Design According to the ASP on-Line Examination System Database

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Abstract: This system is the on-line examination system of applied ASP and database technique design.It elaborated the need analysis of system, E-R model design and the transformation of the relational model, table structure and the relation between table model etc.. Through this system, hoping to make examination process easy, fast and convenient.

1 INTRODUCTION

Nowadays, the information technology has already penetrated into all field of all field of human life, especially the information construction of the colleges have already turned into an overall development stage. Along with the network technology, multimedia technology, database technology application of fusion in the field of education, education way is facing a huge change. In the process of traditional examination, the examination process complex, high cost invigilation teachers demand is big, the secrecy faults may make it harder for new way of education to with traditional test standards. For a Long time, the teaching feedback is usually a numerous and complex project, so the writer applied ASP (ASP is Active Server Page abbreviation, mean "dynamic state server page", is a replacing of the Microsoft company development CGI a kind of application of the script procedure, it can interact with databases and other programs, is a kind of simple and convenient plait distance tool) and database technique, designed on-line examination system. Online examination system can make people to take an examination of anytime and anywhere, overcome the limit of time and region. Compared with the traditional way of examination, it has the advantages of automaticity, objectivity, authenticity, confidentiality. By reading a large number of documents, the writer designed the on-line examination system based on ASP and

database technology to design, hope that through this system, to avoid the cumbersome process of written examination, at the same time, it can effectively control the exam cheating situation, to ensure the test can be open, fair.

2 THE RESEARCH STATUS AT HOME AND ABROAD

Both in domestic and foreign online examination system application is very broad, with the popularity of online examination system, the application of the online examination system to reduce the test made tremendous contributions to the social cost. Online examination system can be divided into two types according to their size, is a kind of on-line examination system based on LAN technology, another is based on Internet network online exam system. In foreign countries, the online examination system has been widely used in many areas and some international certification exam is mostly in the second type examination system, such as the United States most of the ICCP certification exams, toefl English online test, ielts, computer skills test, etc. Online exam system abroad are generally for a specific domain, has the question bank size, strong pertinence, safe and reliable, etc.

The start and development of in the online examination system in China is relatively late, but development is very rapid, the services provided by the almost covers all levels of various types of training courses, the overall rich achievements in

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online exam of our country, but some problems still exist in the aspect of system function, system interconnection, docking between ease of use aspect also needs to improve. These defects makes it hard for the online examination system of large-scale application in formal test.

3 TECHNICAL ANALYSIS

3.1 The Advantage of ASP and Features

With the increasing development of Internet technology, ASP was gradually accepted and widely used. It can be brought to the attention of the people because the user can use it to easily create and execute web server applications, the execution results are standard HTML, will the results of the ASP directly in the browser "browse". ASP has the following features:

Simplicity, learnability: as long as you use the general document editing program, such as Windows notepad, Dreamweaver, FrontPage, etc can all be edited.

Compatibility and adaptability: ASP.NET is based on the common language compiler running program, the common language of basic library, information mechanism, the processing of data interface can be seamless integration to ASP.NET Web applications.

High efficiency, easy to control: an ASP.NET application installed on a single server system simply copy some files, must not require the system to restart.

Reliability and safety: Based on the Windows authentication technology and application configuration, can ensure the safety of the source program is.

3.2 The Limitations of ASP Technology

As a mainstream development of Web application development technology, ASP technology has been widely used. However, due to some characteristics of the ASP technology, it is not suitable for the development of large scale and complex demands of Web application, its limitations embodied in several aspects:

(1) low development efficiency: control logic to be written in a scripting language embedded in HTML tag is used to display, so the development of the ASP page efficiency is low, and not conducive to the late maintenance;

(2) the development of language is limited: dynamic part adopts script language, its function is restricted, not suitable for the development of complex procedures;

(3) the development process is: the development process trival, need a programmer to maintain the page data transfer between work, to want to develop the larger application is difficult;

(4) development program ideas difficult: ASP technology is difficult to adopt the object-oriented ideas and methods. Therefore, the technology is not suitable for development of large, complex Web applications.

4 THE REQUIRMENTS ANALYSIS STAGE

4.1 Information Need

Examining system is an important part of the management of university students, so with the aid of the computer a powerful information processing ability, the development of the Web on-line examination system is very necessary. In today's information age, online examination for the modern way of education puts forward a new way of examination, can be solved in the process of traditional examination big workload, low efficiency, some problems such as wasting resources, this system has realized the online test automation, easy, and promote the teachers' management improves the efficiency of teaching.

4.2 Function Request

Using this system, schools can set up their own questions, papers and student test record, and can test at any time. The examinee can also examine result and examination answer through the system.

This system used for examinations, without too much limitation, popularity after the implementation of the test system can not only improve the test efficiency, saving a lot of time, manpower and material resources and financial resources, but also can improve the objectivity and impartiality of the examination results over a large area. System need to have the following functions:

(1) for the administrator to manage the exam, the examinee, system maintenance.

(2) for the examinee, after the success of the online registration can log into the system, to complete the test within the given time.

(3) Submit the answer when the system automatically controls the right answer to calculate scores, so that students can get a timely feedback.

Test question management mainly includes the definition of subjects, edit, delete, to the question to add, edit, and delete, manual generation of test paper, randomly generated and select generate questions; The examinee management mainly includes the examinee to add, update, and delete, the definition of examination permission and cancellation, the cancellation of the examinee exam qualification and recovery, view the list of all the examinee scores various departments; System management can add, delete, administrators and change the password.

Specific functions include Three, the concept structure design stage. Concept structure's design stage is the key of the database design, It is through a comprehensive, induction and abstraction of user requirements, conceptual model to form an independent of a specific DBMS. Examinee's on-line examination movable diagram is as follows (Figure1):
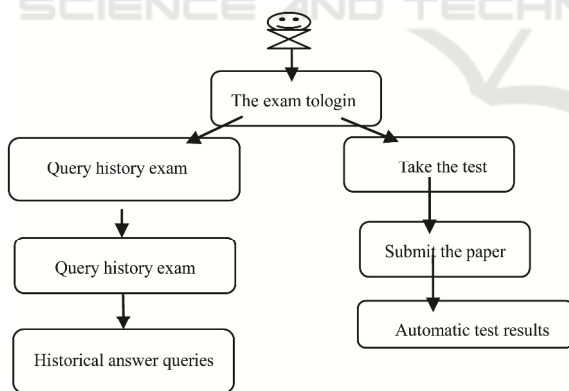

Figure 1: The conceptual model of the DBMS.

The system has six entity sets, respectively, the examinee, exam, exam questions, curriculum, administrator, entity sets have such links, :Examinee with paper m:n, paper and test questions m:n, examinee and course m:n, course and database 1:1, database with test questions 1:N; Attribute corresponding to each entity: Test(test number, test code, test name and test time), test questions (question number, score, the contents of the paper,

the answer, paper type, difficulty, The examinee (departments, professional, class, test number,name, student number,).System main function page includes: main page (index. The HTML), data persistence layer class files (Ben_try. Cs), background management system of landing page (admin/adminlogin. Aspx), background management system home page (admin/admin. HTML), test paper management page (admin/mgTrybooks. Aspx), generating test paper (admin/ trybooksManage. Aspx page, exam management page (admin/mgScore. Aspx), online test landing page (stuTry/stuLogin. Aspx), online test page (stuTry/try. Aspx).

4.3 Data Management Requirements

Examination system stores a lot of item bank, and the records in the database is tens of thousands of, at the same time, its corresponding system data table data is quite huge, so when the database operation, need to its running speed or response time within the range of people can accept.

4.4 Fault Handling Requirements

A perfect system for user input is error, improper operation should have certain response, reason should be given some unexpected surprises, as far as possible to maximize meet user needs. Such as computer abnormal accident, computer power shutdown problems lead to the examinee examination unexpectedly, that has implications for how the maximum protection problem students' test records. For this kind of problem, can set the system automatically save time in a reasonable scope, the greatest degree of save the students in the process of examination questions.

5 THE LOGIC STRUCTURE DESIGN STAGE

The logic structure is the information structure of independent any kind of data model. the task of the logical structure is the logical structure of the conceptual design stage design good basic E-R diagram to support the appropriate selection of DBMS data model fit, and its optimization.

E-R diagram into relation model is transformed to solve the problem is how the entity type and the link between the entities into relation model, how to determine the attribution of these models and codes.

Table 1: (alltrys).

The field names	The data type	Allow empty	Field limits	Note
Trys_id	int	Not null	Primarykey	The test paper number
Object_id	int	Not null	Foreignkey	Exam course
Try_diff	int	Not null	-	Difficulty of test paper
Try_score	int	Not null	-	Test scores
Try_type	int	Not null	-	Test types
Try_subject	varchar(200)	Not null	-	title
a	varchar(100)	-	-	A option content
b	varchar(100)	-	-	B option content
c	Varchar(100)	-	-	C option content
d	varchar(100)	-	-	D option content
Try_keys	Varchar(10)	Not null	-	The test question number

According to the demand and the analysis of system design, system database table test subjects table, paper information table, database list, examination table, examination results and answer sheet, the examination permission table, class examinee table, table administrator, part of the form in Table1

6 PHYSICS DESIGN STAGE

The task of physical database design phase is based on the specific computer system (DBMS and hardware etc.) characteristics, determine the storage structure and access methods for a given rational database model. It is the storage space to make the physical database design that occupy less, and the operation of the database has the highest possible speed. This stage is the realization of the internal model of database system, its quality directly determines the performance of the whole system. The initial conditions for these parameters, the system gives a reasonable default value, to the performance of the system, in the physical design has been on these parameters re assignment.

Physical design has the following features: don't directly to end users, the general users do not need to know the details of the physical design, physical design can not consider the convenience users to understand. The design content includes: 1. Determine the storage structure of data, choose the DBMS; 2. To determine the physical distribution of data (including data partitioning); 3. Choose for data access path, namely the design of the index; 4.

Adjust and optimize the performance of the database, such as to adjust some of the DBMS option and parameter Settings.

7 DATABASE IMPLEMENTATION AND MAINTENANCE

To its function in the process of database operation and performance test, after the commissioning qualified database, database development and design work is completed, the next step is officially running debugging. But, due to the application environment changing, physical storage will be constantly changing in the process of database operation, monitoring and analysis of the database design, backup and restore, organization and structure, security and integrity control such as maintenance is a long-term task.

7.1 Database Backup and Recovery

Because the system is simple, generally not what fault, but still need ahead of time the data backup, if the database is damaged or system failure, we can for a rainy day.

7.2 The Security of the Database, Integrity Control

Because of the change of application environment, users in the system of categories, integrity constraints conditions will change too, which will

need to keep correct database to meet the demand of system operation and user.

7.3 The Monitoring Analysis of Database

Make full use of the database in the operation of the system to produce a series of performance parameter values, judge the current situation of the system operation, and timely adjustment and improvement.

7.4 The Heavy Organization and Structure of the Database

Due to increased new entity or applications, the existing database design can't meet the new requirements, you need to adjust the database model and internal model, of course, the database refactoring is limited; The heavy organization and there are structural differences between the two, the former does not modify the original logical and physical structure of system design, while the latter is likely to change the database part of the model.

8 CONCLUSION

This paper proposes a design and implementation of the online examination system based on ASP technology, can be randomly generated examination paper, database maintenance, online automatic marking scores, and other functions, has a certain economy, reliability, scalability, for the teaching process in the process of test, the results of test are applicable, and the formation of the online examination system breaks through the limit of time and space. Summary ASP online examination system make exam easy, network, intelligence, especially for traditional relatively heavy paper work, not only reduce the time of checking paper, but also improve the checking work accuracy and efficiency, and to a certain extent, the system can effectively control the exam cheating to ensure that the examination, can open, fair. Therefore, colleges should be combined with their own actual actively carry out the design and construction of online examination system based on ASP, in order to improve teaching quality, promote the optimization of the teaching.

Any development and application of a system is a long-term experiment process, need to practice constantly improve and improve, make the system more practical. With the development of computer technology and Internet technology, online test will become the inevitable trend, design and development of intelligent, interactive online examination system in the development of the future will have more broad application prospects.

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