

DEVELOPMENT OF STUDENT MANAGEMENT SYSTEM

Student Management System (SMS) is a simple interface for maintaining student information that allows for easy retrieval and management of data, as well as excellent dependability, huge storage capacity, good confidentiality, and low cost.

INTRODUCTION

By using standardized management, scientific statistics, and quick inquiries, adjustments, additions, and deletions, the student management system aims to improve the accuracy of information and the efficiency of everyday management. The system was designed and developed based on the current state of student management and new student management requirements, and it addresses the issues that manual processing of student information management data has, such as large amounts of data, inconvenient modification, and lengthy time spent analyzing a series of data.

I. SYSTEM DESIGN

This phase involves the system design methodology, functional diagrams, UML diagrams, requirements analysis, and the front-end and back-end design process of the student management system. Some parts are omitted.

a. Requirement Analysis

The basic requirement for designing SMS is that each user has his or her own account and that only one user type is using the system - the administrator. Administrators can access and process a variety of information and print it out as needed.

b. Database Design

A physical data model is a database-specific model that represents relational data objects (for example, tables, columns, primary and foreign keys) and their relationships. A physical data model can be used to generate DDL statements which can then be deployed to a database server. The physical data model of the system is shown in figure 1.

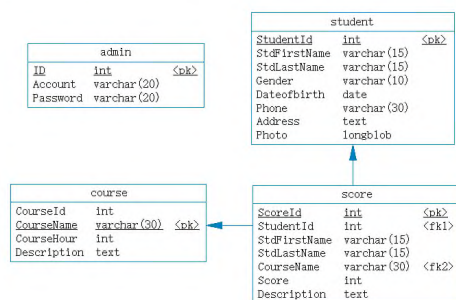


Fig. 1 – Physical Data Model

Zhang Gege, undergraduate's student in the Faculty of Information Technology and Management of BSUIR, 15738799626@163.com.

A. Gourinovitch, professor in the Faculty of Information Technology and Management of BSUIR, gurinovitch@bsuir.by.

II. TECHNOLOGIES USED

a. .NET

.NET is a free and open-source, managed computer software framework for Windows, Linux, and macOS operating systems. It is a cross-platform successor to .NET Framework.

b. C#

C# is an object-oriented high-level programming language based on the .NET framework that inherits the strength of C and C++ while reducing some of its more complicated features.

c. SQL

SQL (Structured Query Language) is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS).

d. Apache

The Apache HTTP Server is a free and open-source cross-platform web server software, released under the terms of Apache License 2.0. Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation.

III. CONCLUSION

The project's goals were eventually met. The system will aid in the systematic operation of the school or educational institution's information database management department. It considerably enhances management efficiency and saves human and material resources when compared to the previous manual management method. The system, however, still needs to be improved in many areas, and it is suggested that the project add more features to fulfill varied needs and use more advanced algorithms in the future.

- Zhi-gang YUE, You-wei JIN, "The development and design of the student management system based on the network environment", 2010 International Conference on Multimedia Communications, 978-0-7695-4136-5/10 2010 IEEE.