

A

**SOFTWARE REQUIREMENT SPECIFICATION
ON
WEB BASED QUIZ SYSTEM
UNDER
NON SYLLABUS PROJECT**



Submitted To:

Shivangi khandelwal

Submitted By:

Bhanwar Singh Rathore (PIET21CS040)

Anuradha (PIET21CS026)

**DEPARTMENT OF COMPUTER ENGINEERING
POORNIMA GROUP OF INSTITUTIONS, JAIPUR
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Chapter -1

Introduction to Project

The main aim of Online Quiz is to facilitate a user-friendly environment for Bluebook implementation and reduces manual effort. Users of the system are:

1. Teachers
2. Students

In past days quiz is conducted manually but in further resolution of the technology we are able to generate the score and pose the queries automatically..

Secure access of confidential data, better design to give effective Bluebook and flexible. Service based architecture will be highly desirable for future extension.

Issues are to reduce the manual pressure and make the project in effective manner.

Teacher is able to make quiz questions and take a contest both. But students are only able to give a quiz. Their result is visible on the screen after the successful completion of the quiz.

Both are able to ask any query from the administrator and give any suggestion to improve the site.

The present project elucidates the following features.

- Registration of Teachers and Students
- Making of Quiz
- Taking of Quiz
- Queries from Users
- Contact From administration

System Development:

The process of building systems has always been complex with system becoming larger, the costs and complexities get multiplied. So the need for better methods for developing systems is widely recognized to be effective and the applied model should meet a few basic requirements.

- The model should be structured and cover the entire system development process from feasibility study to programming, testing and implementation.
- The model should utilize established methods and techniques like database designs, normalizations and structured programming techniques.
- The model should consist of building blocks, which define tasks, results and interfaces.
- Documentation should be a direct result of the development work and should be concise, precise and as non-redundant as possible.

Based on the above requirements of the system model, system study has been made.

Various methodologies have been applied for system study, evolving design documents, data modeling, input screen design and report design.

Project:—

The persons who are students can enhance and judge their knowledge from the online quizzes on the site. Teachers are able to make quizzes. Students and teachers can ask their queries in the site. They are also able to contact the administrator with the help of the address given in the Contact us option

Preliminary Investigation:

First in the system development process is preliminary Investigation. Preliminary Investigation is conducted in the following phases.

Project clarification

Feasibility study

Project appraisal

Project clarification is the process of selecting a project request for further study.

When a system development or modification request is made, the first systems activity, the preliminary investigation, begins the activity has three parts: Request clarification, feasibilitystudy and project appraisal. Many request from employees and users in organization are not clearly stated.

Therefore before any systems investigation can be considered, the project request must be examined to determine preciously what the originator wants. This is called Requestclarification.

As important outcome of the preliminary investigation is the determination that thesystem request in feasible.

Technical Feasibility:

The proposed system is developed using Active Server Page, VB Script and HTML as front-end tool and Oracle 8 as the back end. The proposed system needs a Personal Web Server to serve the requests submitted by the users. The Web browser is used to view the web page that is available within the Windows operating system itself. The proposed system will run under Win9x, NT, and win2000 environment. As Windows is very user friendly and GUI OS it is very easy to use. All the required hardware and software are readily available in the market. Hence the system is technically feasible.

Operational Feasibility:

The proposed system is operationally feasible because of the following reasons.

- The customer is benefited more as most of his time is saved. The customer is serviced at his place of work.
- The cost of the proposed system is almost negligible when compared to the benefits gained.

Economical Feasibility:

As the necessary hardware and software are available in the market at a low cost, the initial investment is the only cost incurred and does not need any further enhancements. Hence it is economically feasible.

The system is feasible in all respects and hence it encourages taking up the system design.

Gathering Information:

The analysis through collection of data plays the wider role in the analysis of the system. So the data is collected at different levels of management to keep track of full information of the system.

The collection of data is done from-

1. Top Level Management
2. Middle Level Management
3. Low Level

System Study:

Present system:

In the existed system, quiz questions are provided in a page to the students. There is no timing set for the quiz questions. The teachers have to check the questions by themselves. Their work becomes haptic.

Problem in Existing System-

- There is no scope for teams to play.
- All the questions will be displayed at a time.*
- These quizzes are not so much interactive to the students.

Proposed system:

Proposed system provides a solution to existing system by extending its facilities as follows:

- There is a scope of any number of topics on which the quizzes are made.
- There is a chance of answering the questions and edit it before the submission of the quiz.***
- Finally the scores of the quiz are calculated.

Limitation:

- In this project there are no team contests.
- The students and teachers are able to judge their knowledge but can not be able to compare them with others.

SYSTEM REQUIREMENTS

Software Environment:

Software Environment is a technical specification of requirement of software product. This specifies the environment for development, operation and maintenance of the product.

Technology used:

- Http
- Http Basics
- HTML
- Javascript
- CSS

HTTP:

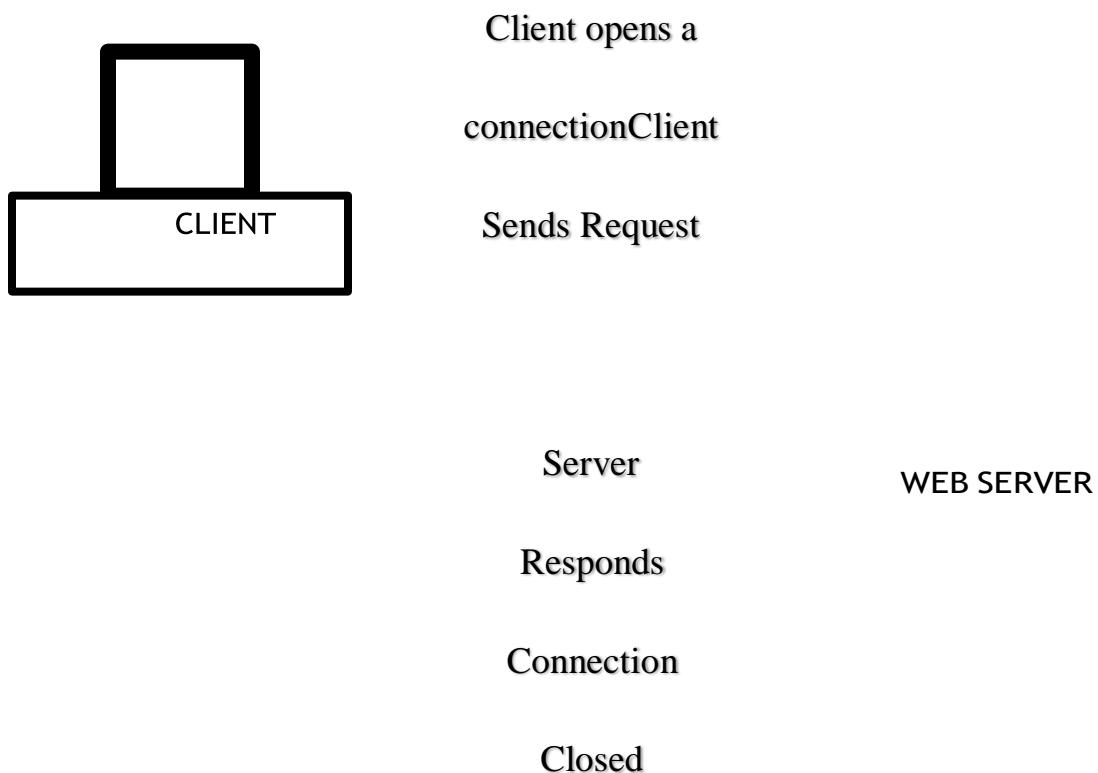
The Hypertext Transfer Protocol is stateless, TCP/IP based protocol used for communicating on the World Wide Web. HTTP defines the precise manner in which Web clients communicate with Web servers. HTTP/1.0 is the most common version in use today. Oddly enough, this protocol is not officially recognized as an Internet standard. It is documented in the informational RFC 1945. Its successor, HTTP/1.1, is currently a proposed Internet standard and many browsers and servers now support this new version.

HTTP Basics:

The HTTP protocol follows a very simple request/response paradigm. In short, a conversation between a Web browser and Web server goes something like this: the client opens a connection to the server, the client makes a request to the server, the server responds to the request, and the connection is closed.

The four stages of a simple Web transaction:

- The client opens a connection to the server.
- The client makes a request to the server.
- The server responds to the request.
- The connection is closed.



Connectionless Protocol:

HTTP is a connectionless protocol. As you may have guessed, the difference between a connectionless and a connection-oriented protocol is in the way they handle connections. Using a connectionless protocol, the client opens a connection with the server, sends a request, receives a response, and closes the connection. Each request requires its own connection. With a connection-oriented protocol, the client connects to the server, sends a request, receives response, and then holds the connection open in order to service future requests.

The connectionless nature of HTTP is both strength and a weakness. Because it holds a connection open only long enough to service the request, very few server resources are required to service large numbers of users. In fact many popular Web sites service millions of users in a single day. The drawback to a connectionless protocol is that a connection must be established with every request. Opening a new connection with each request incurs a performance penalty that translates into additional delays for the user.

Alternatively, a connectionless protocol such as FTP has a strong performance advantage over a connectionless protocol. This is due to the fact that the overhead required to open a new connection is incurred only once rather than with every request. Unfortunately, each open connection consumes some amount of server resources. These finite resources, such as memory and disk space, limit the number of concurrent users the server can handle. In contrast to a Web site, an FTP site can rarely support more than a few hundred users at a time.

HTML:

The extended reach of information and services to customers that the Internet has enabled, has created a new challenge for the developer. The developer should develop a user interface that is distributable, available on multiple platforms and supports a wide range of client environments from handheld wireless devices to high-end workstations. So to maintain a broad reach to client environments and to achieve greatest compatibility with all browsers, this system uses standard HTML.

Hyper Text Markup Language is the standard language for creating documents for the World Wide Web. An HTML document is a text file, which contains the elements, in the form of tags that a web browser uses to display text, multimedia objects, and hyperlinks using HTML; we can format a document for display and add hyperlinks to other documents.

The user interface has been designed in HTML hence can be browsed in any web browser.

Cascading Style Sheets:

These have been used to separate data from presentation. By using these style sheets throughout the project, a uniform look and feel can be maintained for all the HTML elements and tags that have been used in the project. If there is any revamp the way the content has been presented in the website, the changes can be made to the appropriate style sheet, which will be reflected across all the style sheets.

JavaScript:

Until recently, Web-site design was limited by the constraints of HTML and CGI. JavaScript is an easy-to-use language, developed by Netscape, which can be embedded in HTML pages to make them more interactive and dynamic.

JavaScript allows site designers with moderate programming skills to add capabilities to their Web pages, including instant user feedback, advanced form processing, pop-up windows, advanced frame applications, and muchmore. You learn the basic elements of the JavaScript language and several techniques to take your Web pages to the next level.

WORKING ENVIRONMENT

Hardware Configuration:

Processor	:	Core i5
RAM	:	4GB RAM
Hard Disk Drive	:	400 GB HDD
Keyboard	:	104 keys
Mouse	:	Logitech Mouse
Monitor	:	Laptop
Display Type	:	LCD

Software Configuration:

Operating System	:	Windows 7(Home Basic)
Web server	:	Apache Tomcat 8.0.3
Web Browser	:	Google Chrome
Designing Tool (IDE)	:	NetBeans IDE 8
Server Side Scripting	:	Java
Client Side Scripting	:	javascript, JSP, servlet
Backend	:	Oracle 14

Chapter-3

Design

SYSTEM DESIGN

Introduction to System Design:

System design is the process of planning a new system or to replace the existing system. Simply, system design is like the blueprint for building, it specifies all the features that are to be in the finished product.

System design phase follows system analysis phase. Design is concerned with identifying functions, data streams among those functions, maintaining a record of the design decisions and providing a blueprint the implementation phase.

Design is the bridge between system analysis and system implementation. Some of the essential fundamental concepts involved in the design of application software are:

- Abstraction
- Modularity
- Verification

Abstraction is used to construct solutions to problem without having to take account of the intricate details of the various component sub problems. Abstraction allows system designer to make step-wise refinement, which at each

stage of the design may hide unnecessary details associated with representation or implementation from the surrounding environment.

Modularity is concerned with decomposing of main module into well-defined manageable units with well-defined interfaces among the units. This enhances design clarity, which in turn eases implementation, Debugging, Testing, Documenting and Maintenance of the software product software projects.

Verification is fundamental concept in software design. A design is verifiable if it can be demonstrated that the design will result in implementation that satisfies the customer's requirements. Verification is of two types namely,

Reliability:

The software should behave strictly according to the original specification and should function smoothly under normal conditions.

Extensibility:

The software should be capable of adapting easily to changes in the specification.

Reusability:

The software should be developed using a modular approach, which permits modules to be reused by other application, if possible.

The System Design briefly describes the concept of system design and it contains four sections. The first section briefly describes the features that the system is going to provide to the user and the outputs that the proposed system is going to offer.

The second section namely Logical Design describes the Data Flow Diagrams, which show clearly the data movements, the processes and the data sources, and sinks, E-R diagrams which represent the overall logical design of the database, and high-level process structure of the system.

Conceptual or logical or external design of software involves conceiving, planning out, and specifying the externally observable characteristics of a software product. These characteristics include user displays, external data sources, functional characteristics and high-level process structure for the product

Input Design:

Input design is a part of overall system design, which requires very careful attention.

The main objectives of input design are:

- To produce a cost-effective method of input.
- To achieve the highest possible level of accuracy.
- To ensure that the input is acceptable to and understood by the user staff.

In this system input screens are designed very carefully so that no inaccurate data will enter the database. The data is made as easy as possible. For simplifying the data entry many facilities are given.

Each and every screen in this system is facilitated by many pushbuttons so that the user can easily work with this system.

Output Design:

Outputs from computer systems are required primarily to communicate the results of processing to users. They are also to provide a permanent hard copy of these results for later consultation.

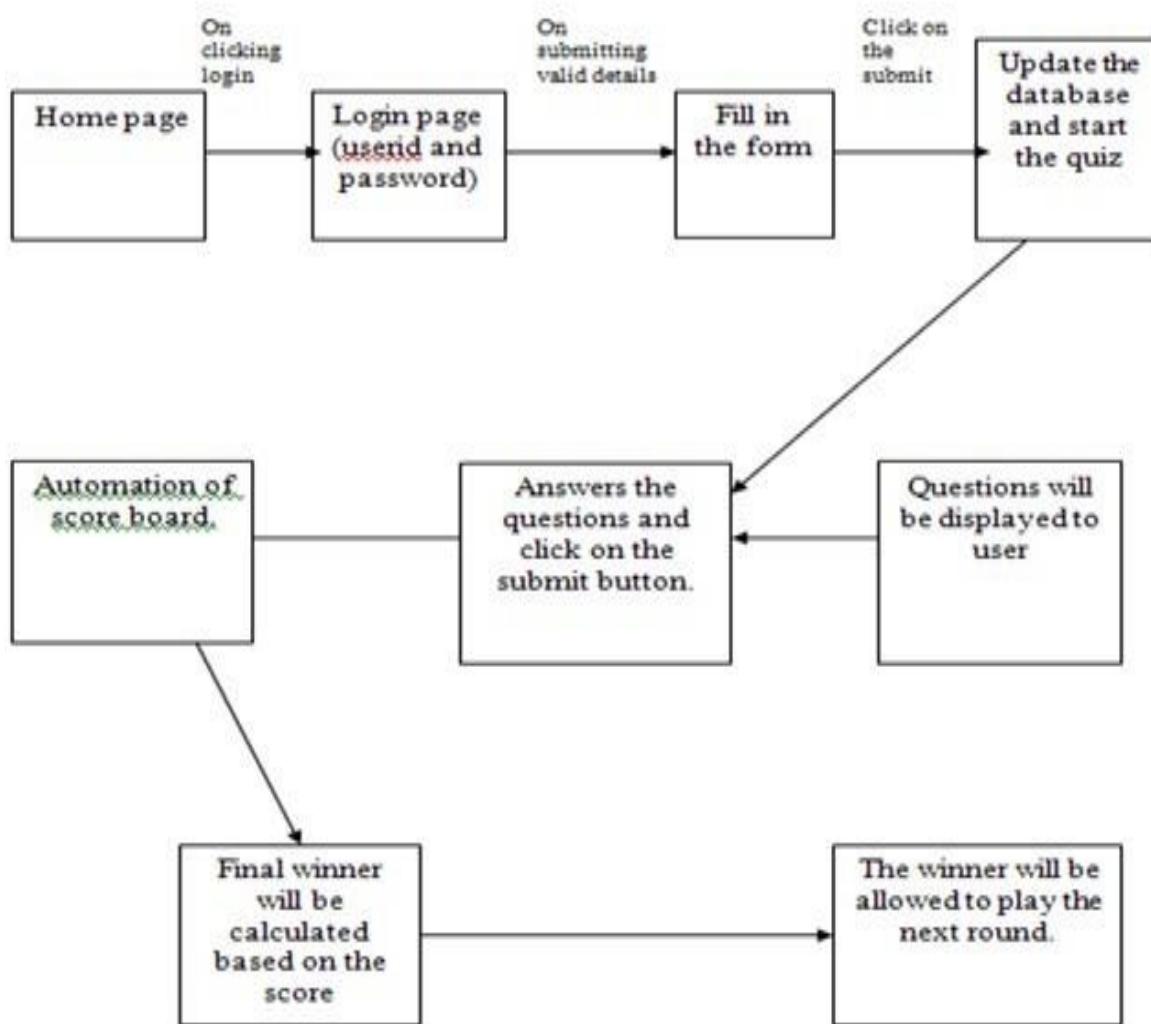
The various types of outputs are required by this system are given below:

- External outputs, whose destination is outside the concern and which require special attention because they, project the image of the concern.
- Internal outputs, whose destination is within the concern and which require careful design because they are the user's main interface within the computer.
- Operation outputs, whose use is purely within the computer department, E.g., program listings, usage statistics etc,
- Interactive outputs, which involves the user in communicating directly with the computers.

SYSTEM FLOW DIAGRAM

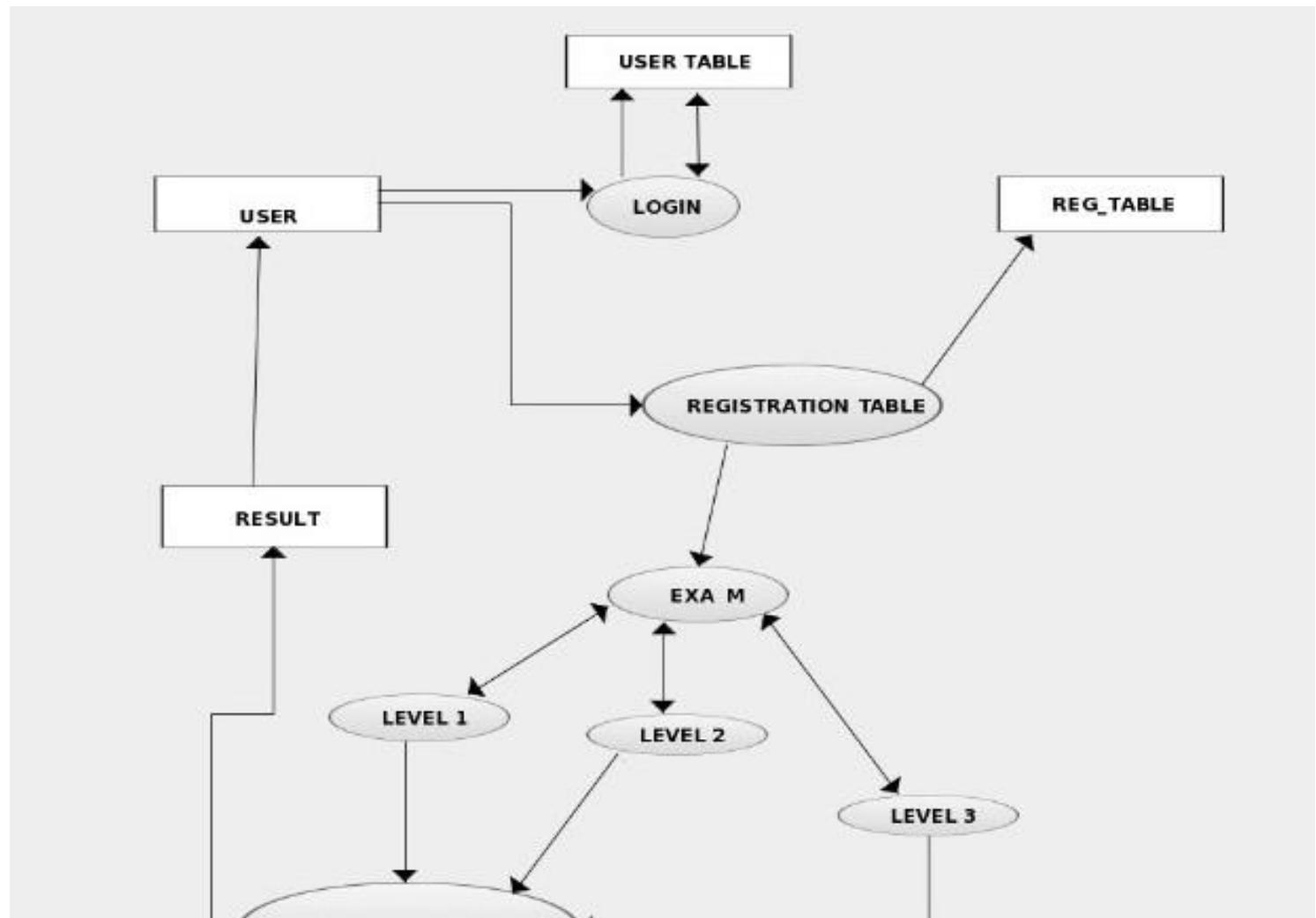


Proposed System Architecture



DATA FLOW DIAGRAMS





SCREENS



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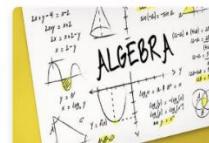


PE&Health



Computer Science

★ Mathematics



SYSTEM TESTING

SYSTEM TESTING

System testing is the stage before system implementation where the system is made error free and all the needed modifications are made. The system was tested with test data and necessary corrections to the system were carried out. All the reports were checked by the user and approved. The system was very user friendly with online help to assist the user wherever necessary.

Test Plan:

A test plan is a general document for the entire project, which defines the scope, approach to be taken, and schedule of testing, as well as identifying the test item for the entire testing process, and the personal responsible for the different activities of testing. This document describes the plan for testing, the knowledge management tool.

Major testing activities are:

- Test units
- Features to be tested
- Approach for testing
- Test deliverables
- Schedule
- Personal allocation

Test units:

Test Case specification is major activity in the testing process. In this project, I have performed two levels of testing.

- Unit testing
- System testing

The basic units in Unit testing are:

- Validating the user request
- Validating the input given by the user
- Exception handling

The basic units in System testing are:

- Integration of all programs is correct or not
- Checking whether the entire system after integrating is working as expected.
- The system is tested as whole after the unit testing.

IMPLEMENTATION AND EVALUATION

Chapter 4

Conclusion

IMPLEMENTATION AND EVALUATION

During the software-testing phase each module of software is thoroughly tested for bugs and for accuracy of output. The system developed is very user-friendly and the detailed documentation is also given to the user as online help wherever necessary. The implementation phase normally ends with the formal test involving all the components.

The entire system was developed using the ASP, HTML, JavaScript, Personal Web Server, and Oracle 8 as back end. The HTML is used to design the web page. The Personal Web Server is used to understand the client's request and to send response to them. The VBScript are used for client-side validations so that the user can enter only appropriate input in the input fields. The Oracle 8 is the back end tool where the database resides.

Hence the design of the entire system is user-friendly and simple the implementation has been quite easy.

CONCLUSION WITH FUTURE ENHANCEMENT

CONCLUSION

This project has given me an ample opportunity to design, code, test and implements an application. This has helped in putting into practice of various Software Engineering principles and Database Management concepts like maintaining integrity and consistency of data. Further, this has helped me to learn more about ORACLE 11, java 8.0, HTML, JavaScript, Adobe Photoshop 7.0 and Apache Tomcat Web Server.

I thank my guide for his invaluable contribution in guiding me through out the project. I also thank my parents and friends who have supported and motivated me to complete this project successfully.