

## ZEND: Survey on the Examination System

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### Abstract

With the development of computer applications and expansion of network applications, such as distance and online examinations, there is a tremendous need for an effective examination system. Teachers and students require these technologies to undergo an effective teaching-learning process. Examination system is a powerful tool that can satisfy the requirements of stakeholders. A powerful examination system is developed using the Zend. The realization of the principle is to optimize the code before the final execution by running the compiler. The examination system is decomposed into three different modules: Manager Module, Faculty Module and Student Module. They include the online tests, exam management and exam questions management etc.

**Keywords:** Examination system, CSS, Zend.

### 1. Introduction

Today, with the rapid development of network technology, in education, distance education is accepted by most people. In the distance education, online exam is an important part. Exam management is a difficult work for each manager, such as organization propositions, student's examination, grading, performance assessment, paper analysis. With the increase of the number of students, test administration is more and more difficult. The traditional examination has been unable to meet the requirement of modern

examinations. With the rapid development of computer applications, online exam has been recognized by many companies and schools.

Examination system can also be online-exam, the exam conducted through the internet or intranet for a remote student. Most of the issues results as the student finish the test, when there is an answer processing module also include with the system. Student is given a limited time to write the questions and time is up the answer paper is disabled and answer is sent to teacher. The teacher will evaluate answers, and send the result to students.[1]

Examination system improve reliability, availability, efficiency for examination and reduce the exam cost, it will become an indispensable examination mode. It is easy to manage, meet the multi-course test and evaluation requirements. Exam system provides a platform for teachers, and provides students with independent learning conditions. Examination system using Zend can improve the speed of execution of PHP. In general, the performance of using the Zend Optimizer in PHP applications is faster than when not in use to 40% to 100%. Visitors can browse the Web faster, in order to complete more transactions, and create better user satisfaction.

### 2. Technical background and analysis

The examination system mainly used PHP, CSS, HTML, JavaScript, Zend optimizer, Mysql and other techniques and tools. Follow these different kinds of techniques

and methods to summarize.

### 2.1 PHP introduction

PHP is an open source, server-side, HTML-embedded scripting language used to create dynamically generated Web pages. With an easy-to-use syntax and a large, extensible library of modules, PHP makes it fast and easy to create powerful data-driven Web sites for e-commerce, community portals, and other Web-based applications.[3]

### 2.2 Zend optimizer

Zend optimizer is software that is used to improve the speed of execution of the php application. The realization of the principle is to optimize the code before the final execution by running the compiler. Visitors can browse the Web faster, in order to complete more transactions, and create better user satisfaction.

### 2.3 CSS

Cascading Style Sheets (CSS) is a style sheet language used to describe the presentation semantics (the look and formatting) of a document written in a markup language. It's most common application is to style web pages written in HTML and XHTML, but the language can also be applied to any kind of XML document, including plain XML, SVG and XUL.

CSS is designed primarily to enable the separation of document content (written in HTML or a similar markup language) from document presentation, including elements such as the layout, colors, and fonts.[2] This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the

structural content (such as by allowing for table less web design). CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. While the author of a document typically links that document to a CSS style sheet, readers can use a different style sheet, perhaps one on their own computer, to override the one the author has specified

### 2.4 Mysql

Mysql is a relational database management system that runs as a server providing multi-user access to a number of databases. It is named after developer Michael Widenius' daughter, MySQL phrase stands for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation.[5]

## 3. Design and analysis of the Examination system using Zend

### 3.1 Architecture of exam system

This system is consisting of a web server with a database. This server is configured with proper security measures. Clients can connect through the internet using web browser (such like IE, Firefox etc) to the server and take the exam. Students too can connect to the server through the internet or intranet for do other tasks and setup papers.[1]

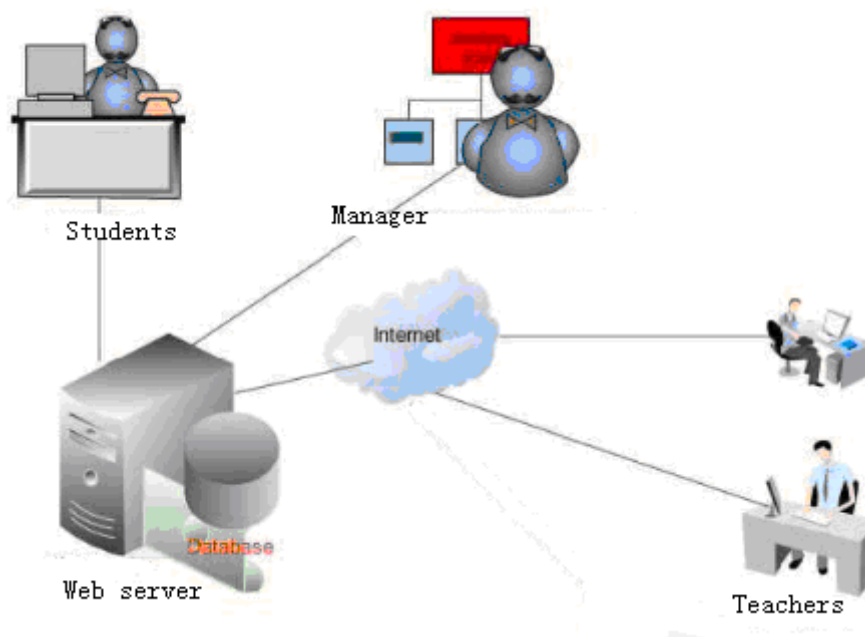


Figure1. Architecture diagram

### 3.2 Detail of exam system

Exam system includes three parts: Manager Module, Faculty Module, and Student Module.

#### 3.2.1 Manager subsystem

Manager can maintain system for manager, student and faculty. They create and delete the questions that the teachers want. Manager also can add and delete new teacher and new students. They control all the information.

#### 3.2.2 Faculty subsystem

Generally teachers use exam system to check the situation of student learning. Faculty can choice the course then add and delete the questions. When the students finish the exam, faculty will get the result.

#### 3.2.3 Student subsystem

Firstly students login the system, then they can select the course they want to test. Every exam has stable time to limit. When test finish, students will get the result. The result shows the detail (which one is error,

which one is correct, total mark etc).

## 4. Result and conclusion

Examination system using Zend satisfy requirement of students, they can exam through this system, managers manage different kind of information, maintain system and keep the database good-running [4]. This system runs faster than other exam system without Zend.

The examination system is better than traditional examination:

Confidence that a large number of student are being assessed equally; reduced opportunity for cheating; less marking work. [1]

Figure 2 represent interface for students when student start to answer the paper. There are two types for questions.(true-false question, single choose). The table of number represents number of questions. When we click one number, the question will be shown automatically.



Figure2. Students interface for answering questions

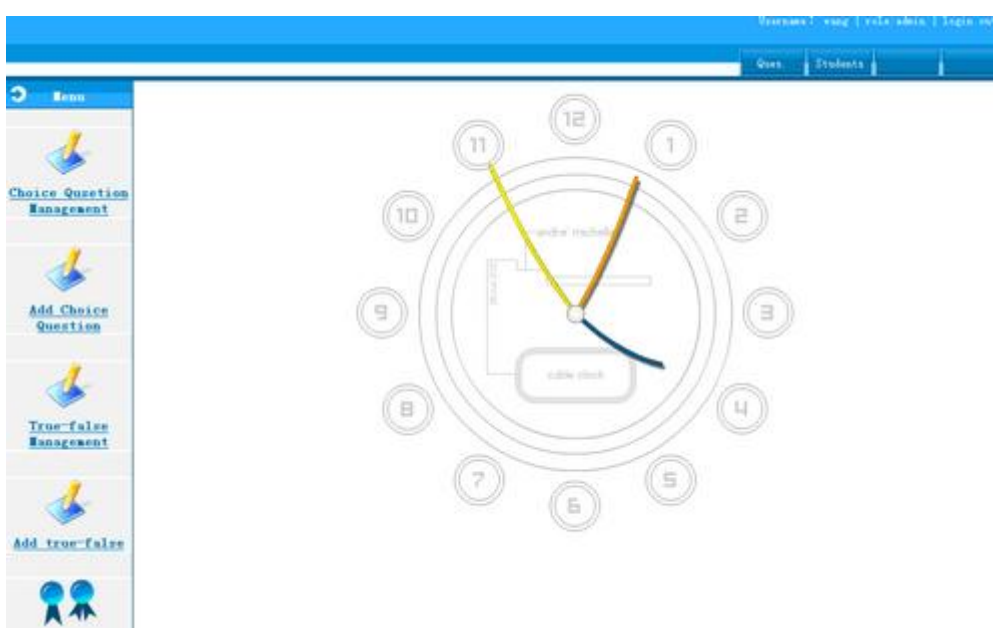


Figure3. Manager interface

Figure 4 show faculty interface for adding question. Teacher can make any question with or without pictures. When

click the button system can automatically save the question into database.

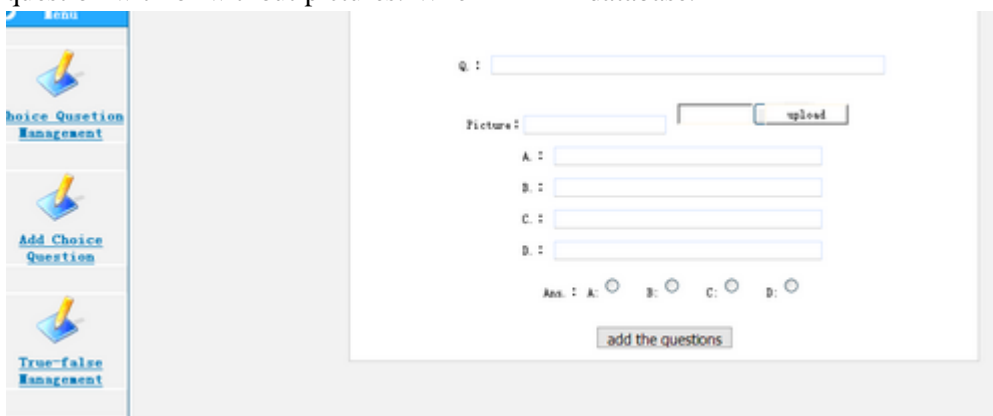


Figure4. Faculty interface for creating questions



Figure5. Managers interface for managing faculty and student

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