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OOP Project Proposal

Student Database management system

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Class: BSCS-2nd Year

Section: A

Shift: Morning

**Proposal for Database Management Project**

(***S*tudent Database Management Software)**

Dedicated to Miss Shaista Raees

(Assistant Professor in Department of Computer Science

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**Technical Part**

1. **Short Project Description:**

Database system is important to ensure the data can be stored, updated and retrieved for future use. Data modelling using the Entity Relationship Model has been introduced more than thirty years. However, designing a good database system is still an attractive issue particularly in system analysis and design because of very hard to do consistency checking between system design and database design. In this paper, a proposal for designing a relational database system based on Object Oriented Analysis and Design is presented. The database system is created by the schema table that extract from class diagram. The rules applying in this paper is following the object oriented concept. It is based on the relationships among the classes, multiplicity, attributes name, class name, data type and the behaviors of the classes. Beside that the user is required to insert record to accomplish a good designing the schema tables to avoid redundancy data. Finally, an automatic editor is proposed in order to automate the process.

***S*tudent Data Management Software (SDMS)** is a comprehensive software solution targeted at Educational Institutions, facilitating the management and analysis of a student's life cycle throughout his / her tenure at the Institution. Starting from getting admitted, to passing out and collecting certificates, the system is capable of generating useful reports at the designated levels.

**Student Data Management Software** enables Educational Institutions to enhance efficiency, eliminate human errors and provide quick access to relevant data.

**Student Data Management Software** uses C#**.Net** for the front end and **SQL Server** 2013 for the backend.

**Student Data Management Software** is the data repository of students, starting from getting admitted, to passing out and collecting certificates; the system is capable of generating useful reports at the designated levels. **Student Data Management Software** manages Attendance, Fees, Examination Scheduler, Marks Entry etc.

1. **List of Important Requirements:**
2. Microsoft Visual Studio 2013
3. Microsoft SQL Server 2013
4. **Possible Risks in making a Database Program:**

|  |  |
| --- | --- |
| Physical | Your computers must be physically inaccessible to unauthorized users. This means that you must keep them in a secure physical environment. |
| Personnel | The people responsible for system administration and data security at your site must be reliable. You may need to perform background checks on DBAs before making hiring decisions. |
| Procedural | The procedures used in the operation of your system must assure reliable data. For example, one person might be responsible for database backups. Her only role is to be sure the database is up and running. Another person might be responsible for generating application reports involving payroll or sales data. His role is to examine the data and verify its integrity. It may be wise to separate out users' functional roles in data management. |
| Technical | Storage, access, manipulation, and transmission of data must be safeguarded by technology that enforces your particular information control policies. |

1. **System Architecture:**

The system will consist of the following major sections:

1. A SQL Server Database Program
2. A C# program for accessing and retrieving the database information
3. **Technologies:**

The system is built by using the following technologies:

1. SQL Server 2012
2. Microsoft Visual Studio 2013
3. **Documentation:**

It will provide:

1. Connected Source Code
2. Technical Documentation

1. **Quality Control and Testing:**

It will implement the following tests:

1. Functional Testing
2. Performance Testing
3. Destructive Testing
4. Usability Testing
5. Security Testing
6. **Compatibility:**

.Net Framework 4.0 required

1. **Possibility:**

By using this program you can add, delete, edit and update student database management system.

**Financial Part:**

1. **Budget Detail:**

Senior Software Engineer: 30 USD per hour

Software Engineer: 18 USD per hour

Database Administrator: 20 USD per hour

1. **Budget Calculation:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Labor Category** | **Duration, man-hours** | **Cost per Category** | **Total cost per category** |
| Senior Software Engineer | 29 | 30 | 500 |
| Software Engineer | 20 | 18 | 300 |
| Database Administrator | 10 | 20 | 100 |
| Total (USD) |  |  | 900 |

1. **Payment Terms:**
2. Pre-payment : 30% Price 1833 USD
3. After Completion of stage 2: 30% Price 1833 USD
4. After Completion of stage 4: 40% Price 2444 USD

Total Price: 6110 USD

Methods of Payment:

1. Payment via PayPal
2. Payment via Wire Transfer
3. Payment via Check
4. **Warranty:**

All errors that are discovered within the first three months of system operation will be fixed at no additional cost.