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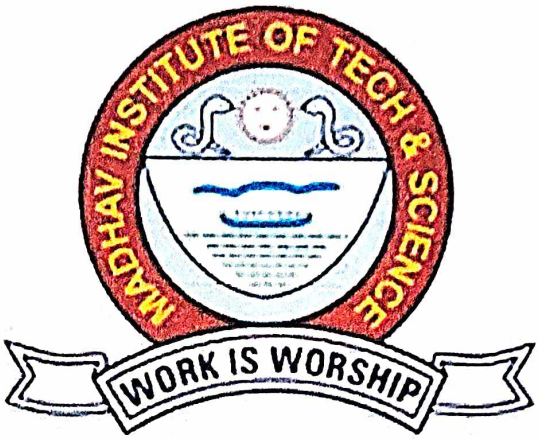

Project Report

on

Online Quiz

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
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MAY-JUNE 2022

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Project Report

Online Quiz

A project report submitted in partial fulfillment of the requirement for the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

Submitted by:

Prachi Chhapariya

0901CS203D08

Shivani Sahu

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Faculty Mentor:

Mr. Mir Shahnawaz Ahmad, Assistant Professor, Computer Science and Engineering

Submitted to:

Mir Shahnawaz Ahmed, Asst.Professor CSE MITS

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CERTIFICATE

This is certified that **Prachi Chhapariya** (0901CS203D08) has submitted the project report title Online Quiz under the mentorship of **Mr. Shahnawaz Ahmad,** in partial fulfilment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

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CERTIFICATE

This is certified that **Shivani Sahu** (0901CS203D10) has submitted the project report title Online Quiz under the mentorship of **Mr. Mir Shahnawaz Ahmad** in partial fulfilment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering from Madhav Institute of Technology and Science, Gwalior.

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MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

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DECLARATION

I hereby declare that the work being presented in this project report, for the partial fulfilment of requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering at Madhav Institute of Technology & Science, Gwalior is an authenticated and original record of my work under the mentorship **Mir Shahnawaz Ahmad, Assistant Professor,** Computer Science & Engineering.

We declare that We have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

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ABSTRACT

Online Quiz System (OQS) is a web-based examination system where quiz is taken online i.e. through the internet or intranet using computer system. The purpose of OQS is to take Semester Quizzes in an efficient manner and no time wasting for checking the paper. The main objective of OQS is to efficiently evaluate the candidate through a fully automated system that not only saves lot of time but also gives fast results. Teachers can administer quizzes using the OQS .The system will show result after the examination is finished. A teacher has control in the question bank and is supposed to make schedule for the quiz. The system carries out the examination and auto-grading for multiple choice questions which is fed into the system. Administrative control of the whole system is provided.

The main objective of the project on MCQ Quiz Applications is to manage the details of Students, Examinations, Marks, Courses, Papers. It manages all the information about Students, Results, Papers,Sudents. The project is totally built at administrative end and thus only the administrator is guaranteed the access. The purpose of the project is to build an application program to reduce the manual work for Marks, Couses, Papers.

सार:

एक नया रेस्तरांखोलतेसमय, भौगोललक स्थिलत यह लनर्ा◌ारतकरनेमेंप्रमुखमहत्व रखती हैलक क्या यह पनपेगा।हालांलकरेस्तरांकेललए उम्मीदवार थिानोंकेआकर्ाणका आकलन करनेकेललए कु छतरीकेलवकलसत लकए गए हैं,सटीकता सीलमत हैक्योंलकवेमुख्यरूप सेजनसांख्यकीयअध्ययन या उपभोक्ता सवेक्षणजैसे पारांपररकडेटास्रोतोंपरभरोसा करतेहैं।इसपररयोजना में,हम लवशेरूप् सेपूवा-मौजूदारेस्तरांकालाभ उठातेहैंतालक एक रेस्तरांकालवस्तार करनेकेललए उम्मीदवार थिानोंकेआकर्ाणका आकलन करनेकेललए भलवष्य कहनेवालासुलवर्ाओंकालनमााणलकया जा सके लवशे।रूप् से,हम एक सांभालवतरेस्तरांकेललए लवचारार्ीन थिान की बाजार प्रलतस्पर्ाा◌ाऔर भौगोललक लवशेर्ताओंकीजांचकरतेहैं।हमसुलवर्ाओंकेतीन सेट तैयारकरतेहैंऔर एक उम्मीदवार केवांलछतथिान पर एक रेस्तरांखोलनेकी इष्टतमता की भलवष्यवाणी करने केललए उन्हेंएक वगीकरण मॉडल मेंशालमल करतेहैं।इसकेअलावा, हमारेप्रयोगात्मक पररणाम बतातेहैंलक भौगोललक लवशेर्ताओंकीतुलनामेंबाजार आकर्ाणऔर बाजार प्रलतस्पर्ाा◌ात्मकलवशेर्ताएंअलर्क अनुमालनत हैं।

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Chapter 1: INTRODUCTION

1.1 Introduction

Online Examination System refers to service as conduct online examination or test. It will use for students progress evaluation using modern computer technology. It replaced the paperwork and overcome the outcomes of traditional way of examinations using paper or pen. It is web based platform can be used by Admin at any remote location. Online Examination System is fully developed automated system is to efficiently evaluate the candidate progress that not only save the time of Examination Controller and also gives fast result. The Administrator of the system has authority to propose tests or papers. It is cost effective and time effective. The candidate can login through proposed computer with their Enrollment number matching the details to the student's database, then they can take the exam. Candidate can give their course's examination in a specific duration and in specific number of questions. The questions can be appear in both mode MCQ (Multiple Choice Questions) and answer in paragraph.

1.2 Aim

The main aim of Online Quiz System Project is to facilitate a user friendly environment of Blue book implementation and reduces the manual effort. Providing an online comprehensive solution to manage quiz system where the individuals are participating in a team. The purpose of the system is to develop Online Examination System., used to test the Domain knowledge of the students, and employees with respect to the particular technology. The manual procedure used for conducting exam is time consuming process and error prone due to human limitations. The System purpose is to completely automate the old manual procedure of conducting exam to Online Web Based Examination System.

1.3 Proposed System

Manual assessment is prone to errors and is not time efficient as discussed previously. So why not automate the whole assessment process? Why would a teacher spend his/her precious time physically correcting the answer of their students? So our main objective is to create a method that would allow us to make our computers do the whole assessment work and award score to the answers accordingly.

1.4 Feasibility

A feasibility study is a high-level capsule version of the entire System analysis and Design Process. The study begins by classifying the problem definition. Feasibility is to determine if it's worth doing. Once an acceptance problem definition has been generated, the analyst develops a logical model of the system. A search for alternatives is analyzed carefully. There are 3 parts in feasibility study.

1) Operational Feasibility
2) Technical Feasibility
3) Economical Feasibility

1.4.1 Operational Feasibility

Operational feasibility is the measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development.The operational feasibility assessment focuses on the degree to which the proposed development projects fits in with the existing business environment and objectives with regard to development schedule, delivery date, corporate culture and existing business processes.To ensure success, desired operational outcomes must be imparted during design and development. These include such design-dependent parameters as reliability, maintainability, supportability, usability, producibility, disposability, sustainability, affordability and others. These parameters are required to be considered at the early stages of design if desired operational behaviours are to be realised. A system design and development requires appropriate and timely application of engineering and management efforts to meet the previously mentioned parameters. A system may serve its intended purpose most effectively when its technical and operating characteristics are engineered into the design. Therefore, operational feasibility is a critical aspect of systems engineering that needs to be an integral part of the early design phases.

1.4.2 Technical Feasibility

This involves questions such as whether the technology needed for the system exists, how difficult it will be to build, and whether the firm has enough experience using that technology. The assessment is based on outline design of system requirements in terms of input, processes, output, fields, programs and procedures. This can be qualified in terms of volume of data, trends, frequency of updating inorder to give an introduction to the technical system. The application is the fact that it has been developed on windows XP platform and a high configuration of 1GB RAM on Intel Pentium Dual core processor. This is technically feasible .The technical feasibility assessment is focused on gaining an understanding of the present technical resources of the

organization and their applicability to the expected needs of the proposed system. It is an evaluation of the hardware and software and how it meets the need of the proposed system.

1.4.3 Economical Feasibility

Establishing the cost-effectiveness of the proposed system i.e. if the benefits do not outweigh the costs then it is not worth going ahead. In the fast paced world today there is a great need of online social networking facilities. Thus the benefits of this project in the current scenario make it economically feasible. The purpose of the economic feasibility assessment is to determine the positive economic benefits to the organization that the proposed system will provide. It includes quantification and identification of all the benefits expected. This assessment typically involves a cost/benefits analysis.

CHAPTER 2: SOFTWARE REQUIREMENTS SPECIFICATION

Table 1 Hardware Requirements

Number	Description
1	PC with 250 GB or more Hard disk.
2	PC with 2 GB RAM.
3	PC with Pentium 1 and Above.

Table 2 Software Requirements

Number	Description	Type
1	Operating System	Windows XP / Windows
2	Language	PHP
3	Database	MySQL
4	IDE	Visual Code
5	Browser	Google Chrome

CHAPTER 3 : DESIGN & PLANNING

3.1 Software Development Life Cycle Model

3.1.1 Waterfall Model

The waterfall model was selected as the SDLC model due to the following reasons:

- Requirements were very well documented, clear and fixed.
- Technology was adequately understood.
- Simple and easy to understand and use.
- There were no ambiguous requirements.
- Easy to manage due to the rigidity of the model. Each phase has specific deliverables and a review process.
- Clearly defined stages.
- Well understood milestones.Easy to arrange tasks.

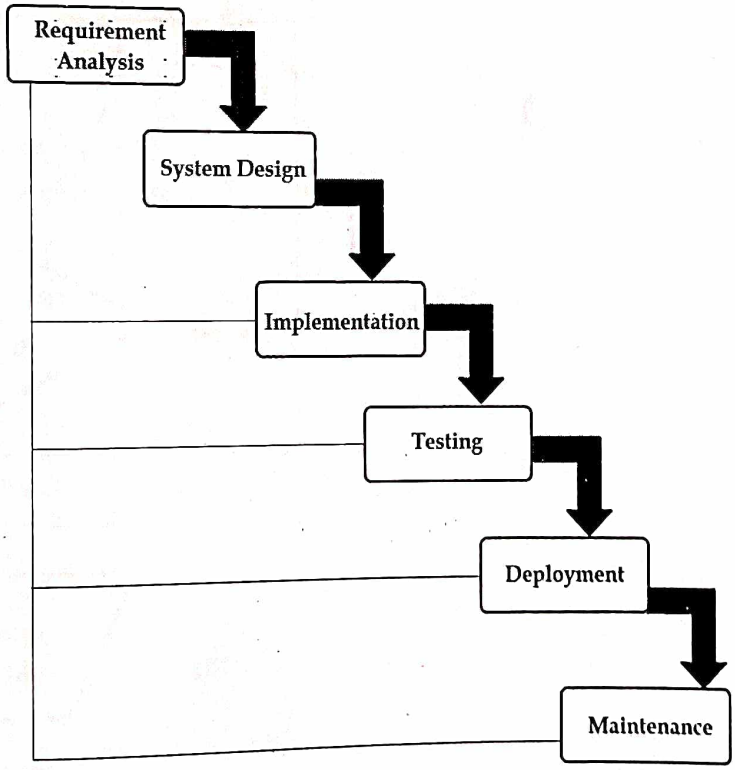

Fig.3.1.1 Waterfall Model

3.2 Flow Chart

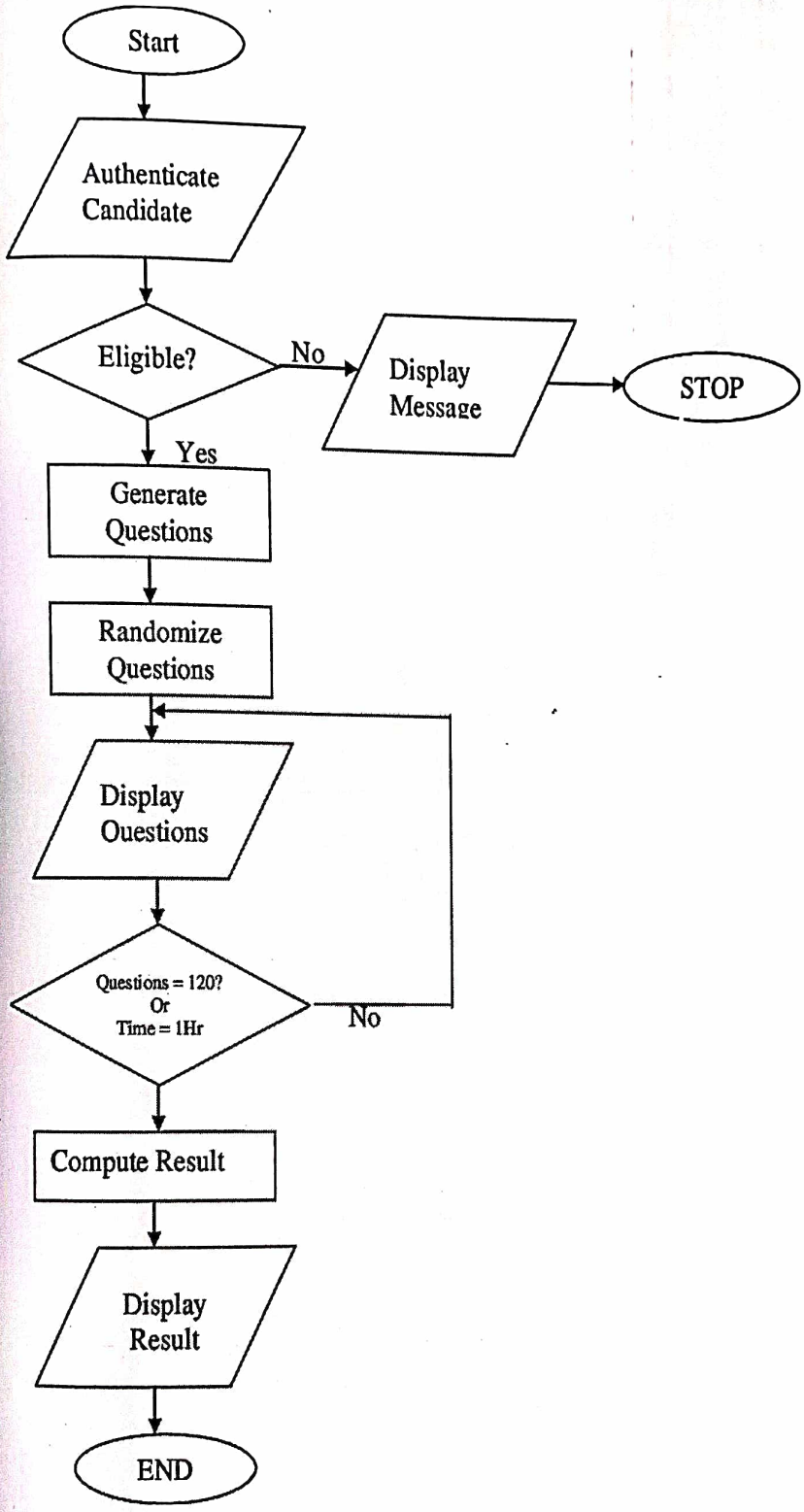

Fig.3.2. Flow Chart

3.3 ER Diagram

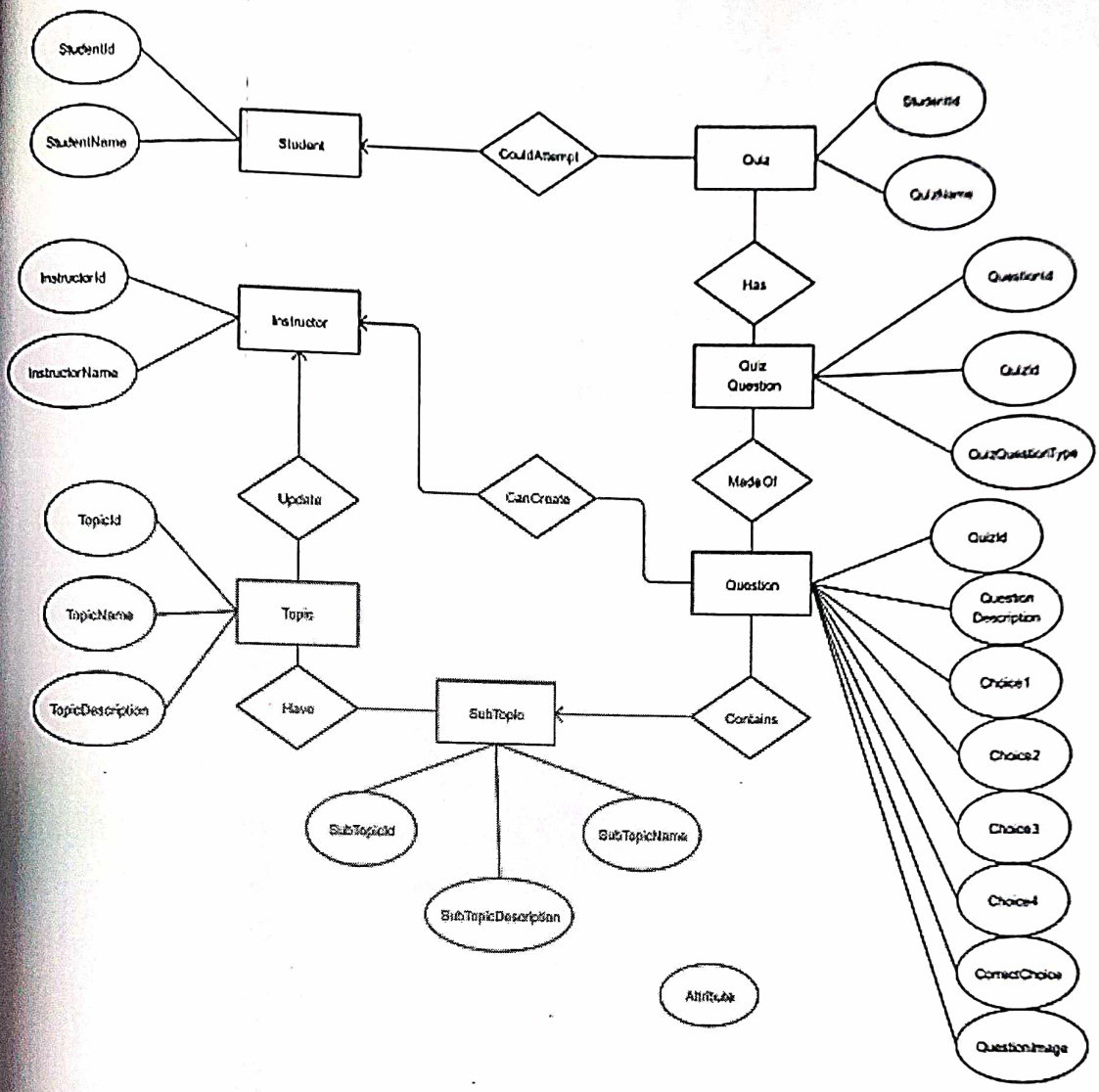

Fig. 3.3 ER Diagram

3.4 DFD Diagram

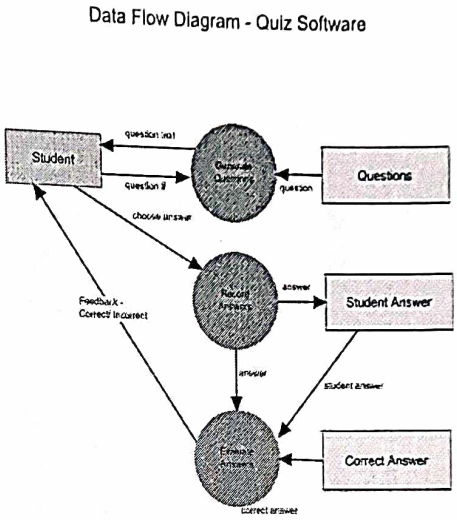

Fig. 3.4 DFD Diagram

CHAPTER 4 : Implementation Details

In this Section we will do Analysis of Technologies to use for implementing the project.

4.1 : Front End

4.1.1 HTML

Hypertext Markup Language (HTML) is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript. Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by tags, written using angle brackets. Tags such as <img /> and <input /> directly introduce content into the page. Other tags such as <p> surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript, which affects the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), former maintainer of the HTML and current maintainer of the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.

4.1.2 CSS

- Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML.CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts.This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple

web pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

- CSS information can be provided from various sources. These sources can be the web browser, the user and the author. The information from the author can be further classified into inline, media type, importance, selector specificity, rule order, inheritance and property definition. CSS style information can be in a separate document or it can be embedded into an HTML document. Multiple style sheets can be imported. Different styles can be applied depending on the output device being used; for example, the screen version can be quite different from the printed version, so that authors can tailor the presentation appropriately for each medium.The style sheet with the highest priority controls the content display. Declarations not set in the highest priority source are passed on to a source of lower priority, such as the user agent style. The process is called cascading.

- One of the goals of CSS is to allow users greater control over presentation. Someone who finds red italic headings difficult to read may apply a different style sheet. Depending on the browser and the web site, a user may choose from various style sheets provided by the designers, or may remove all added styles and view the site using the browser's default styling, or may override just the red italic heading style without altering other attributes.

4.2 : Back End

4.2.1 PHP

PHP is a server side scripting language that is used to develop Static websites or Dynamic websites or Web applications. PHP stands for Hypertext Pre-processor, that earlier stood for Personal Home Pages. PHP scripts can only be interpreted on a server that has PHP installed. The client computers accessing the PHP scripts require a web browser only. A PHP file contains PHP tags and ends with the extension ".php".

The term PHP is an acronym for PHP: Hypertext Preprocessor. PHP is a server-side scripting language designed specifically for web development. PHP can be easily embedded in HTML files and HTML codes can also be written in a PHP file. The thing that differentiates PHP with client-side language like HTML is, PHP codes are executed on the server whereas HTML codes are directly rendered on the browser.

PHP: Hypertext Preprocessor (or simply PHP) is a general-purpose programming language originally designed for web development. It was originally created by Rasmus Lerdorf in 1994.PHP code may be executed with a command line interface (CLI), embedded into HTML code, or used in combination with various web template

systems, web content management systems, and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in a web server or as a Common Gateway Interface (CGI) executable. The web server outputs the results of the interpreted and executed PHP code, which may be any type of data, such as generated HTML code or binary image data. PHP can be used for many programming tasks outside of the web context, such as standalone graphical applications and robotic drone control.

4.2.2 MySQL

MySQL is an open source relational database management system (RDBMS) based on Structured Query Language (SQL). It is one part of the very popular LAMP platform consisting of Linux, Apache, My SQL, and PHP. Currently My SQL is owned by Oracle. My SQL database is available on most important OS platforms. It runs on BSD Unix, Linux, Windows, or Mac OS. Wikipedia and YouTube use My SQL. These sites manage millions of queries each day. My SQL comes in two versions: My SQL server system and My SQL embedded system.

RDBMS Terminology

Before we proceed to explain MySQL database system, let's revise few definitions related to database.

- **Database:** A database is a collection of tables, with related data.
- **Table:** A table is a matrix with data. A table in a database looks like a simple spreadsheet.
- **Column:** One column (data element) contains data of one and the same kind, for example the column postcode.
- **Row:** A row (= tuple, entry or record) is a group of related data, for example the data of one subscription.
- **Redundancy:** Storing data twice, redundantly to make the system faster.
- **Primary Key:** A primary key is unique. A key value cannot occur twice in one table. With a key, you can find at most one row.
- **Foreign Key:** A foreign key is the linking pin between two tables.
- **Compound Key:** A compound key (composite key) is a key that consists of multiple columns, because one column is not sufficiently unique.
- **Index:** An index in a database resembles an index at the back of a book.
- **Referential Integrity:** Referential Integrity makes sure that a foreign key value always points to an existing row.

CHAPTER 5 : TESTING AND IMPLEMENTATION

The term implementation has different meanings ranging from the conversation of a basic application to a complete replacement of a computer system. The procedures however, are virtually the same. Implementation includes all those activities that take place to convert from old system to new. The new system may be totally new replacing an existing manual or automated system or it may be major modification to an existing system. The method of implementation and time scale to be adopted is found out initially. Proper implementation is essential to provide a reliable system to meet organization requirement.

5.1 : Unit Testing

5.1.1 Introduction

In computer programming, unit testing is a software testing method by which individual units of source code, sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures, are tested to determine whether they are fit for use. Intuitively, one can view a unit as the smallest testable part of an application. In procedural programming, a unit could be an entire module, but it is more commonly an individual function or procedure. In object-oriented programming, a unit is often an entire interface, such as a class, but could be an individual method. Unit tests are short code fragments created by programmers or occasionally by white box testers during the development process. It forms the basis for component testing. Ideally, each test case is independent from the others. Substitutes such as method stubs, mock objects, fakes, and test harnesses can be used to assist testing a module in isolation. Unit tests are typically written and run by software developers to ensure that code meets its design and behaves as intended.

5.1.2 Benefits

The goal of unit testing is to isolate each part of the program and show that the individual parts are correct. A unit test provides a strict, written contract that the piece of code must satisfy. As a result, it affords several benefits.

5.2 : Integration Testing

Integration testing (sometimes called integration and testing, abbreviated I&T) is the phase in software testing in which individual software modules are combined and tested as a group. It occurs after unit

testing and before validation testing. Integration testing takes as its input modules that have been unit tested, groups them in larger aggregates, applies tests defined in an integration test plan to those aggregates, and delivers as its output the integrated system ready for system testing.

5.2.1 Purpose

The purpose of integration testing is to verify functional, performance, and reliability requirements placed on major design items. These "design items", i.e., assemblages (or groups of units), are exercised through their interfaces using black-box testing, success and error cases being simulated via appropriate parameter and data inputs. Simulated usage of shared data areas and inter-process communication is tested and individual subsystems are exercised through their input interface. Test cases are constructed to test whether all the components within assemblages interact correctly, for example across procedure calls or process activations, and this is done after testing individual modules, i.e., unit testing. The overall idea is a "building block" approach, in which verified assemblages are added to a verified base which is then used to support the integration testing of further assemblages.Software integration testing is performed according to the software development life cycle (SDLC) after module and functional tests. The cross-dependencies for software integration testing are: schedule for integration testing, strategy and selection of the tools used for integration, define the cyclomatical complexity of the software and software architecture, reusability of modules and life-cycle and versioning management.Some different types of integration testing are big-bang, top-down, and bottom-up, mixed (sandwich) and risky-hardest. Other Integration Patterns are: collaboration integration, backbone integration, layer integration, client-server integration, distributed services integration and high-frequency integration.

5.3 : Software Verification & Validation

5.3.1 Introduction

In software project management, software testing, and software engineering, verification and validation (V&V) is the process of checking that a software system meets specifications and that it fulfills its intended purpose. It may also be referred to as software quality control. It is normally the responsibility of software testers as part of the software development lifecycle. Validation checks that the product design satisfies or fits the intended use (high-level checking), i.e., the software meets the user requirements.This is done through dynamic testing and other forms of review.Verification and validation are not the same thing, although they are often confused. Boehm succinctly expressed the difference between

- Validation : Are we building the right product?

- Verification : Are we building the product right?

According to the Capability Maturity Model (CMMI-SW v1.1)

Software Verification: The process of evaluating software to determine whether the products of a given development phase satisfy the conditions imposed at the start of that phase.

Software Validation: The process of evaluating software during or at the end of the development process to determine whether it satisfies specified requirements.

In other words, software verification is ensuring that the product has been built according to the requirements and design specifications, while software validation ensures that the product meets the user's needs, and that the specifications were correct in the first place. Software verification ensures that "you built it right". Software validation ensures that "you built the right thing". Software validation confirms that the product, as provided, will fulfill its intended use.

5.3.2 Classification of Methods

In mission-critical software systems, where flawless performance is absolutely necessary, formal methods may be used to ensure the correct operation of a system. However, often for non-mission-critical software systems, formal methods prove to be very costly and an alternative method of software V&V must be sought out. In such cases, syntactic methods are often used.

5.3.3 Test Cases

A test case is a tool used in the process. Test cases may be prepared for software verification and software validation to determine if the product was built according to the requirements of the user. Other methods, such as reviews, may be used early in the life cycle to provide for software validation.

5.4 : System Testing

System testing of software or hardware is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements. System testing falls within the scope of black-box testing, and as such, should require no knowledge of the inner design of the code or logic. As a rule, system testing takes, as its input, all of the "integrated" software components that have passed integration testing and also the software system itself integrated with any applicable hardware system(s). The purpose of integration testing is to detect any inconsistencies between the software units that are integrated together (called assemblages) or between any of the assemblages and the hardware. System testing is a more limited type of testing; it seeks to detect defects both within the "inter-assemblages" and also within the system as a whole.

System testing is performed on the entire system in the context of a Functional Requirement Specification(s) (FRS) and/or a System Requirement Specification (SRS). System testing tests not only the design, but also the behavior and even the believed expectations of the customer. It is also intended to test up to and beyond the bounds defined in the software/hardware requirements specification(s).

CHAPTER 6: Advantages

- It saves more time.
- It saves the student's money.
- It saves paper.
- It's more secure.

CHAPTER 7: Conclusion

A large number of participants, with instant results of your online quiz (for the creator as well as the participants), a better overview, you're able to randomize your questions and set a timer. That all without the need of an instructor. What's holding you back to not use online quizzes?