

高校实验室管理系统设计与实现

摘要: 随着信息化发展, 高校相关学术研究的实验设备不断完善, 与之相关的管理模式却没有得到更进一步的发展。实验室管理系统可让管理人员或使用人员以更加简单直接的方式对实验室进行管理, 并及时了解实验室的使用情况, 这使实验室的利用效率得到明显提高。

本文选取 B/S 架构设计并实现了一个实验室管理系统。系统包含多个子功能, 如故障管理功能。本系统开发的侧重点在于实验室的利用率以及相关实验室使用信息的记录。

本文开头主要对当前国内外实验室管理系统现在进行了阐述, 并以当前发展现状为基础对其发展方向进行了假设, 随后指出了本课题的研究背景与意义。随后对相关开发技术进行介绍。在对相关实验室管理系统业务流程详细分析后, 对系统进行需求分析, 根据我国的实验室管理方式, 对我国的实验室管理系统有了一个初步规划。在概要设计中, 系统使用 B/S 软件架构, 对实验室管理系统的功能也进行了简单描述。设计了系统的数据库模型, 并以 E-R 图、数据表的形式进行表示。随后对系统的相关功能搭配相应数据流程图进行阐释。最后对整个系统的功能与应用进行测试。

关键词: B/S; 数据库; PHP; 实验室管理

Design and implementation of laboratory management system in Colleges and Universities

Abstract:With the development of informatization, the experimental equipment of university-related academic research has been continuously improved, but the management model related to it has not been further developed. The laboratory management system allows managers or users to manage the laboratory in a simpler and more direct way, and to keep abreast of the laboratory's usage, which significantly improves the laboratory's efficiency.

In this paper, a laboratory management system is designed and implemented with B / S structure. The system contains multiple sub-functions, such as fault management functions. We focus of the development of this system is the utilization rate of the laboratory and the recording of relevant laboratory usage information.

At the beginning of this paper, the current domestic and foreign laboratory management systems are mainly elaborated, and the development direction is assumed based on the current development status, and then the research background and significance of this topic are pointed out. Subsequently, related development technologies are introduced. After analyzing the business process of the related laboratory management system in detail, the requirements of the system are analyzed. According to the laboratory management method in China, we have a preliminary plan for the laboratory management system in China. In the general design of the system, while confirming that the system uses the B / S architecture, it also briefly describes the functions of the laboratory management system. The database model of the system is designed and expressed in the form of E-R diagrams and data tables. Then the related functions of the system are explained with corresponding data flow charts. Finally, the function and application of the entire system are tested.

Keywords:B/S; database; PHP; laboratory management

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