Titleoftheproject

“Educational Institute Management System.”

Course:**Internship–Phase(II)**

CourseCode:**CIS499**

DepartmentofComputingandInformationSystem(CIS)

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APPROVAL

This Project titled **"Educational Institute Management System."**, Submitted by **MD.Rifat Rahman Nishat**, ID No: **182-16-311**to the Department of Computing and Information Systems, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computing & Information Systems and approved as to its style and contents. The presentation has been held on13-01-2025.

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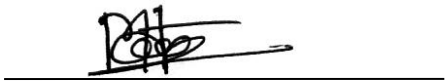

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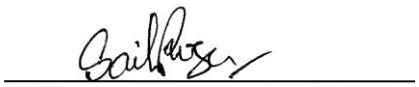

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Declaration

I hereby declare that; this Internship project has been done by me under supervision of **Md Sarwar Hossain Mollah** System (CIS) of Daffodil International University. I am also declaring that this project or any part of there has never been submitted anywhere else for the award of any educational degree like, B.Sc., M.Sc., Diploma or other qualifications.

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Abstract

This internship project focuses on developing an advanced Educational Institute Management System designed to streamline administrative processes and enhance operational efficiency. The system integrates core functionalities such as student enrollment, faculty management, course scheduling and performance analytics into a centralized digital platform. By leveraging modern technologies, the solution aims to minimize manual efforts, reduce errors, and facilitate seamless communication among stakeholders, including administrators, teachers, students, and parents. The project emphasizes user-friendly interfaces, data security, and scalability to meet the diverse needs of educational institutions. Ultimately, the system aspires to transform traditional workflows into a more automated, efficient, and collaborative ecosystem, paving the way for smarter educational management.

Acknowledgement

In the beginning, I want to thank Almighty Allah for giving me this amazing chance to develop and learn. I couldn't have finished this Internship and all of its related chores without His direction and assistance.

Since working as an intern trainee has been a great learning opportunity for me, I am incredibly grateful to The Databiz Software Ltd. for providing me with this opportunity. I have learned a great deal during this internship program, particularly about emerging technologies and business procedures.

I owe a debt of gratitude to my academic supervisor, **Md Sarwar Hossain Mollah**, as well as my senior development team and project manager, who trained me as an intern. Their constant encouragement, direction, and support have been crucial to my career advancement. They have consistently been there to provide me sound counsel, support me in making wise choices, and motivate me to face obstacles head-on.

I genuinely appreciate their generosity, support, and faith in my skills. In addition to guiding me through challenging assignments, their mentoring has taught me how to perform well under pressure and manage major projects in the future.

Table of Contents

Chapter 1: Introduction

Educational Institute Management System is a system used to manage and run an educational institution easily. In our country, a school, college, university, or any kind of educational institute runs the institutional complex activates manually. As a result, if any information is needed then it is very tough to search the specific information from a bunch of paper. Sometimes the important document is lost or very hard to find when it is in need. We know, it is a very common thing that humans will do mistakes or forget. Educational Institute Management System (EIMS) is designed to manage institution information, whether a user can create, read, Update student's, teacher's information. Users can also manage classes and courses. Student and teachers can manage their activities very flexibly and easily.

Chapter 2: Initial Study

- Background of the project
- Problem Area
- Possible solution

Background of the project:

The project Educational Institute Management System (EIMS) is a web application developed with PHP Laravel 8 framework. The main aim to develop the system is to bring our country's educational institutes under a dynamic digital easy and flexible system which will help the institutes to manage and maintain all the information. Information will easy to get when it is need and easy to keep up to date the information are also a strong cause of developing the EIMS. After that, in an educational institute has lots of information to manage on paper. Paper can be lost or can be destroy at any time. Manage paper document is very difficult and complex. Also, this paper documents have no backup and keeping paper document backup is very difficult and costly. In EIMS, information is stored, secured and easy to keep backup. User can login easily and can do the necessity activities from anywhere.

Problem Area:

Humans do mistakes and forget anything. 90% of educational institutions at the school level in our country run a very complex manual system. In this modern era, these school-level institutions maintain register books to keep a record of their students, teachers, and more. On the other hand, 80% of college-level institutions of our country follow a manual system. They maintain paper works to keep a record of their documents. Every year many students pass out from school and college level. After some years of passing out if they go to their school and college for any necessary document or information, it is very difficult to get that. Sometimes it seems that the file has been lost. If they get the document after searching, it takes a long time to get the document. From the student's point of view, if any notice is published then the institution sends a notice class to class to see the published notice on the notice board which is hung on any corner of the school or college. If the result is published, students have to communicate with the

class teacher to know his or her result. The application process is also very old, complex, and time-consuming.

Possible Solution:

Keeping the problems, the educational institute management system has been designed. In this system, the User (Admin) can maintain all the information of an educational institution easily. User (Admin) can also publish notice, result and user (Student) will get their result or notice by accessing student portal. User (Admin) also maintains class schedule, courses and user (Student) will get the information by accessing the student portal. Users (Teachers) can also see the notice and can provide or shear study materials to students from the teacher portal. After an exam, a teacher can input marks on a specific course of a specific subject to a specific student. User (Teachers) will submit to User (Admin) and User (Admin) will publish the result.

Chapter 3: Literature Review

- Discussion on problem domain based on published articles.
- Discussion on problem solutions based on published articles.
- Comparison of three/four leading solutions- Best features
- Limitations
- Recommended approach

Discussion on problem domain based on published articles:

The amount of time spent managing all data or information. Consider how much more productively that time could have been spent if the information had been managed more swiftly. Information can also be 'lost' if it is not properly stored. A single institute employs a single file structure. Another option is to use different software, such as Excel, to manage the information. As a result, any educational institute can simply manage their institutional activities with the Educational Institute Management System (EIMS), which is also very versatile to utilize. Human error cannot be completely eliminated from your Educational Institute Management System (EIMS).

Talk about problem-solving techniques based on published articles:

Limit the number of institutions with access to the automated system. Taking a consistent approach to educational institution management across the entire business (including across many sites) eliminates this uncertainty – and, if you choose a cloud-based solution, personnel will be able to access the information from all locations as well. Training is the most effective way to reduce human error; nonetheless, appropriate knowledge of the system is required.

Best qualities of a comparison of the top three or four solutions

Manage Information: The most fundamental and important purpose of Educational Institute Management System (EIMS) is to safely and easily save your institute's management.

Keyword search: A decent Educational Institute Management System (EIMS) features a comprehensive keyword search feature that allows you to quickly retrieve any information based on certain keywords. Some systems include metadata and tags to aid in the discovery of information or groups of information. For example, using a simple search, you can identify a student's data and examine information from all information of this type.

Permission access to a certain system: By creating a role, you may grant employees, students, and teachers access to a specific system while preventing everyone else from viewing or altering it.

Limitations:

Technology Dependence - Living in the digital age necessitates a heavy reliance on technology. But what if technology becomes a burden one day? With this in mind, organizations should think about avoiding relying too heavily on technology in case it becomes an issue in the future.

Security - Because one of its functions is information sharing, there is always the potential that the information sent on will end up in the wrong hands. Aside from that, the internet poses the greatest security risk because company records are the type of information that hackers would love to obtain.

Cost of Equipment — When a business decides to go paperless, a massive amount of data must be scanned. The hardware required for this type of screening service would be quite expensive.

Recommended approach:

Consistent System Structure: Most firms struggle to maintain consistency in the way information is named and formatted, resulting in an inability to assure Educational Institute Management System (EIMS) best practices.

Consistent naming information: Businesses struggle not just with system consistency, but also with the consistency of Educational Institute Management System (EIMS) best practices and information management.

Providing System and Role Access Permissions: A recurrent topic we hear from our customers is that the volume of confidential data in their practices is increasing at an alarming rate.

Safeguarding Information: One of the most typical queries you may have when looking for Educational Institute Management System (EIMS) best practices is, "Is my information secure?"Did you know that one of the most popular ways we share data with the rest of the world is through email?

Unstructured Data Management: Examine your computer's desktop. Institutions have data that has been and continues to be fully unmanaged, making it difficult to ensure best practices for the Educational Institute Management System (EIMS).

Chapter 4: Methodology

- What to use
- Why to use
- Sections of methodology
- Implementation plans

What to use:

To build the suggested system, I used the agile development methodology's EIMS (Dynamic Solution Management Method). The emphasis on iterative development, constrained time and resources, and the goal of building a more dynamic structure make it my preferred approach.

Methodology sections

The EIMS's Primary Ideology:

A few concepts or viewpoints about the effective completion of a project were established by EIMS. Here are a few examples:

1. The focus and objectives of the proposed strategy.
2. Forces early product delivery via iterative aspect expansion.
3. To choose the best deliverables, time boxes are used.
4. The tester and end-user confer with other users during the project's iterative extension phase.

This System's EIMS follows:

1) The suggested system must be delivered on schedule, within budget, and in demand as it is intended to operate an educational institution. EIMS focuses its efforts here and makes sure that the required business requirements are fulfilled.

2) MoSCoW prioritization specifies the project requirement, and time boxes describe the time delivery required for this planned framework.

3) Iterative growth is the most important portion of this half. Consequently, these users will communicate their business logic and goals, which they will employ throughout the project's implementation.

4) Iterative growth is the most important portion of this half. These users will therefore be able to talk about their goals and business plan, which they hope to effectively use during the project's implementation.

EIMS Techniques:

EIMS practitioners employ a variety of techniques. I've given brief descriptions for a few of them below:

I. Prioritization of MoSCoW:

Must-Have: The main project goals that must be fulfilled in order to accomplish the stated goal are listed in this section.

Should've: This section lists optional requirements that might make the suggested structure stronger.

Might Have: Although not necessary, the standards listed in this section could be necessary for the framework and might benefit the project if they are used. Any frameworks or functions that are not intended for or unrelated to this project will be discussed in this section.

II. Time Boxing:

Every time box establishes a deadline for completion and decides which tasks are finished first.

- It also indicates how long it will take to implement each component.
- Define the process's subtasks and break down the tasks.

III. Iterative Development:

Every level of EIMS can be created in an iterative fashion. This procedure can be used to validate the previous stage. The project task is the most important method and labor in iterative manufacturing recognition, which a production strategy follows to carry out these responsibilities. Think on the solution to the job.

Figure 1 Phases of EIMS

Phases of EIMS:

EIMS The seven stages of methodology are listed below: EIMS Aten contains 6 phases:

Figure 2: EIMS 6 Phases

1. Pre-project
2. Feasibility
3. Foundation
4. Evolutionary Development
5. Development
6. Post-Project

Implementation plans:

This is where the majority of the work will be done. During the framework's use, all needs gathered previously from consumers and the business must be remembered. A module can make a big difference. Considered how the arrangement will be perceived in practice. This is how the proposed solution looks. With enough information, the framework can be implemented.

Chapter 5: Planning

Management Plan / WBS

Work Breakdown Structure (WBS): In project management, a work breakdown structure (WBS) is a strategy for completing a complex, multi-step project. It is a method of dividing and conquering enormous undertakings in order to complete them more quickly and efficiently.

Now I'm going to supply the system's work breakdown structure (WBS) for my project.

Total effort time 63 days

Resource Allocation:

(The Project Management Body of Knowledge: A Guide, 2017)The practice of allocating and efficiently using resources to complete project activities and achieve project goals is known as resource allocation. Assigning the team, the necessary duties and using resources effectively are essential for a successful project. Our project adheres to the resource allocation shown below, and every step has a defined function for all stakeholders, from users to project management.

Chapter 6: Feasibility

- All Possible type of feasibility
- DSDM – Good or not for this project

Every conceivable type of feasibility

Financial feasibility:

An economic analysis is another name for a cost-benefit analysis. It is the method most often used to assess the efficacy of a new system. Economic analysis is a technique for controlling and weighing the expected benefits and savings of a potential plan against its expenses. The choice to develop and deploy the system is made if the benefits exceed the drawbacks. An entrepreneur must thoroughly consider the advantages and disadvantages before acting.

The following are some possible questions generated by economic analysis:

- Can the system be sustained financially?
- Is the cost of maintenance reasonable?
- Is it feasible to design a regression model that accounts for the whole population?
- Are the advantages greater than the disadvantages?

Operational viability:

Operational viability is determined by the project's human capital availability and if the strategy is implemented after its design and execution. The organization's ability to sustain the intended structure is determined by its operational viability. Probably the hardest choice to make is this one.

The usability of the system is assessed in this area. We'll go over some of the system's special capabilities in this area, such creating an access group and handling data and information on any kind of educational institution. This web-based framework simplifies the procedure for the user to learn and saves time. By allowing several users to freely alter the most important functions, the framework guarantees their security.

The user of the system can complete the work consistently and on time. The framework accurately performs the information validation operation related to operational feasibility.

Technical feasibility:

If new technology is necessary for the planned system's deployment, technical feasibility assesses whether the organization and users will be able to maintain it. It is also concerned with the technical knowledge provided by the user in order to exploit the system. Because smart phones, tablets, and even laptops are so prevalent nowadays, there is no need for training to utilize them, and the proposed system can run on them.

DSDM – good or not for this project

DSDM, or Dynamic Systems Development Method, is an Agile software development paradigm that is iterative. It is based on the core principle that any project must correspond with clearly defined strategic goals, with an emphasis on the early delivery of realistic benefits to the team, department, and business. This strategy operates throughout the project life cycle, providing advice on best practices for delivering goods on time and on budget. It also aims to exhibit scalability and to meet the needs of all project sizes, as well as any industry or business sector.

DSDM is good for this project.

Chapter 7: Foundation

List of general requirements

- Overall Requirement List
- Which technology—client, web, or standalone—will be used?

Overall Requirement List:

Two categories of requirements exist.

1. Functional specifications
2. Non-functional specifications

Functional specifications:

A Functional Requirement (FR) is a description of the service that the software must offer.

FR-01 View all functions after logging into the system as an admin. The system will show some details. User can view EIMS

Admin click on student and get a custom search option. Admin can search a specific student by id and email.

Description: Admin can also see a list of students by searching department, faculty and also by campus.

Users: User, Management authority, Admin

Priority Must Have

FR-02 View all teacher list

Description: User can view all teachers

Users: User, Management authority, Admin

Priority Must Have

FR-03 Add info, file link, select department, save info

Description: System can create student.

view, save info.

Users Management authority, Admin

Priority Must Have

FR-04 User access

Description: System can set access (read, write, update, delete) for

information

Users Admin

Priority Must Have

FR-05 Search ability

Description: System can find any type of information

Users User, Management authority, Admin

Priority Must Have

Non-Functional specifications:

NFR-01: The Landing page will respond within a second

Description: Response to view all types of list

Users User, Management authority

NFR-02: The usage of the system must not cause damage to users.

Description: The system will be built in accordance with the specifications to ensure that no user is harmed.

Users User

NFR-03: The system will secure all information

Description: Without the access normal user cannot create, read,

Update information.

Users User, Management

NFR-04: The system must be available 24x7

Description: the system must be available 24 hours a day. And it must

be updated.

Users

Technology of implementation :

This section will outline the current system's development process. What technologies was used to construct this system?

Language of Programming: A variety of programming languages are available for creating applications. For example:

- PHP
- Java
- PHP
- MYSQL
- BOOTSTRAP
- JAVASCRIPT
- C#

So, here I use PHP (Laravel 8) TO make “EIMS” system for backend.

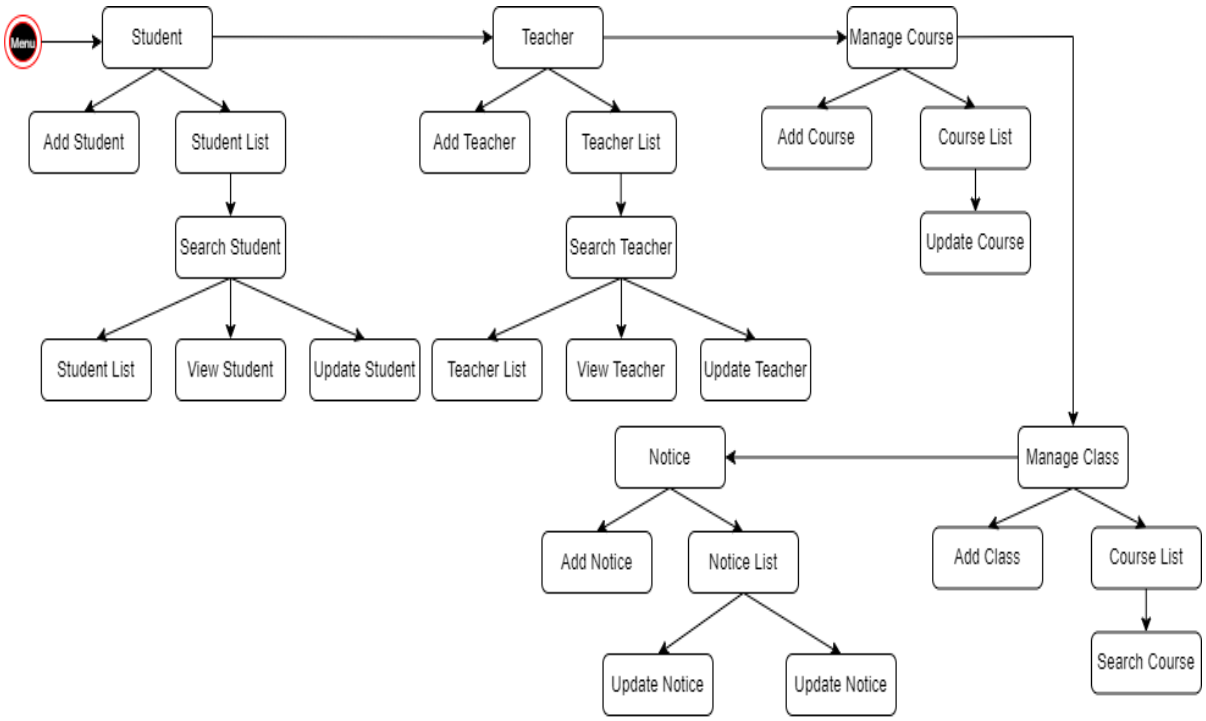
PHP is an excellent tool for developing huge, scalable systems. I'll be able to include PHP Platform into the project as needed to provide a choice of alternatives. Developers can use this set of tools to implement any of the following ideas. in the business logic of this project.

One of PHP's most important features is object-oriented programming. It is also a server-side scripting language. This gives me a versatile and long-term development route. This language is widely used, and there are many skilled programmers. There is a vast community where developers may acquire information and provide important content.

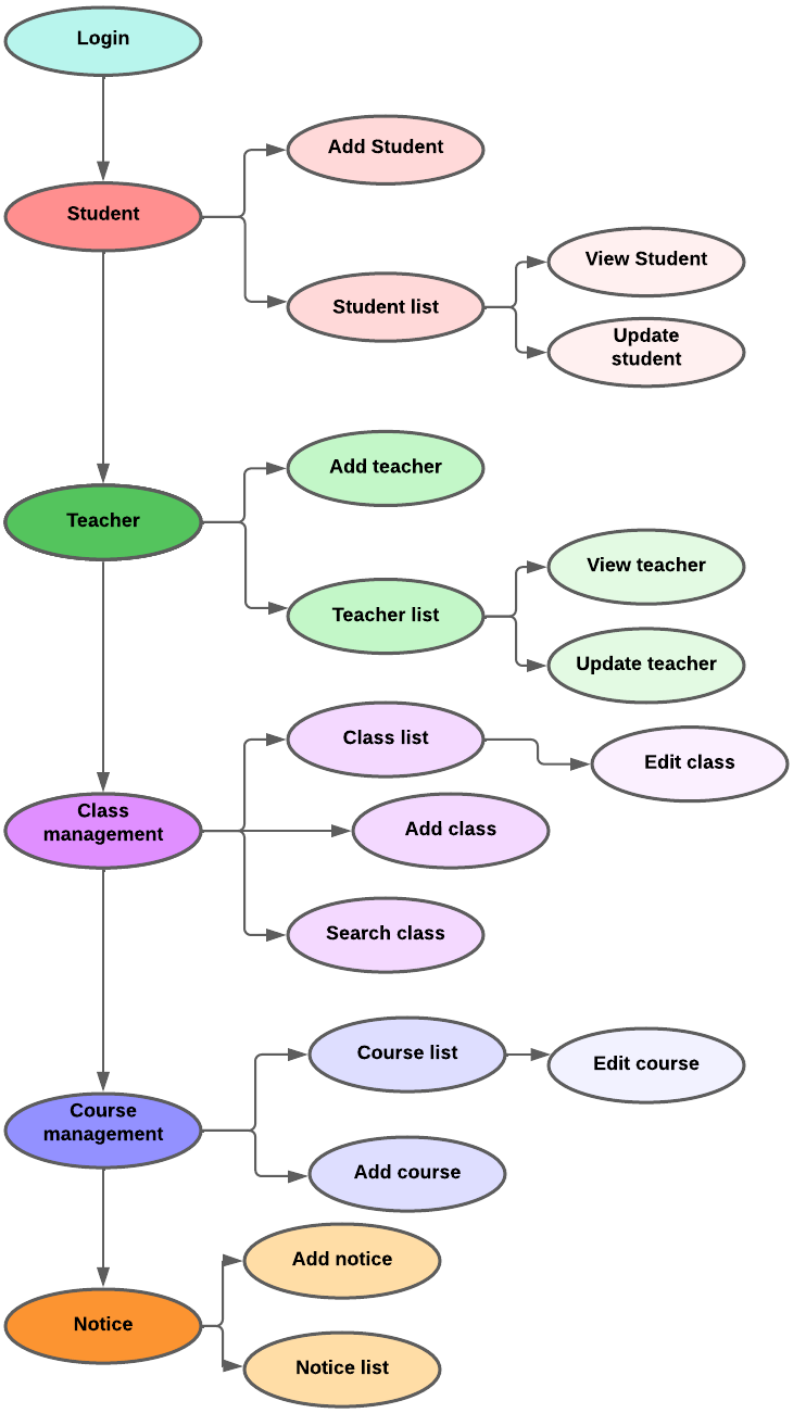
Chapter 8: Engineering

- Activity Diagram
- Use case

Activity Diagram:

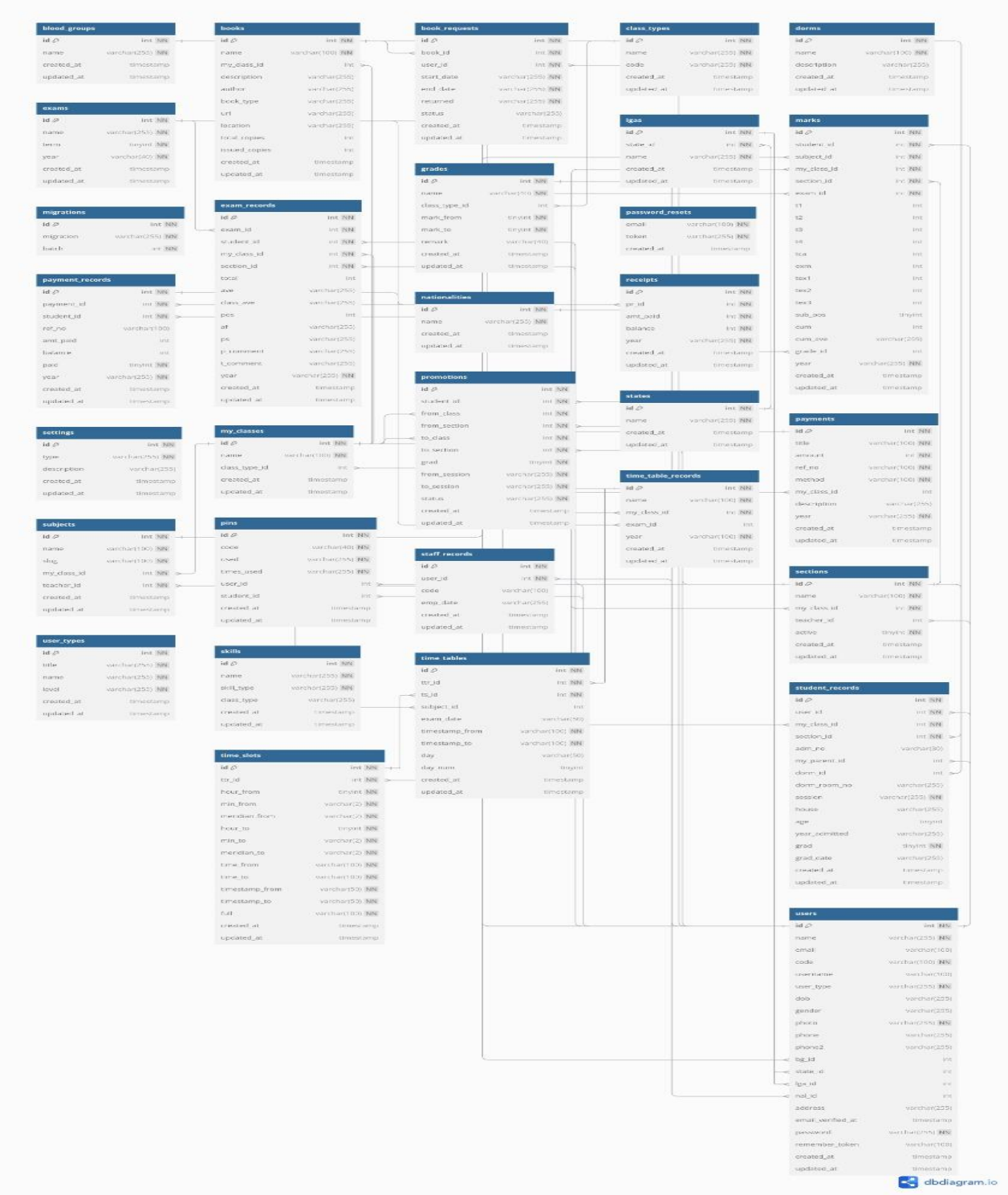


Use case:



Chapter 9: Engineering (ERD)

Entity relation diagram:

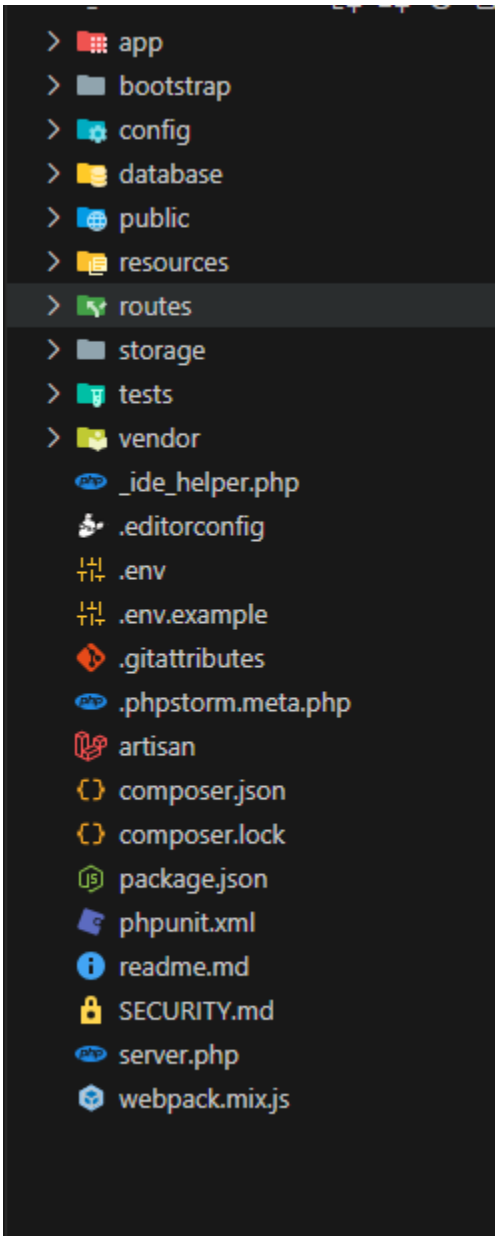


Chapter 10 – Deployment / Development

- Core Module Coding Samples
- Possible problem breaks down

Core Module Coding Samples

EIMS module:



User module:

```php
class UserController extends Controller
{
    protected $user, $loc, $my_class;

    public function __construct(UserRepo $user, LocationRepo $loc, MyClassRepo $my_class)
    {
        $this->middleware('teamSA', ['only' => ['index', 'store', 'edit', 'update'] ]);
        $this->middleware('super_admin', ['only' => ['reset_pass','destroy'] ]);

        $this->user = $user;
        $this->loc = $loc;
        $this->my_class = $my_class;
    }

    public function index()
    {
        $ut = $this->user->getAllTypes();
        $ut2 = $ut->where('level', '>', 2);

        $d['user_types'] = Qs::userIsAdmin() ? $ut2 : $ut;
        $d['states'] = $this->loc->getStates();
        $d['users'] = $this->user->getPTAUsers();
        $d['nationals'] = $this->loc->getAllNationals();
        $d['blood_groups'] = $this->user->getBloodGroups();
        return view('pages.support_team.users.index', $d);
    }
```

Chapter 11 – Testing

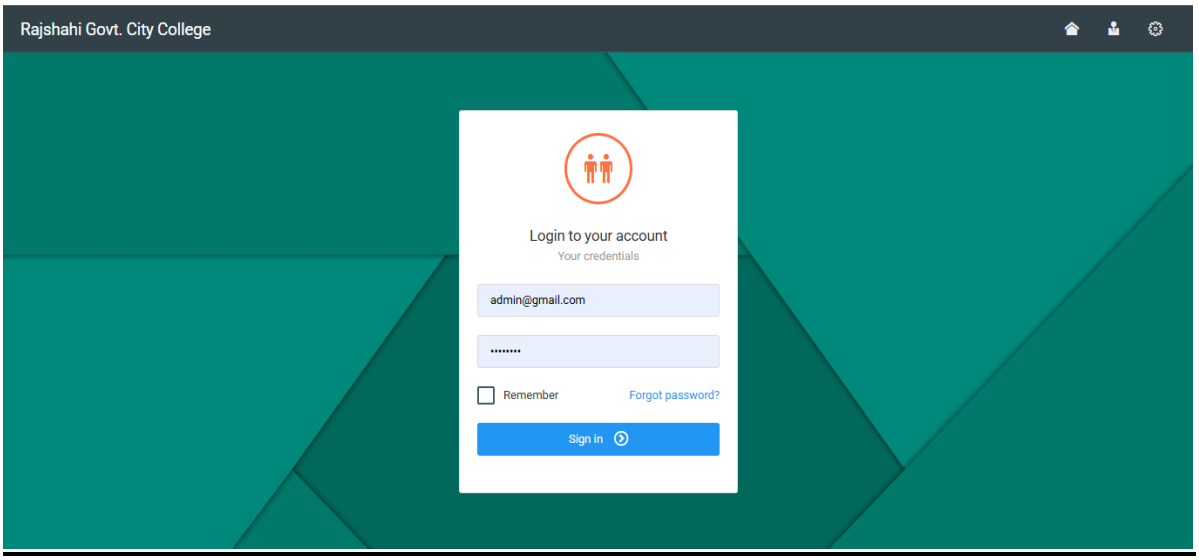
- Test Case
- Unit Testing (2 to 3)
- Module Testing (2 to 3)
- Integration Testing (2 to 3)

Test Unit

Unit testing:

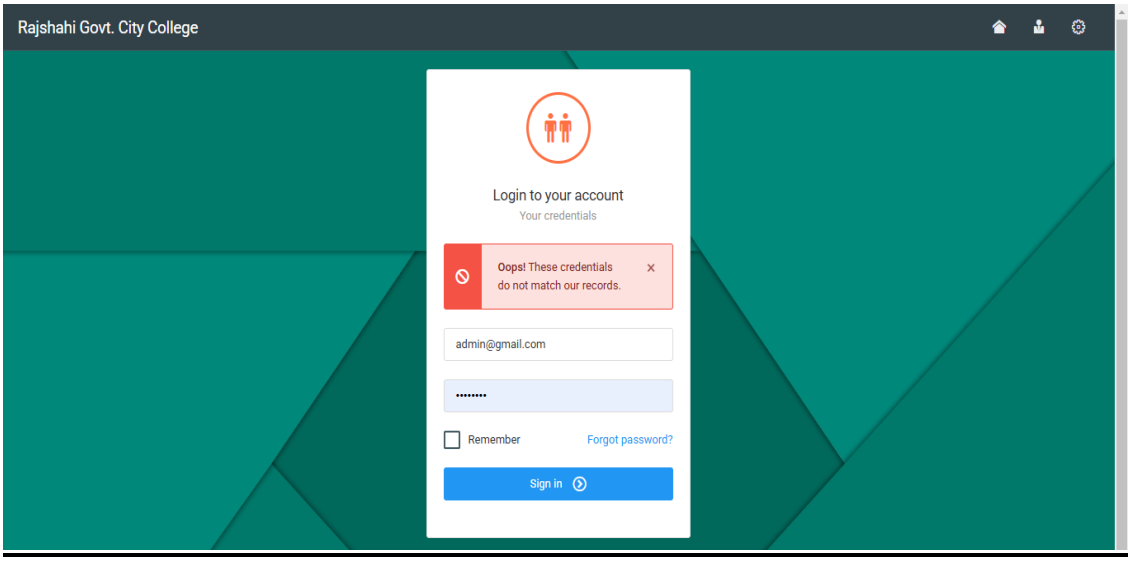
Test Case No.	Unit Testing1		
Test Type	**Login page**		
Test Description	**Without database input password in the login page**		
Test Steps	**Expected Results**	**Actual Results**	Comments
Login	**cannot login**	**Message show "please fill out this form"**	**As expected**

Result expected



Test Case No.	Unit Testing2		
Test Type	**Login EIMS**		
Test Description	**Without database login, users cannot access the system.**		
Test Steps	**Expected Results**	**Actual Results**	Comments
Login	**login successfully**	**Successfully login**	**As expected**

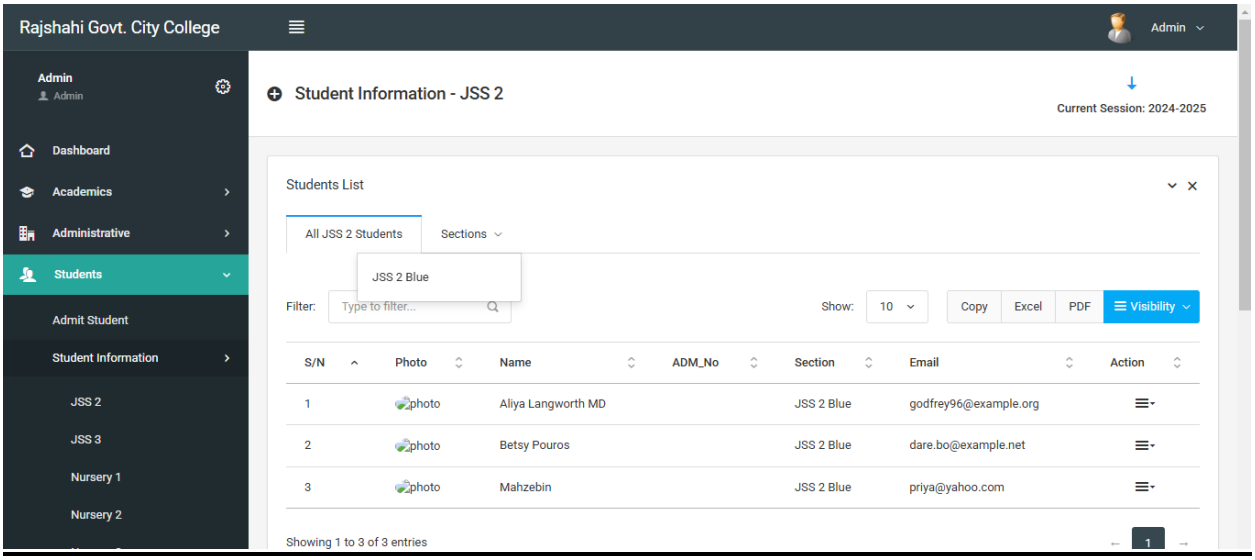
Result expected



Module Testing

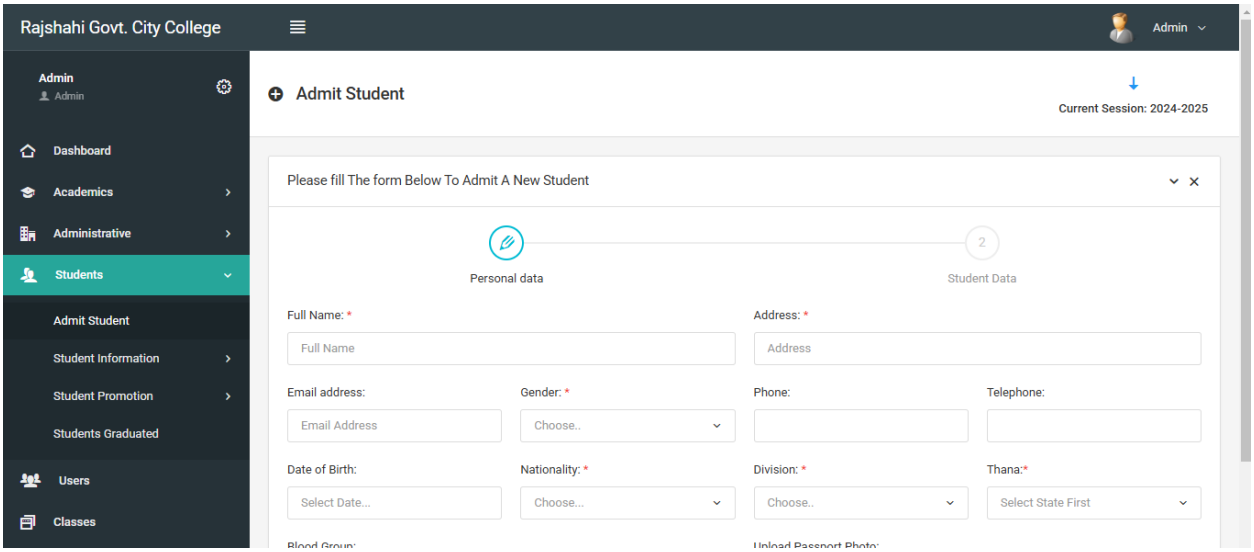
Test Case No.	Module Test1			
Test Type	**Student List**			
objectives	**Create file without invalid parent directory**			
Data source	**Task**	**Expected Results**	**Actual Results**	Comments
File	**Student List**	**Get Student List**		**As expected**

Result expected



Test Case No.	Module Test2			
Test Type	**Add Student**			
objectives	**Successfully Add Student**			
Data source	**Task**	**Expected Results**	**Actual Results**	Comments
File create	**Add Student**	**The user can successfully Add Student**	**Add Student**	**As expected,**

Result expected

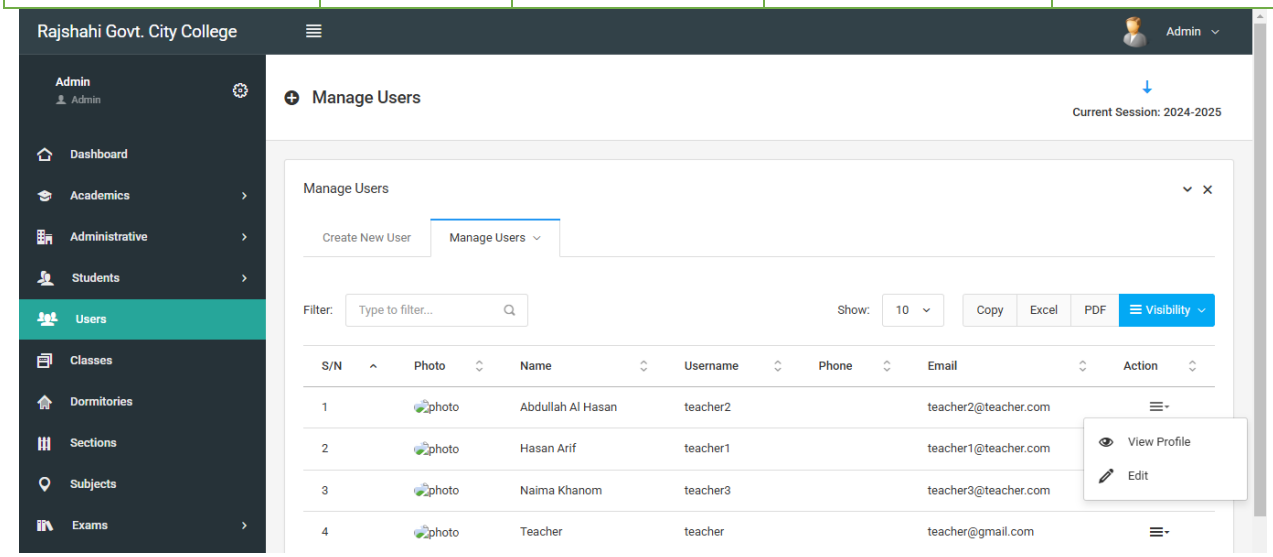


Integrationtest

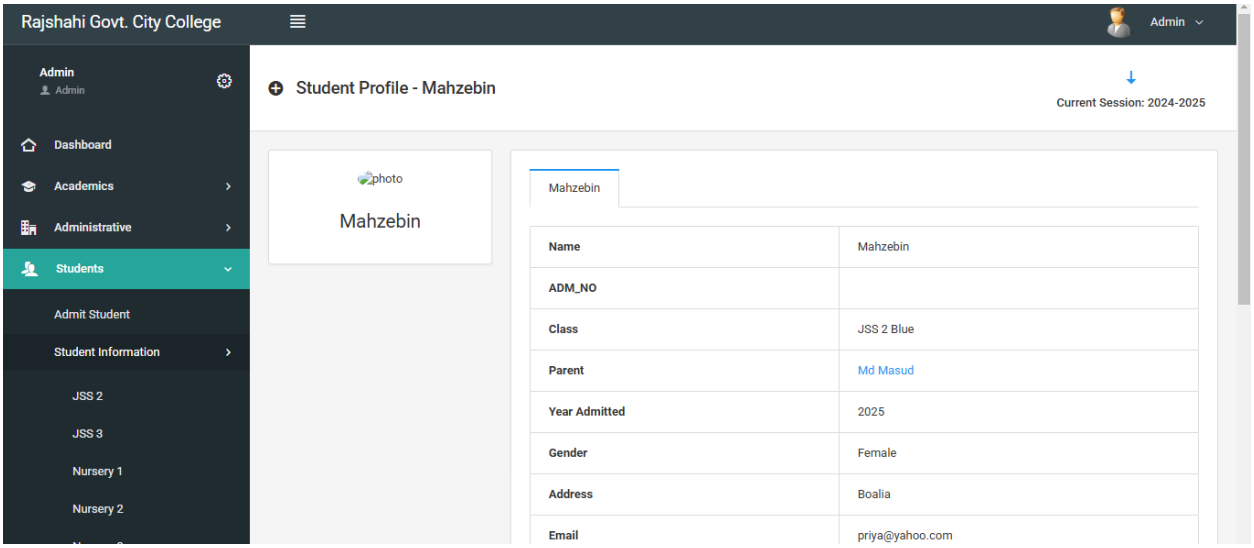
Test Case No.	Integration test 1			
Test Type	**User list**			
objectives	**User list**			
Data source	**Task**	**Expected Results**	**Actual Results**	Comments
File access	**User list**	**User list**		**As expected,**

Resultexpected

Test Case No.	Integration test 2			
Test Type	**View Student**			
objectives	**View Student successfully**			
Data source	**Task**	**Expected Results**	**Actual Results**	Comments
File access	**View Student**	**View Student profile**	**View Student profile**	**As expected,**



Resultexpected



Chapter 12 – Critical Appraisal and Evaluation

- Rate of success for every goal
- How much improved are the solution's features?
- How much better are the solution's features?
- Which features could not be altered?

Potentially achievable goal

This framework has a goal in mind. Part of the system objectives, as listed below, must be met in order for this project to be successful:

1. Finish the project in accordance with the rules stated in the project information.
2. You must do a feasibility assessment for the system in order to assess the technique's efficacy and ensure that it is properly implemented.
3. The framework technique was used to carry out this project.
4. You must accurately style details.
5. You must conduct a system feasibility analysis.

Goals for the Company:

1. All of your lectures must be of the highest caliber.
2. provide a feedback system
3. provide a question selection system
4. provide a method for granting access
5. provide a method for executing operations and attaching attachments

Personal ambitions:

1. Establish a good Educational Institute management system.
2. comprehend and work on the business object
3. Gather useful information for this project.

Success rate against each objective:

Success name	**Percentage**	**Satisfaction level**
Features are created	90%	Satisfied
User Interaction	95%	Satisfied
Security	90%	Satisfied
Admin accessibility and maintenance process	100%	Satisfied

Could it have been any better?

In a project library, ensure the safe storage and backup of all information. Make it clear which version of a deliverable is the most recent. Over the course of the project, keep a detailed record of all accepted deliverables. Provide safeguards to ensure that confidential information is only accessible to those who need it. At the end of the project, provide an accurate and full archive of project information to the permanent organization.

How much have the solution's features improved?

1. Enhanced security

   To secure sensitive data, information security is crucial for enterprises of all sizes. DMS allows for more control over critical information, and access to information may be restricted at the folder level for certain groups or people.

2. Greater Regulatory Compliance

   Certain information compliance standards may be quite complex. Noncompliance can result in fines, license revocation, and, in some cases, criminal charges. Carbines Oxley and HIPAA, for example, are federal and state regulations that mandate stringent security and privacy safeguards.

3. Enhanced Productivity

   Time is valuable, and saving time is a clear advantage of DMS, which frequently translates directly into higher production. Faster and more efficient information retrieval can improve employee morale and client satisfaction. Furthermore, information management solutions are expandable to match any enterprise's evolving needs. A thorough electronic information management system provides firms with a number of intangible benefits.

Which features could not be tampered with?

Information that is not frequently backed up

How frequently do you backup your institute's data? Many organizations make the mistake of not backing up their data on a regular basis, or they expect that their outsourced supplier will do so automatically. If data is not securely backed up in the event of a system catastrophe, natural disaster, or even a huge data breach, vital information may be lost.

Check to see if your data is being backed up on a regular basis, either internally or through your service provider. This will get you ready for the unexpected.

Chapter 13: Conclusion

- An overview of the project
- The project's objective
- My personal knowledge

Summary

The project's topic is managing an educational institute. This simplifies the management of various types of information. This system can create a file, category, directory, storage, and configure directory access. The system was built using the DSDM methodology. PHP and Laravel 8 are utilized to design these systems, while XML, SCSS, and JavaScript are used to create user interfaces. This system is now operational.

Goal

This system is available to people all around the world, who can choose the services they require. Before utilizing any program, A user has to log in. Through their profile, they may see and manage their information.

1. The main purpose of this system is usability.
2. Obtain input from the system.
3. give financial assistance
4. Capable of managing all types of information.
5. Departmental security.

My personal knowledge

Finally, I was able to complete my module assignment. Users can now log in and view all services available as part of this project, which has a specific aim. Users have the ability to create, read, update, store, and search information. Here, the user will be able to satisfy any need. The system is currently up and running.

I have limited experience with software programming as a student of computer information and systems. However, it was during the creation of this system that I realized the actual significance of agile structure, DSDM, and repetitive development. As part of my homework, I had to draw an architectural diagram based on the setting. In this case, though, I've created architectural figures for actual projects.

I also used diagrams to gain the necessary functionality and to build a database. Finally, I gained a tremendous deal of knowledge regarding databases.

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