

Research on the Structure design of interactive Multimedia Distance Education System

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Abstract

In recent years, with the rapid development of Internet technology and multimedia information technology, multimedia remote interactive teaching system is gradually improved. Multimedia distance education can terminal via the Internet, so that the students, white-collar workers, the workers all kinds of people in any time, any place free teaching model, multimedia distance education system by uploading a high quality, high level of teaching materials, to meet the needs of all kinds of people, but also can realize the online communication with teachers to discuss, to mobilize the interest of learning staff. The multimedia distance education system not only changes the traditional offline teaching mode, but also makes the background of the multimedia education system more rigorous through continuous improvement and updating. This paper analyzes and studies the concrete design structure of interactive teaching mode adopted by multimedia distance education system and the teaching objectives achieved by the teaching mode.

Keywords

Interactive; Multimedia; Distance education; The structure design.

1. Remote interaction concept

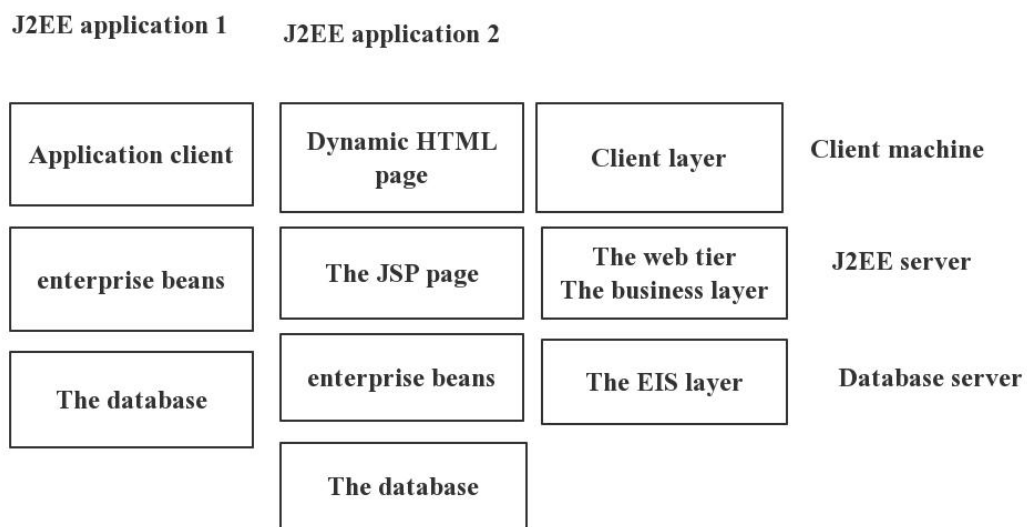
Interaction is when two different ideas come together to form a new idea. Interaction is the core of distance education. In the concept of distance interaction, students can browse teaching courseware online to realize their independent learning ability and cultivate their flexible and independent learning ability. Since the distance teaching model was put forward in the 1980s, the distance education model has gradually evolved into three interactive links: students and teachers, students and students, students and courseware, and each interaction link needs the support of Internet information technology, so that the multimedia distance interaction model can be carried out smoothly. [1.2.3]With the continuous development of Internet information technology, the teaching mode between students and courseware is gradually being replaced by other teaching modes. In the 1990s, with the idea of teaching and learning put forward, multimedia distance teaching through the combination of teaching and learning technology, so as to better strengthen the service of learning courses, for distance education teaching laid a foundation. Therefore, it can be found that communication media teaching method can not only effectively improve the learning efficiency of students, students and teachers through the realization of two-way interactive teaching mode, so as to achieve synchronous communication mode, so as to achieve communication and cooperation teaching mode in the field of multimedia distance teaching mode education.

2. Multimedia distance education system related technology

2.1. Overview of J2EE system technology

J2EE system is mainly applied in the enterprise application system, and now nearly half of the enterprises in the global 500 are applied to change the system, so it can be seen that the J2EE system in the application process, not only has stability, security, convenience. J2EE system technology mainly adopts multi-layer distributed structure, the specific application system includes: persistence layer, business logic layer and presentation layer three different levels, and each level is interrelated, interrelated. The specific model structure is shown in Figure 1 below[4]:

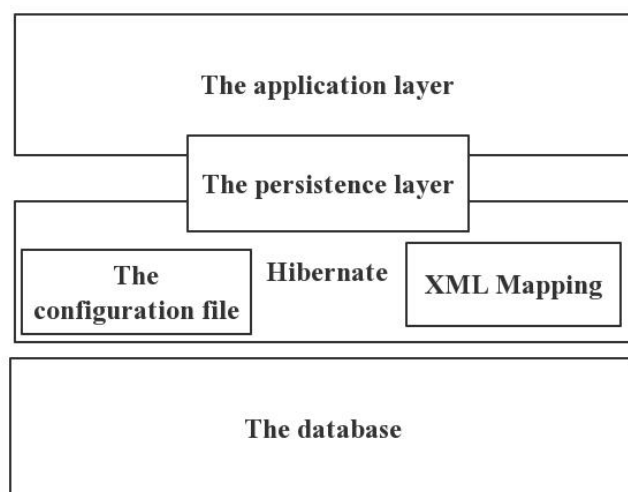
Figure 1 J2EE design model structure



2.2. Overview of Hibernate system technology

Hibernate system is mainly applied in GNU public software that allows free development. The main technical principle is to map the database content in the traditional model in the object domain to the system, thus forming the framework model. The specific technical structure of the system is shown in Figure 2 below. Hibernate technology forms a relational model by uploading the design model to the database during operation. The Hibernate model uses the relational model to match the original and model of the system to form the associated configuration file. This data mapping relationship, in the first time for the system internal data one-to-one, one-to-many and many-to-one matching.

Figure 2 Hibernate design model structure

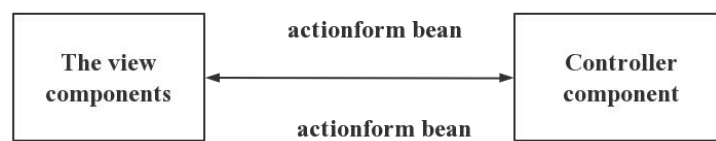


2.3. Struts system technology overview

Struts system is the presentation layer of open source framework. The main design concept is

to study the presentation layer by using WEB programs by reorganizing the internal components of the presentation layer. Because Struts system has certain flexibility, plasticity and fabricability. In addition, the Struts system is mainly divided into logic area, business processing area and view area. In order to facilitate enterprise application, the development of related view layer is vigorously carried out. Struts system is mainly through the implementation of control procedures to effectively create system forms, and finally verify the development theory. See Figure 3 for details:

FIG. 3 Struts design model structure



3. Demand analysis of interactive multimedia distance education system

In the development and research process of each system software, it is necessary to conduct a comprehensive analysis of the software system requirements in advance, and ensure that the software meets the needs of the required users. Therefore, software requirements analysis is the premise of every software development.

3.1. The feasibility

In order to better serve students and teachers, multimedia distance education system can not only realize the flexibility, plasticity and easy maintenance of teaching, but also bring economic benefits for software by adopting interactive teaching mode. With the improvement of people's quality of life and the continuous development and progress of Internet information technology, distance education system can break the limitation of time and space, so that students can learn the knowledge they are interested in at home, saving a lot of teaching resources. On the Internet, teachers and students can communicate. Teachers can solve the problems students encounter in the learning process more conveniently and efficiently. Multimedia distance education system can meet the various needs of students and teachers in the learning process by establishing a new teaching mode.

3.2. Security

Because people in the age of big data, data information easy to use, multimedia remote teaching system in order to ensure that the user can go smoothly operation, through the increase the intensity of user management, according to the users of different learning requirements, open different permissions, so as to better control the client, to ensure the security of multimedia remote teaching system, friendliness, scalability, Multimedia distance teaching system can be long-term, scientific, reasonable, sustainable development of the application.[5]

4. Conclusion

At present, the development trend of education gradually tends to the multimedia distance education system, and the remote education management system in the process of running application, leave the Internet Internet information technology and multimedia technology, multimedia distance education system through the video, audio, image, data and other information, combining to achieve a complete set of multimedia distance education system. Through consulting a large number of domestic and foreign literature, the author of this paper studies and analyzes the structure design of multimedia remote interactive system, and finds that the multimedia remote interactive system is mainly a combination of J2EE technology, Hibernate technology and Struts technology. Thus, a multimedia distance teaching system with security, feasibility, friendliness and expansibility can be developed to better serve end users, mobilize students' interest in learning and improve the quality of learning.

References

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