Web Application MCQ
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Abstract:
This Project is basically aimed in providing latest technologies & trends to the College sector service, so that college can store there student’s records like details of student, attendance & semester marks which can be viewed by Administrator. It is a comprehensive student information management system developed from the ground up to fulfill the needs of independent Colleges as they guide their students to success. The Education Edge integrated information management system connects operations in the College environment Admissions and Registration, Marks Reports, Attendance Reports, Course Details, Semester details. This reduces data error and ensures that information is always up-to-date throughout the College.

I. INTRODUCTION:
ERP (Enterprise Resource Planning) system is built on the basis of information technology, using modern enterprises, advanced management ideas, and all the resources and information of enterprise; and it provides all-round and systematic platform on decision-making, planning, control and operating results of achievements. This is an enterprise information management system for college level enterprise. ERP system is information system as well as management theory and designing or processing of information from different resources. College management module like attendance management, time-table management, student/staff information management is important in college level enterprise management. Accounting Module enterprises are an important part of resource flows, and one of ERP systems' important part. Main components: one is based on the needs of the enterprises to carry out the attendance process, including student daily information of attendance of each lecture; the other is the management of time-table, notices, etc. Management of student data and transactions through conventional methods which results in an erroneous output and hence affects the efficiency of an institution. The problem results in, wastage of time, huge paperwork and finally inability and ineffectiveness of work. ERP software applications to improve the performance of organizations for resource planning, management control and operational control. ERP software consists of multiple software modules that integrate activities across functional departments - from project planning, order tracking to financial accounting in an Educational Business Organization.

II. SYSTEM SPECIFICATION

Hardware Requirements
- Processor: Core i3/i5/i7
- RAM: 2-4GB
- HDD: 500 GB

Software Requirements
- Platform: Windows Xp/7/8
- Front End: Php
- Back End: MYSQL
- Server: XAMP SERVER

III. EXISTING SYSTEM:
Manual Process of this requires a lot many of records to maintain. College authorities need to take care to store each and every student details and also there examination details. Manual process requires man power. Existing System is manual process. Data Security is not provided in this system. Integrating data is also a problem in this system. It is not User friendly system.

IV. PROPOSED SYSTEM:
Proposed system is web application. In this application student details are maintained efficiently admin has a facility to view the student details, edit the details, semester details and marks details are also maintained in this system. This has an enhanced facility. It is a fast, affordable, low-risk solution with easy implementation and lower maintenance and operational costs.

V. MODULES
This Project contains the following Modules
- Admin Module
- Authentication
- Search
- Display

Module Description

Admin Module:
Admin is the Super User of the system who maintains the details of the system. Admin Module contains the following sub modules: Course Details, Branch Details, Semester Details, Subject Details, Student Registration, Student Attendance, Student Marks, Student Update Marks, and Student Details Update

Authentication Module:
This module contains all the information about the authenticated users. User without his username and password can’t enter into the login if he is only the authenticated user then he can enter to his login and then he will have authorization based upon their roles.

Search:
Different search facilities are provided to Admin and students in this system. Normally search can be done on different
criteria. For that purpose the system is having search capabilities like Simple Search, Category wise Search.

**Display Module:**
Different types of information’s can be generated by the Admin on the student details. The details can include Course Details, Branch Details, Semester Details, Subject Details, Student Registration, Student Attendance, and Student Marks

**VLARCHITECTURE DIAGRAM**

![Architecture Diagram](image)

**VII. LANGUAGE SPECIFICATION PHP**

**PHP:** Hypertext Preprocessor, is a widely used, general-purpose scripting language that was originally designed for web development, to produce dynamic web pages. It can be embedded into HTML and generally runs on a web server, which needs to be configured to process PHP code and create web page content from it. It can be deployed on most web servers and on almost every operating system and platform free of charge. PHP was originally created by Rasmus Lerdorf in 1995 and has been in continuous development ever since. The main implementation of PHP is now produced by The PHP Group and serves as the de facto standard for PHP as there is no formal specification. PHP is free software released under the PHP License, which is incompatible with the GNU General Public License (GPL) because of restrictions on the use of the term PHP PHP has evolved to include a command line interface capability and can also be used in standalone graphical applications.

**Usage:**
PHP is a general-purpose scripting language that is especially suited for web development. PHP generally runs on a web server. Any PHP code in a requested file is executed by the PHP runtime, usually to create dynamic web page content. It can also be used for command-line scripting and client-side GUI applications. PHP can be deployed on most web servers, many operating systems and platforms, and can be used with many relational database management systems. It is available free of charge, and the PHP Group provides the complete source code for users to build, customize and extend for their own use. PHP primarily acts as a filter, taking input from a file or stream containing text and/or PHP instructions and outputs another stream of data; most commonly the output will be HTML. Since PHP 4, the PHP parser compiles input to produce byte code for processing by the Zend Engine, giving improved performance over its interpreter predecessor. Originally designed to create dynamic web pages, PHP now focuses mainly on server-side scripting, and it is similar to other server-side scripting languages that provide dynamic content from a web server to a client, such as Microsoft's Active Server Pages, Sun Microsystems' JavaServer Pages and mod_perl. PHP has also attracted the development of many frameworks that provide building blocks and a design structure to promote rapid application development (RAD). Some of these include CakePHP, Symfony, CodeIgniter, and Zend Framework, offering features similar to other web application frameworks.

**About HTML**

HTML, which stands for Hyper Text Markup Language, is the predominant markup language for web pages. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists etc as well as for links, quotes, and other items. It allows images and objects to be embedded and can be used to create interactive forms. It is written in the form of HTML elements consisting of "tags" surrounded by angle brackets within the web page content. It can include or can load scripts in languages such as JavaScript which affect the behavior of HTML processors like Web browsers; and Cascading Style Sheets (CSS) to define the appearance and layout of text and other material. The W3C, maintainer of both HTML and CSS standards, encourages the use of CSS over explicit presentational markup. Hyper Text Markup Language (HTML) is the encoding scheme used to create and format a web document. A user need not be an expert programmer to make use of HTML for creating hypertext documents that can be put on the internet. Most graphical e-mail clients allow the use of a subset of HTML (often ill-defined) to provide formatting and semantic markup not available with plain text. This may include typographic information like coloured headings, emphasized and quoted text, inline images and diagrams. Many such clients include both a GUI editor for composing HTML e-mail messages and a rendering engine for displaying them. Use of HTML in e-mail is controversial because of compatibility issues, because it can help disguise phishing attacks, because it can confuse spam filters and because the message size is larger than plain text.

**Naming Conventions**
The most common filename extension for files containing HTML is .html. A common abbreviation of this is. htm, which originated because some early operating systems and file systems, such as DOS and FAT, limited file extensions to three letters.

**HTML Application**
An HTML Application is a Microsoft Windows application that uses HTML and Dynamic HTML in a browser to provide the application's graphical interface. A regular HTML file is confined to the security model of the web browser, communicating only to web servers and manipulating only webpage objects and site cookies. An HTA runs as a fully trusted application and therefore has more privileges, like creation/editing/removal of files and Windows Registry entries. Because they operate outside the browser's security model, HTAs cannot be executed via HTTP, but must be downloaded (just like an EXE file) and executed from local file system.

**About Javascript**

JavaScript is an object-oriented scripting language used to enable programmatic access to objects within both the client application and other applications. It is primarily used in the
form of client-side JavaScript, implemented as an integrated component of the web browser, allowing the development of enhanced user interfaces and dynamic websites. JavaScript is a dialect of the ECMAScript standard and is characterized as a dynamic, weakly typed, prototype-based language with first-class functions. JavaScript was influenced by many languages and was designed to look like Java, but to be easier for non-programmers to work with.

VIII. TESTING:

Testing is a set of activities that can be planned in advance and conducted systematically. For this reason a template for software testing, a set of steps into which we can place specific test case design techniques and testing methods should be defined for software process. Testing often accounts for more effort than any other software engineering activity. If it is conducted haphazardly, time is wasted, unnecessary effort is expanded, and even worse, errors sneak through undetected. It would therefore seem reasonable to establish a systematic strategy for testing software

Type of Testing
There are two type of testing according their behaviors
  I. Unconventional Testing
  II. Conventional Testing

Unconventional Testing
Unconventional testing is a process of verification which is doing by SQA (Software Quality Assurance) team. It is a prevention technique which is performing from begging to ending of the project development. In this process SQA team verifies project development activities and insuring that developing project is fulfilling the requirement of the client or not.

  In this testing the SQA team follows these methods:
  1. Peer review
  2. Code walk and throw
  3. Inspection
  4. Document Verification

Conventional Testing
Conventional Testing is a process of finding the bugs and validating the project. Testing team involves in this testing process and validating that developed project is according to client requirement or not. This process is a correction technique where testing team find bugs and reporting to the development team for correction on developed project built. For these testing the testing team using the following methodologies:

  A. UNIT TESTING:
The primary goal of unit testing is to take the smallest piece of testable software in the application, isolate it from the remainder of the code, and determine whether it behaves exactly as you expect. Each unit is tested separately before integrating them into modules to test the interfaces between modules. Unit testing has proven its value in that a large percentage of defects are identified during its use. In the company as well as seeker registration form, the zero length username and password are given and checked. Also the duplicate username is given and checked. In the job and question entry, the button will send data to the server only if the client side validations are made. The dates are entered in wrong manner and checked. Wrong email id and web site URL (Universal Resource Locator) is given and checked.

B. INTEGRATION TESTING:
Testing is done for each module. After testing all the modules, the modules are integrated and testing of the final system is done with the test data, specially designed to show that the system will operate successfully in all its aspects conditions. Thus testing is a confirmation that all is correct and an opportunity to show the user that the system works.

C. VALIDATION TESTING:
The final step involves Validation testing, which determines whether the software function as the user expected. The end-user rather than the system developer conduct this test most software developers as a process called “Alpha and Beta testing” to uncover that only the end user seems able to find. The compilation of the entire project is based on the full satisfaction of the end users. In the project, validation testing is made in various forms. In question entry form, the correct answer only will be accepted in the answer box. The answers other than the four given choices will not be accepted.

Testing Strategies
A number of software testing strategies have been proposed in the literature. All provide the software developer with a template for testing and all have the following generic characteristics:

  1. Testing begins at the component level and works “outward” toward the integration of the entire computer-based system.
  2. Different testing techniques are appropriate at different points in time.
  3. The developer of the software conducts testing and for large projects, independent test group.
  4. Testing and debugging are different activities, but debugging must be accommodated in any testing strategy.

IX. TESTING TECHNIQUES:

Module testing:
Module Testing is a process of testing the system, module by module. It includes the various inputs given, outputs produced and their correctness. By testing in this method we would be very clear of all the bugs that have occurred.

Interface testing:
The Interface Testing is performed to verify the interfaces between sub modules while performing integration of sub modules aiding master module recursively.

Black Box Testing:
In this testing we give input to the system and test the output. Here we do not go for watching the internal file in the system and what are the changes made on them for the required output.

White box testing:
It is just the vice versa of the Black Box testing. There we do not watch the internal variables during testing. This gives clear ideas about what is going on during execution of the system. The point at which the bug occurs was all clear and were removed.

Integration testing:
The strategies for integrating software components into a functioning product include the bottom-up strategy, the top-down strategy and to ensure that modules will be available for
integration into the evolving software product when needed. The integration strategy dictates the order in which modules must be available and thus exerts a strong influence on the order in which modules are written, debugged and unit tested.

Maintenance:
The objectives of this maintenance work are to make sure that the system gets into work all time without any bug. Provision must be for environmental changes which may affect the computer or software system. This is called the maintenance of the system. Nowadays there is the rapid change in the software world. Due to this rapid change, the system should be capable of adapting these changes. In our project the process can be added without affecting other parts of the system. Maintenance plays a vital role. The system will able to accept any modification after its implementation. This system has been designed to favor all new changes. Doing this will not affect the system's performance or its accuracy. This is the final step in system life cycle. Here we implement the tested error-free system into real-life environment and make necessary changes, which runs in an online fashion. Here system maintenance is done every months or year based on company policies, and is checked for errors like runtime errors, long run errors and other.

X. CONCLUSION

This thesis has attempted the improvement of the teaching-learning process in higher educational institutions by using knowledge management. The unique feature in this project is that it covers almost every part of an educational organization which is very important to improve the quality of education. In this work almost all the methods have been used to extract the knowledge from the contributors, who are related to the educational organizations. Implicit knowledge is the backbone of the knowledge portal; so, this knowledge has been managed very well in this portal. In conclusion, the author suggests that higher educational institutions or universities that put into practice, a knowledge portal in their organizations can get a more friendly knowledge community. A more informed knowledge community with a strong sense of skills may enhance its own success. This research is a starting attempt to analyze, evaluate and improve the performance of faculty members and students, to enhance the quality of higher education and the higher educational system. The results discussed show that there is a commendable improvement in the knowledge management system, student performance improvement system and faculty performance, designed from the knowledge collected and stored in the knowledge portal. The higher educational institutions can use such systems to enhance their overall performance. Knowledge management systems in 122 institutions can improve their policies, enhance their strategies, and improve the quality of the management system. A knowledge society is achievable once the Knowledge portal and knowledge management systems are implemented in all the higher educational institutions

XI. FUTURE ENHANCEMENT

A number of directions can be followed as an extension of this research. Some challenges and open questions still to be explored in the research work are as follows:
- Identifying new sources of implicit knowledge
- New methods for extraction of knowledge
- New methods to improve the performance of educational institutions

XII. REFERENCES