. Next question will be automatically retrieved from database. This process will continue till the last question.

MARK KEEPER AND RESULT GENERATOR

Whenever student pressed on the keyboard key for providing answer for a question the result generator will check for the back-end database for correct answer and compares with answer given by student. if the answer is correct the mark will be keep to add with mark of another answer's mark. At the end of test, it automatically calculates the total mark and displays the score in the screen with computerized voice.

QUESTION BANK EDITOR

Only admin has the rights to update the question bank. admin can make correction with any question he wants to change in question or option. Also, he can remove one full subject question bank at a time. all the update will be reflected in the back-end database immediately.

REPORT GENERATION

All the result will be stored in the database with individual student details. Admin can view these results at any time and he can produce report as pdf file or excel file to download the report with complete result of student.

CHAPTER 2

SYSTEM SPECIFICATION

SYSTEM SPECIFICATION

The system specification deals with hardware and software requirement that are required to develop the project.

2.1 HARDWARE SPECIFICATION

SYSTEM	: DESKTOP-V6BHOBG
HARD DISK	: 250 GB
MONITER	: 15VGR COLOR
RAM	: 4GB

2.2 SOFTWARE SPECIFICATION

Operating system	: windows 10
Front-End	: DHTML, CSS, BOOTSTRAP4, jQuery, and JavaScript
Back-End	: MS SQL SERVER 2019, ASP.NET, MVC,

ENTITY FRAME WORK AND C#

Coding Login	: C# Programming
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2.3MICROSOFT VISUAL STUDIO

Microsoft Visual Studio is Microsoft's flagship software development product for computer programmers. it centers on an integrated distribution environment which has programmers create stand alone, and web services that run on any platforms supported by Microsoft's .NET Framework (for all versions after 6). Supported platforms include Microsoft windows, servers and workstations, Pocket PC, Smart Phones and World Wide Web browsers not the Java Virtual Machine that all other java tools target.

Microsoft Visual Studio is an integrated development environment (IDE) from Microsoft. It is used to develop console and graphical user interface application alone with windows forms or WPF applications, web sites, web application, and web services in both code together with managed code for all platforms supported by Microsoft windows, windows, windows mobile, windows CE, .NET compact framework and Microsoft Silverlight.

Visual Studio includes a code editor supporting Intel sense as well as code refactoring. The integrated debugger and a machine-level debugger. other built-in tools include a forms designer for building GUI applications, designer, class designer, and database schema designer. It accepts plug-ins that enhance the functionality at almost every level-including adding support for source-control systems (like subversion and visual SourceSafe) and adding new toolsets like editors and visual designers for domain or toolsets for other aspects of the software development lifecycle (like the team foundation server client: Team Explorer).

VISUAL STUDIO 2019

The most important languages added in this version was the introduction of generics, which are similar in many aspects to C++ templates. This potentially increases the number of bugs caught at compile-time instead of run-time by encouraging the use of strict type checking in areas where it was not possible before, C++ also got a similar upgrade with addition of C++/CLI Which is slated to replace the use Managed C++.

Other new features of Visual Studio 2019 include the "Development Designer" which allows application designs to be validated before deployments, an improved environment for web publishing when combined with ASP.NET 2.0 and load testing to see application performance under various sorts of user loads. Visual Studio 2019 also added extensive 64-bit support. While the development environment itself only available as a 32-bit application, Visual C++ 2005 supports compiling for (x64AMD64 and EM64T) as well as IA-64 (Itanium). The platforms SDK include 64-bit and 64-bit versions of the libraries

INTRODUCING THE .NET PLATFORM

The precept behind the .NET platform is that the world of computing is changing from one of PCs connected to servers through networks such as the Internet, to one where all manner of smart devices, Computers, and services work together to provide a richer user experience. The .NET platform is Microsoft's answer to the challenges this change will provide for software developers.

The .NET platform has several components-however, who you ask will probably affect the answer you receive. Servers such as BizTalk and SQL Server, as well as services such as .NET My Services and its first visible components, .NET Passport, are being described by some as integral parts of the .NET platform. However, for many of us, .NET Framework is what we think of when .NET is mentioned. It includes Visual Studio .NET (VS.NET), the .NET Common Language Runtime (CLR), and the .NET Base Class Libraries (BCL). The other components may be required by specific applications, but they are not a necessary part of all .NET applications.

FEATURES OF THE .NET PLATFORM

The core of the .NET platform is found in the Common Language Runtime, Base Class Library, and the Common Language Specification. The .NET Base Class Library exposes the features of the Common Language Runtime in much the same way that the Windows API allows you to utilize the features of the Windows operating system; however, it also provides many higher-level features that facilitate code reuse.

This architecture gives a great number of benefits, not the least of which is a consistent API. By writing to the Common Language Runtime and using the .NET Base Class library, all application services are available via a common object-oriented programming model. Today some OS functions are accessed via DLL calls using the C-based API and other facilities are accessed via COM objects, making the developer do the necessary legwork to make everything work together smoothly. Some features are available only to developers working in low-level languages, forcing design decisions

NETFRAMEWORK SDK

The .NET framework is an integral windows component that supports building and running the next generation of applications and XML web services. The key component of the .NET framework are the common language runtime and the .NET framework class library, which includes ADO.NET, ASP.NET and windows forms. The .NET framework provides a managed execution environment simplified development and deployment and integration with a wide variety of programming languages.

This framework is made up of the following parts:

- ❖ The common language runtime (CLR)
- ❖ The base class libraries
- ❖ Object oriented internet development with ASO.NET
- ❖ RAD for the internet using web forms.

OVERVIEW OF THE .NET FRAME WORK

The .NET framework is a new computing platform that simplifies application development in the highly distributed environment of the internet. The .NET framework is designed to fulfill following objectives:

- To provide a consistent object-oriented programming environment whether object code is stored and executed locally but internet- distributed or executed remotely.
- To provide a code execution environment that minimizes software deployment and versioning conflicts

- To provide a code execution environment that guarantees safe execution of code, including code created by an unknown or semi-trusted third party.
- To provide a code execution environment that eliminates the performance problem of scripted or interpreted environments.
- To make the developer experience consistent across widely types of application, such as. windows based applications and web-based applications.
- To build all Communication on industry standards to ensure that code based on the .NET framework can integrate with any other code.

The .NET Framework has two main components: the common language runtime and the .NET framework class library. The common language runtime is the foundation of the .NET framework. You can think of the runtime as an agent that manages code at execution time, and removing while also enforcing strict type safety and other forms of code accuracy that ensure security and robustness in fact the concept of code management is a fundamental principle of the runtime.

Using internet explorer to the host runtime enables you to embed managed components or windows forms controls in HTML documents. Hosting the runtime in this way makes mobile code (similar to Microsoft Active X controls) possible, but with significant improvement that only managed code can offer, such as semi-trusted execution and secure isolated file storage.

The following illustration shows the relationship of the common language runtime and the class library to your application and to the overall system. The illustration also shows how managed code operated with in a larger architecture

We can use the .NET framework to develop the following types of application and services:

- ❖ Console applications
- ❖ Window GUI application (Windows Forms) ASP.NET applications
- ❖ XML Web services
- ❖ WINDOWS Services

COMMON LANGUAGE RUNTIME (CLR)

The common language runtime (CLR) is responsible for run-time services such as language integration; and memory, process and thread management. In addition, it has a role at development time when features such as life cycle management, strong type naming, cross-language exception handling, dynamic binding and so on, reduce the amount of code that a developer must write to turn the business logic into a reusable component. The runtime can be hosted by high performance, server-side applications, such as Microsoft Internet Information Services (IIS) for building web applications with ASP.NET and the next release of Microsoft SQL Server.

This infrastructure enables you to use code "managed" by the .NET framework to write your business logic, while still enjoying the superior performance of the industry's best enterprise servers that support runtime hosting. You can also write managed code using the C# language, which provides the following benefits:

- Complete object-oriented design.
- Very strong type safety.
- A good blend of Visual Basic simplicity and C++ power.
- Garbage collection
- Syntax and keywords similar to C and C++.
- Use of delegates rather than function pointers for increased type safety and security. Function pointers are available through the use of the unsafe C# keyword and the /unsafe option of the C# compiler (Csc.exe) for unmanaged code and data.

C#.SHARP

C# syntax languages are typically able to begin to work productively in C# within a very short time. C# syntax simplifies many of the complexities of C++ and provides powerful features such as null value types, enumerations, delegates, lambda expressions and direct memory access which are found in Java. C# supports generic methods and types, which provide increased type safety and performance, and iterators which enable implementers of collection classes to define custom iteration behaviors that are simple to use by client code.

In addition to these basic object-oriented principles, C# makes it easy to develop software components through several innovative language constructs, including the following:

- Encapsulated method signatures called delegates, which enable type-safe event notifications
- Properties, which serve as accessory for private member variables.
- Attributes, which provide declarative metadata about types at run time.
- Inline XML documentation comments.
- Language-Integrated Query (LINQ) which provides built-in query capabilities across a variety of data sources.

The C# build process is simple compared to C and C++ and more flexible than in Java. There are no separate header files, and no requirement that methods and types be declared in a particular order. A C# source file may define any number of classes, structs, interfaces, and event.

- The following are additional C# resources: For a good general introduction to the language, see Chapter 1 of the C# Language Specification
- For detailed information about specific aspects of the C# language, see the C# Reference
- For more information about LINQ, see LINQ (Languages-Integrated Query)
- To find the latest articles and resources from the Visual C# team, see the Visual C# Developer Center.

ISS

Microsoft Internet Information Services (IIS; formerly called server is a set of Internet-based services for servers using Microsoft Windows. It is the world's second most popular web server in terms of overall websites. As of September 2007, it served 34.94% of all websites and 36.63% of all active websites according to Net craft.

ADO.NET

ADO.NET provides consistent access to data sources such as Microsoft SQL Server and XML, as well as to data sources exposed through OLE DB or ODBC. A data-sharing consumer application can use ADO.NET to connect to these data sources and retrieve, manipulate, and update the data that they contain.

The ADO.NET classes are found in System.Data.dll and are integrated with the XML classes found in System.Xml.dll. When compiling code that uses the System.Data namespace, reference both System.Data and System.Xml.dll.

ADO.NET provided functionality to developers writing managed code similar to the functionality provided to native component object model (COM) developers by ActiveX Data Objects (ADO).

ADO.NET COMPONENTS

There are two components of ADO.NET that you can use to access and manipulate data:

- ❖ .NET Framework data providers.
- ❖ The DataSet

.NET FRAMEWORK DATA PROVIDERS

The .NET Framework Data providers are components that have been explicitly designed for data manipulation and fast, forward-only, read-only access to data. The Command object enables access to database commands to return data, modify data, run stored procedures, and send or retrieve parameter information. Finally, the DataAdapter provides the bridge between the DataSet object and the data source. The DataAdapter uses the Command object to execute SQL commands at the data source to both load the DataSet with data and reconcile changes made to the data in the DataSet back to the data source.

THE DATASET

The ADO.NET DataSet is explicitly designed for data access independent of any data source. As a result, it can be used with multiple and differing data sources used with XML data or used to manage data local to the application. The DataSet contains a

collection of one or more Data Table objects made up to rows and columns of data as well as primary key, foreign key, constraint and relation information about the data in the Data Table objects.

BENEFITS OF ADO.NET

ADO.NET offers several advantages over previous versions of ADO and over other data access components. These benefits fall into the following categories:

CHAPTER 3

3.SYSTEM ANALYSIS

3.1 Existing System

In this system has some disadvantages and drawbacks. There are online exams are Holding nowadays. Ordinary students can take the exam frequently, but blind students tough to attend the exam. There will be no any advance learning technique. There will be lot of time consuming. It is very hard to take the exam for blind students.

Disadvantages

- No advanced techniques
- Blind students cannot access independently, rely on others help
- Slow and time-consuming process
- No database structured system

3.2Proposed System

In this proposed system, blind students can take the exam frequently. In this system there is a voice system, questions can be here to blind students. The questions are asked by the system. There is an option to learn new technology to the blind students. This will make their knowledge growth. They can answer by touching the different type of buttons.

Advantages

- Unlimited Questions can be stored in the system
- Question are asked by the system.
- The blind students can hear the Questions via speakers.
- It enhances the knowledge level of blind students and they will be competent as others.

CHAPTER 4

4.SYSTEM DESIGN

4.1 DATA FLOW DIAGRAM

Figure 1.1

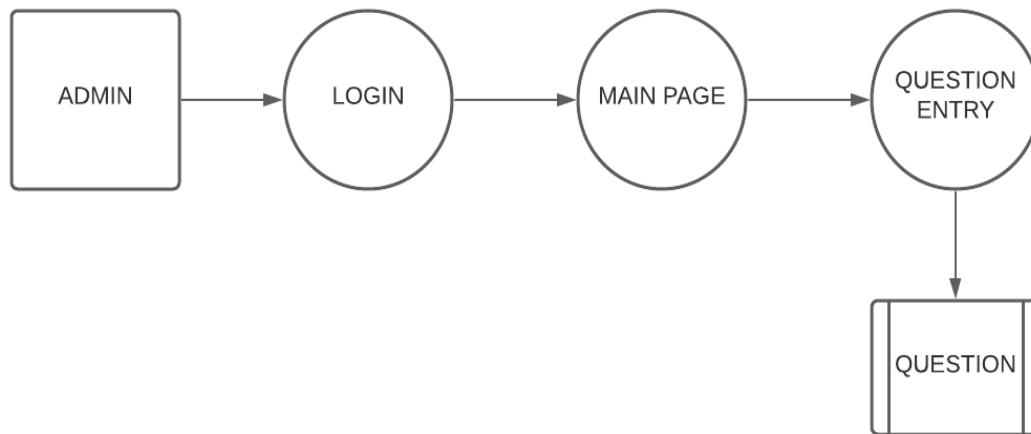
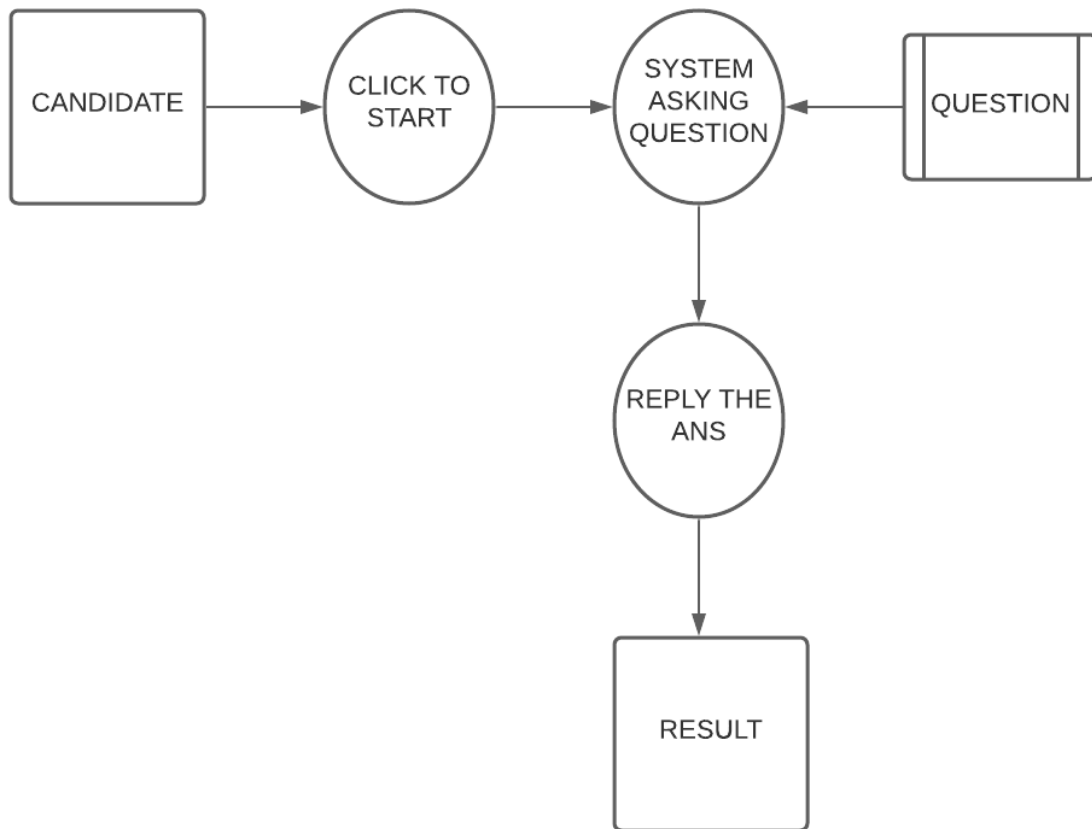


Figure 1.2



4.2 DATABASE DESIGN

Table name: Admin login

Field name	Data type	Field description
Username	Varchar (20)	Username
password	Varchar (10)	password

Table name: Question data

Primary key: Quesid

Field name	Data type	Field description
Subject	Varchar (20)	Selected Subject
Quesid	int	Question id
Ques	Varchar (50)	Question
Opsone	Varchar (20)	Option one
Opstwo	Varchar (20)	Option two
Opsthree	Varchar (20)	Option three
Opsfour	Varchar (20)	Option four
Ans	Varchar (20)	Answer

CHAPTER 5

5.SYSTEM TESTING AND IMPLEMENTATION

Software Testing is an empirical investigation conducted to provide stakeholders with information about the quality of the product or service under test, with respect to the context in which it is intended to operate. Software Testing also provides an objective, independent view of the software to allow the business to appreciate and understand the risks at implementation of the software. Test techniques include, but are not limited to, the process of executing a program or application with the intent of finding software bugs. It can also be stated as the process of validating and verifying that a software program/application/product meets the business and technical requirements that guided its design and development, so that it works as expected and can be implemented with the same characteristics. Software Testing, depending on the testing method employed, can be implemented at any time in the development process, however the most test effort is employed after the requirements have been defined and coding process has been completed

Software Testing Strategies

Testing is a set of activities that can be planned in advanced and conducted systematically. A strategy for software testing must accommodate low-level tests that are necessary to verify that a small source code segment has been correctly implemented as well as high-level tests that validate major system functions against customer requirements

There are three types of testing strategies

- 1)Unit test
- 2)Integration test
- 3)Performance test

Unit Testing:

Unit testing focuses verification efforts on the smallest unit of software design module. The unit test is always white box oriented. The tests that occur as part of unit testing are testing the module interface, examining the local data structures, testing the boundary conditions, execution all the independent paths and testing error-handling paths.

Integration Testing:

Integration testing is a systematic technique or construction the program structure while at the same time conducting tests to uncover errors associated with interfacing. Scope of testing summarizes the specific functional, performance, and internal design characteristics that are to be tested. It employs top-down testing and bottom-up testing methods for this case.

Performance Testing:

Timing for both read and update transactions should be gathered to determine whether system functions are being performed in an acceptable timeframe.

System Testing

When unit tests are satisfactorily concluded, the system, as a complete entity must be tested. At this stage, end users and operators become actively involved in testing. While testing one should also test to find discrepancies between the system and its original objective, current specifications and systems documentation.

For example, one module may expect the data item for employee number to be numeric field, while other modules expect it to be a character data item. The system itself may not report this error, but the output may show unexpected results. A record maybe created and stored in one module, using the employee number as a numeric field. If this is later sought on retrieval with the expectation that it will be a character field, the field will not be recognized and the message requested record not found would not

be displayed. System testing must also verify that file sizes are adequate and their indexes have been built properly. Sorting and rendering procedures assumed to be

present in lower level modules must be tested at the systems level to see that they in fact exist and achieve the results modules expect.

Validation Checking:

Validation checks are performed on the following fields.

Text Field:

The text field can contain only the number of characters lesser than or equal to its size. The text fields are alphanumeric in some tables and alphabetic in other tables. Incorrect entry always flashes and error message.

Numeric Field:

The numeric field can contain only numbers from 0 to 9. An entry of any character flashes an error messages. The individual modules are checked for accuracy and what it has to perform. Each module is subjected to test run along with sample data. The individually tested modules are integrated into a single system. Testing involves executing the real data information is used in the program the existence of any program defect is inferred from the output. The testing should be planned so that all the requirements are individually tested.

A successful test is one that gives out the defects for the inappropriate data and produces and output revealing the errors in the system.

Quality Assurance:

Quality assurance defines the objectives of a project and reviews the overall activities so that error are corrected early in the development process.

Levels Of Quality Assurance

Quality Assurance comes in three main levels namely

- ❖ Testing
- ❖ Validation
- ❖ Certification

Testing:

In system testing a common view is to eliminate program errors. This is extremely difficult and time consuming. Since designers cannot prove 100% accuracy. A successful test, then, is one that find errors.

Validation:

It checks the quality of the software in both simulated and live environments. In the Simulated approach the developers test the product on their workplace to make the products meet its requirements. In the Live Environment phase the product is given to the customer to evaluate the product's functionality. Validation refers to the different set of activities that ensure that software correctly implements a specific function and the software that been built is traceable to customer requirements. Verification and validation can be defined in a way like:

* Verification

*Validation

Software validation is achieved through a series of black-box test that demonstrate conformity with requirement. After each validation check a test has been conducted, one of the two possible conditions exists

*The function or performance characteristics conform to specification and are expected

*A deviation from specification is uncovered and a deficiency list is created

Alpha and Beta Testing

The alpha testing is conducted at the developer's site by the customer. the software is used in the natural setting with the developer looking over the developer and recording errors and usages problems. Alpha test is conducted in controlled environment

The beta testing is conducted at one or more customer site by the end user of the software. Unlike software testing the developer is generally not present. Therefore,

beta test is live application of the software in an environment that cannot be controlled by the developer

Certification

Certification is to certify that the program or software package is correct and confirms to standards. With growing trend towards purchasing ready to use software, certification has become more important.

System Security

Software integrity has become increasingly important in the age of hackers and firewalls. This attribute measures a system ability to withstand attacks (both accidental and intentional) to its security. Attacks can be made on all three components of software program, data, and documents

To measure integrity, two additional attributes must be defined

- Thread
- Security

Thread

Threat is the probability (which can be derived or estimated from empirical evidence) that an attack of specific type occurs within a specific time.

Security

Security is the probability (which can be estimated or derived from empirical evidence) that attack on the specific type will be repelled.

Security Testing

Any computer-based system that manages sensitive information or causes action that can Security testing to verify that protection mechanism built into a system will in fact provide proper protection form improper penetration. During system testing, the tester plays the role of the individual who desires to penetrate the system. Anything goes! The tester may attempt to acquire password through external clerical means; may attack the

system with custom software designed to break down any defenses that have been constructed may overwhelm the system thereby denying the service to other; may purposely cause system errors.

Implementation:

Implementation is the carrying out, execution, or practice of a plan, a method, or any design for doing something. As such, implementation is the action that must follow any preliminary thin improperly harm (or benefit) individuals is the target for improper or illegal penetration. Penetration spans a board range of activities; hackers who penetrate system for sport; disgruntled employee who attempt to penetrate for revenge; dishonest individual who penetrate for illicit personnel gains

king in order for something to actually happen.

In an information technology context, implementation encompasses all the processes involved in getting new software or hardware operating properly in its environment.

Including installation, configuration, running, testing, and making necessary changes. The word deployment is sometimes used to mean the same thing.

System maintenance

System maintenance is an ongoing activity, which covers a wide variety of activities, including removing program and design errors, updating documentation and test data and updating user support.

Corrective maintenance

Corrective maintenance is a maintenance task or operation done in order to identify, isolate or separate and rectify a particular fault. This is performed in order to restore the failed machine, equipment or system to an operational condition. Corrective maintenance can be either planned or unplanned.

Adaptive maintenance

Adaptive maintenance includes changes to the functionality of the system developed for specific customer needs. Adaptive maintenance also implies the need for modifications of certain functionalities, although the system works as expected and in this sense that there is no fault or error in the system. It usually occurs when there comes to a change in legal norms or a shift in the political business users.

Perfective Maintenance

Perfective maintenance involves making enhancements to improve processing performance, interface usability, or to add desired, but not necessarily required, system features. The objective of perfective maintenance is to improve response time, system efficiency, reliability, or maintainability. During system operation, changes in user activity or data pattern can cause a decline in efficiency, and perfective maintenance might be needed to restore performance. Usually, the perfective maintenance work is initiated by the IT department, while the corrective and adaptive maintenance work is normally requested by users.

Preventive Maintenance

Preventive maintenance involves changes made to a system to reduce the chance of future system failure. Preventive maintenance is less likely to occur as compared to corrective maintenance. Finally note that over the life of a system, corrective maintenance is most likely to occur after system installation or after major system changes. This means that adaptive, perfective, and preventive maintenance activities can lead to corrective maintenance activities if not carefully designed and implemented.

CHAPTER 6

6.CONCLUSION

The system “**VISION LOSS BLIND STUDENTS**” voice based automated transport enquiry system which operates based on the voice input given by the user. There is no communication which is understood more appropriately than voice user friendliness is the unique feature of this system. The system generates the reports as and when required the system is highly interactive and flexible for further enhancement.

The coding is done in a simplified and easy to understandable manner so that other team trying to enhance the project can do so without facing much difficulty. The documentation will also assist in the process as it has as it been carried out in a simplified and concise way.

Almost all aspects regarding Production have been taken into consideration when developing the system and are included into the system. Much of the process is automated and hence the change of human errors is limited.

However, there have been certain limitation the system would be better off without. More security could have been given to the system by the way authorization and further features could never been added to make the system more robust.

CHAPTER 7

7.SCOPE FOR FUTURE ENHANCEMENT

In Future Data Storage and retrieval will become faster and easier to maintain because data is stored systematic manner and in a single database Decision making process would be greatly enhanced because of faster processing of information since data collection from information available on computer taken must less time this system. It will be Easier and faster data transfer through latest technology associated with the computer and communication. Through these features it will increase the efficiency accuracy and transparency in future.

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- en.wikipedia.org/wiki/.NET
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SCREEN SHORT

Adminlogin:

Admin Login - Computerized Education System

Online Examination Registration Login

Admin Login

Admin Name

Password

Login

[Back to List](#)

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Candidate list:

Candidate List - Computerized Education System

Online Examination Registration Login Hello Bharath Logout

Candidate List

[Add New](#)

Candidate Name	Password	Email	Contact	Institution	Action
arun.N	12345678	atozharathkumar008@gmail.com	9952863616.00	sathyabama	Edit Delete

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ADMIN SITE

- ADMIN
- CANDIDATE
- RESULT
- SUBJECT
- EXAM
- QUESTION

Subject:

Subject List - Computerized Exam x Downloads x Windows - How to take Screenshots x +

localhost:6119/Subject/Index

Apps Gmail YouTube Maps

Online Examination Registration Login Hello Bharath Logout

ADMIN SITE

ADMIN

CANDIDATE

RESULT

SUBJECT

Subject List

Add Subject

Subject List

[Add New](#)

Subject Name	Subject Code	Action
English	SBS5005	Edit Delete
GK	sbs1303	Edit Delete
English	sbs1303	Edit Delete

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Exam:

Exam List - Computerized Exam x Downloads x Windows - How to take Screenshots x +

localhost:6119/Exam/Index

Apps Gmail YouTube Maps

Online Examination Registration Login Hello Bharath Logout

ADMIN SITE

ADMIN

CANDIDATE

RESULT

SUBJECT

EXAM

Exam List

Add Exam

Exam List

[Add New](#)

Exam Name	Subject Name	Action
First Semester	English	Edit Delete
Second semester	GK	Edit Delete

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Question:

Question List - Computerized Ex... Downloads Windows - How to take Screensh... +

localhost:6119/Question/Index

Apps Gmail YouTube Maps

Online Examination Registration Login Hello Bharath Logout

ADMIN SITE

ADMIN

CANDIDATE

RESULT

SUBJECT

EXAM

QUESTION

Question List

Add Question

Question List

[Add New](#)

Question Number	Question Title	Ans 1	Ans 2	Ans 3	Ans 4	Correct Answer	Admin Name	Exam Name	Action
1	which is the largest ocean in the world	Pacific ocean	Atlantic ocean	Indian ocean	Aratic ocean	1	Bharath	First Semester	Edit Delete
2	Who is a first president of india	Jawaharlal nehru	Rajendra prasad	Kamaraj	B.R ambedkar	2	Bharath	First Semester	Edit Delete
3	First chief ministers of madras	P.S kumaraswamy raja	C.rajagopalachari	K.Kamaraj	B.R ambedkar	1	Bharath	First Semester	Edit Delete
1	which is our national animals	Tiger	Lion	Elephant	Bear	1	Bharath	Secound semester	Edit Delete
4	which is our national bird	parrot	owl	peacock	hean	3	Bharath	First Semester	Edit Delete
1	which is the largest ocean in the world	Pacific ocean	Atlantic ocean	Indian ocean	Aratic ocean	1	Bharath	First Semester	Edit Delete

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Candidatelogin:

Candidate Login - Computerized... Downloads Windows - How to take Screensh... +

localhost:6119

Apps Gmail YouTube Maps

Online Examination Registration Login

Candidate Login

Candidate Name

Password

Login

[Want to Registration? Please Registration](#)

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(ii)CODING:

```
public class AdminController : Controller
{
    private Exam_QuizEntities db = new Exam_QuizEntities();

    // GET: /Admin/
    public ActionResult Index()
    {
        return View(db.Admin_tbl.ToList());
    }

    // GET: /Admin/Details/5
    public ActionResult Details(int? id)
    {
        if (id == null)
        {
            return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
        }

        Admin_tbl admin_tbl = db.Admin_tbl.Find(id); if (admin_tbl == null)
        {
            return HttpNotFound();
        }

        // POST: /Admin/Create

        // To protect from overposting attacks, please enable the specific properties you want to
        bind to, for

        // more details see http://go.microsoft.com/fwlink/?LinkId=317598.
```

[HttpPost]

[ValidateAntiForgeryToken]

public ActionResult Create([Bind(Include="admin_id,admin_name,admin_password")]

Admin_tbl admin_tbl)

{

if (ModelState

return View(admin_tbl);

}

// GET: /Admin/Create

public ActionResult Create()

{

return View();

}

// POST: /Admin/Create

// To p

roTECT from overposting attacks, please enable the specific properties you want to bind to, for

// more details see <http://go.microsoft.com/fwlink/?LinkId=317598>.

[HttpPost]

[ValidateAntiForgeryToken]

public ActionResult Create([Bind(Include="admin_id,admin_name,admin_password")]

Admin_tbl admin_tbl)

{

```

if (ModelState.IsValid)
{
    db.Admin_tbl.Add(admin_tbl);
    db.SaveChanges();
    return RedirectToAction("Index");
}

return View(admin_tbl);
}

// GET: /Admin/Edit/5
public ActionResult Edit(int? id)
{
    if (id == null)
    {
        return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
    }

    Admin_tbl admin_tbl = db.Admin_tbl.Find(id);

    if (admin_tbl == null)
    {
        return HttpNotFound();
    }

    return View(admin_tbl);
}

// POST: /Admin/Edit/5

```

// To protect from overposting attacks, please enable the specific properties you want to bind to, for

// more details see <http://go.microsoft.com/fwlink/?LinkId=317598>. [HttpPost]

[ValidateAntiForgeryToken]

public ActionResult Edit([Bind(Include="admin_id,admin_name,admin_password")]

Admin_tbl admin_tbl)

{

if (ModelState.IsValid)

{

db.Entry(admin_tbl).State = EntityState.Modified;

db.SaveChanges();

return RedirectToAction("Index");

}

return View(admin_tbl);

}

// GET: /Admin/Delete/5

public ActionResult Delete(int? id)

{

if (id == null)

{

return new HttpStatusCodeResult(HttpStatusCode.BadRequest);

}

Admin_tbl admin_tbl = db.Admin_tbl.Find(id);

```

if (admin_tbl == null)
{
return HttpNotFound();
}

return View(admin_tbl);
}

// POST: /Admin/Delete/5

[HttpPost, ActionName("Delete")] [ValidateAntiForgeryToken]
public ActionResult DeleteConfirmed(int id)
{
Admin_tbl admin_tbl = db.Admin_tbl.Find(id); db.Admin_tbl.Remove(admin_tbl);
db.SaveChanges();

return RedirectToAction("Index");
}

public ActionResult Login()
{
return View();
}

[HttpPost]

[ValidateAntiForgeryToken]
public ActionResult Login(Admin_tbl ut)
{
if (ModelState.IsValid)

```

```

{
using (Exam_QuizEntities db = new Exam_QuizEntities())

{
var log = db.Admin_tbl.FirstOrDefault(model =>
model.admin_name.Equals(ut.admin_name) &&
model.admin_password.Equals(ut.admin_password)); if (log != null)

[HttpPost]

[ValidateAntiForgeryToken]

public ActionResult Login(Admin_tbl ut)

{
if (ModelState.IsValid)

{
using (Exam_QuizEntities db = new Exam_QuizEntities())

{
var log = db.Admin_tbl.FirstOrDefault(model =>
model.admin_name.Equals(ut.admin_name) &&
model.admin_password.Equals(ut.admin_password)); if (log != null)

{
Session["admin_name"] = log.admin_name; return RedirectToAction("AdminProfile",
"Admin");
}
else

{

```

```

ViewBag.Message = "Username or password incorrect"; Response.Write("<script>
alert('User Name or Password is wrong')</script>");

}

}

}

return View();

}

public ActionResult Logout()

{

Session.Clear();

return RedirectToAction("Login", "Admin");

}

public ActionResult AdminProfile()

{

return View();

}

protected override void Dispose(bool disposing)

{

if (disposing)

{

db.Dispose();

}

base.Dispose(disposing);

```

```

}

}

}

public class CandidateController : Controller
{
    private Exam_QuizEntities db = new Exam_QuizEntities();

    // GET: /Candidate/
    public ActionResult Index()
    {
        return View(db.Candidate_tbl.ToList());
    }

    // GET: /Candidate/Details/5
    public ActionResult Details(int? id)
    {
        if (id == null)
        {
            return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
        }

        Candidate_tbl candidate_tbl = db.Candidate_tbl.Find(id);

        if (candidate_tbl == null)
        {
            return HttpNotFound();
        }
    }
}

```

```

    }

    return View(candidate_tbl);
}

```

// GET: /Candidate/Create

```
public ActionResult Create()
```

```

{
    return View();
}

```

// POST: /Candidate/Create

// To protect from overposting attacks, please enable the specific properties you want to bind to, for

// more details see <http://go.microsoft.com/fwlink/?LinkId=317598>.

```
[HttpPost]
```

```
[ValidateAntiForgeryToken]
```

```
public ActionResult
```

```
Create([Bind(Include="candidate_id,candidate_name,candidate_password,candidate_email,candidate_contact,candidate_institution")] Candidate_tbl candidate_tbl)
```

```

{
    if (ModelState.IsValid)
    {
        db.Candidate_tbl.Add(candidate_tbl);
        db.SaveChanges();
    }
}

```

```

        if (Session["admin_name"]!=null)
        {
            return RedirectToAction("Index");
        }
T else
        {
            return RedirectToAction("Login");
        }

    }

    return View(candidate_tbl);
}

// GET: /Candidate/Edit/5
public ActionResult Edit(int? id)
{
    if (id == null)
    {
        return new HttpStatusCodeResult(HttpStatusCode.BadRequest);
    }

    Candidate_tbl candidate_tbl = db.Candidate_tbl.Find(id);

    if (candidate_tbl == null)
{

```

```

        return HttpNotFound();
    }

return View(candidate_tbl);

}

// POST: /Candidate/Edit/5

// To protect from overposting attacks, please enable the specific properties you
want to bind to, for

// more details see http://go.microsoft.com/fwlink/?LinkId=317598.

[HttpPost]
[ValidateAntiForgeryToken]

Edit([Bind(Include="candidate_id,candidate_name,candidate_password,candidate_email,candidate_contact,candidate_institution")] Candidate_tbl candidate_tbl)
{
    if (ModelState.IsValid)
    {
        db.Entry(candidate_tbl).State = EntityState.Modified;
        db.SaveChanges();
        return RedirectToAction("Index");
    }
return View(candidate_tbl);

}

```

```
// GET: /Candidate/Delete/5
```

```
public ActionResult Delete(int? id)
```

```
{  
    if (id == null)  
    {  
        return new HttpStatusCodeResult(HttpStatusCode.BadRequest);  
    }  
    Candidate_tbl candidate_tbl = db.Candidate_tbl.Find(id);  
    if (candidate_tbl == null)  
    {  
        return HttpNotFound();  
    }  
    return View(candidate_tbl);  
}
```

```
// POST: /Candidate/Delete/5
```

```
[HttpPost, ActionName("Delete")]
```

```
[ValidateAntiForgeryToken]
```

```
public ActionResult DeleteConfirmed(int id)
```

```
{  
    Candidate_tbl candidate_tbl = db.Candidate_tbl.Find(id);  
    db.Candidate_tbl.Remove(candidate_tbl);  
    db.SaveChanges();  
    return RedirectToAction("Index");  
}
```

```

    }

    public ActionResult Login()
    {

        return View();

    }

    [HttpPost]
    [ValidateAntiForgeryToken]
    public ActionResult Login(Candidate_Login ut)
    {
        if (ModelState.IsValid)
        {
            using (Exam_QuizEntities db = new Exam_QuizEntities())
            {
                var log = db.Candidate_tbl.FirstOrDefault(model =>
model.candidate_name.Equals(ut.candidate_name) &&
model.candidate_password.Equals(ut.candidate_password));

                if (log != null)

                    Session["candidate_name"] = log.candidate_name;

                return RedirectToAction("Index", "SelectExam");
            }
        }
    }

```

```

        else
        {
            ViewBag.Message = "Username or password incorrect";

            Response.Write("<script> alert('User Name or Password is
wrong')</script>");
        }
    }
}

return View();
}

```

```

public ActionResult Logout()
{
    Session.Clear();

    return RedirectToAction("Login", "Candidate");
}

protected override void Dispose(bool disposing)
{
    if (disposing)
    {
        db.Dispose();
    }

    base.Dispose(disposing);
}

```

}

}

}