



UNIVERSITY *of*  
RWANDA

# Industrial attachment report

220011657

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**Year 3**

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## DECLARATION

I hereby declare this industrial attachment is prepared and submitted by me as partial fulfillment of the requirements for the industrial attachment program at Rwanda Energy Group (REG) where make internship activities.

I further declare that the information presented in this report is based on my personal experience and observations during the internship period, along with relevant information obtained from credible resources. Any reference, quotation, or materials user from other sources have been duly acknowledged and cited.

I acknowledge that the internship work and its outcomes presented in this report are the result of my own efforts, under the guidance and my supervisor. The internship was carried out from 30<sup>th</sup> January 2023 at headquarter of Rwanda Energy Group(REG), located Nyarugenge.

I affirm that I have adhered to the ethical standards and guidelines set by the institution and the organization throughout the internship duration. I take full responsibility for the authenticity, accuracy, and originality of the content presented in this report.

I understand that any act of plagiarism or misrepresentation in this report is considered as serious offence may result in disciplinary action, including the rejection of this report and any related academic consequences.

Also I acknowledge and appreciate the support, guidance and cooperation extended by all individuals who contribute to the successful completion of this internship and preparation of this report. Their assistance has been invaluable in enriching my learning experience.

I affirm that all the information provided in this declaration is true and correct to the best of my acknowledge and belief.

I grant permission to the institution and the organization to use this report for academic and research purpose, while maintaining the confidentiality of any proprietary or sensitive information contained herein.

## DEDICATION

I dedicate this industrial attachment report to my family, friends, and loved ones who have supported and encouraged me throughout my academic journey. Their unwavering belief in my abilities has been a constant source of motivation and strength.

I am grateful for the understanding and patience they have shown during the demanding and challenging moments of this internship. Their love, encouragement and moral support have been instrumental in helping me overcome obstacles and achieve success.

I would also like to extend my heartfelt gratitude to the faculty and staff of Rwanda Energy Group(REG) for providing me with the opportunity to pursue this internship. Their guidance, knowledge and expertise have played a significant role on shaping my understanding of software development and fostering my professional growth.

Additionally, I want to express my appreciation to my internship supervisor MANISHIMWE EMMANUEL, for their valuable guidance, support, and mentorship throughout the internship period. Their expertise, feedback, and encouragement have been instrumental in enhancing my technical skills and expanding my knowledge in the field of software development.

Finally, I would like to dedicate this report to all individuals within the organization where I completed my internship. Their willingness to share their knowledge and expertise, and their collaborative spirit have contributed immensely to my learning experience. I am grateful for the opportunities they provided me to work on real world project and gain practical insights into the software development industry.

This report is a testament to the collective efforts and support of all who have played a significant role in my internship journey. I am truly grateful for their contributions, and this dedication is a token of my appreciation and gratitude.

## ACKNOWLEDGMENT

In this report I can express my sincere gratitude for the opportunity to undertake an internship in the field of software development at Rwanda Energy Group. I am thrilled to accept the offer extended to me and eagerly look forward to contributing my skills and knowledge to the company project.

I am fully aware of the significance of this internship in shaping my professional career, and I am committed to making the most of this valuable experience. I am confident that working with the talented team at Rwanda energy group will provide me with the necessary exposure to enhance my technical skills and gain practical industry experience.

I would like to express my appreciation to Rwanda energy group team for giving me this opportunity. I am eager to learn from the experienced professionals at your organization and contribute to the development of innovative software solutions. I am excited about the chance to collaborate on challenging projects and apply the theoretical knowledge I have acquired during studies.

I understand that the internship will commence on 30<sup>th</sup> January 2023 and conclude on 7<sup>th</sup> April 2023. I assure you that I will dedicate myself to the tasks assigned to me and actively participate in all relevant training and development programs offered by Rwanda energy group.

Once again, I would like to express my sincere appreciation for granting me this internship opportunity. I am excited about the learning and growth that lies ahead during my tenure at REG. please feel free reach out to me via email or phone if you require any further information or have any specific instructions to me.

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## ABSTRACT

This internship focused on software development, providing an opportunity to gain practical experience in a professional setting. The objective was to enhance technical skills and knowledge while working on real world software project. Throughout the internship, the primary responsibilities included collaborating with team of experienced developers, participating in the software development life cycle, and contributing to the design, coding, testing, and debugging of various software applications.

The internship provided a valuable learning experience in multiple aspects of software development, including understanding the project requirement, implementing software solution, and employing best coding practices. It involved utilizing industry standard programming language, frameworks, and tools to develop software application that addressed specific needs and requirements. The experience helped to improve proficiency in areas such as programming logic, algorithm design, and troubleshooting software issues.

Furthermore, the internship fostered an understanding of the importance of effective teamwork, communication, and time management in a professional software development environment. Regular meeting and code reviews with the development team facilitated knowledge sharing, constructive feedback, and continuous improvement. The opportunities to collaborate on team projects also enhanced skills in version control, collaborative coding, and agile development methodologies.

Overall, the internship in software development provided a comprehensive introduction to the practical aspects of building software applications. It equipped the intern with valuable technical skills, industry knowledge, and an understanding of the software development life cycle. The experience gained during this internship will serve as a foundation for future endeavors in the field of software development and contribute to the intern's professional growth and career aspiration

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## List of symbols and abbreviations

<b>API:</b>	Application Programming Interface
<b>CSS:</b>	Cascading style sheet
<b>HR:</b>	Human Resources
<b>HTML:</b>	Hypertext markup language
<b>IAMS:</b>	Internship Application Management System
<b>IDEs:</b>	Integrated Development Environments
<b>JS:</b>	Java Script
<b>OOP:</b>	Object Oriented Programming
<b>QA:</b>	Quality Assurance
<b>REG:</b>	Rwanda Energy Group
<b>SDLC:</b>	Software Development Life Cycle
<b>SQL:</b>	Structured Query Language
<b>TDD:</b>	Test Driven Development
<b>UI:</b>	User Interface
<b>VCS:</b>	Version Control System
<b>VM:</b>	Virtual Machine
<b>VS:</b>	Visual studio

## **CHAP1. INTRODUCTION**

### **1.1 Background and necessity of the training**

During my internship, I had the opportunity to work with an Internship application management system(IAMS) at Rwanda energy group. REG is a learning software development firm specializing in creating innovative solution for various industries. The internship program at REG aims to provide valuable hands on experience to aspiring software developers like myself.

Rwanda energy group has been in operation as a trusted provider of software solutions. The company focuses on developing cutting edge applications and system that cater to the specific needs of their clients.

Within REG, I was assigned to the software development team. Which is responsible for designing, developing and maintaining various software applications. The team consists of experienced software engineers and developers who works collaboratively to deliver high quality solutions to clients. The team follows agile software development methodologies, ensuring efficient project management and timely to delivery of software products.

During my internship I worked on the development and enhancement of Internship Application Management System(IAMS). The IAMS is an internal tool used by REG to streamline and automate the entire internship application process, it allows potential inters to submit their application, provide a centralized platform for HR personnel to manage and review applications, and facilitates communication between the HR team and application.\

Prior to the internship, I had a solid foundation in programming language such as java and web development technologies like HTML.CSS and java script. I also had experience with database and SQL. This knowledge provided a strong base for me to contribute to the development of the IAMS. Throughout the internship, I aimed to further enhance my skills in front-end development, backend programming and database management.

## **1.2 Training objectives**

My primary learning objectives for the internship were to gain practical experience in developing web based application, improve my understanding of software development best practices, and enhance my skills in teamwork and collaboration, I was particularly interested in learning about the software development lifecycle, version control system, and agile methodologies.

Other hand this internship provides to me experience in a specific field or industry. I have the opportunity to apply the knowledge and skills they have acquired though academic studies in real world situation.

Opportunity to assess whether a particular career path or industry is the right fit for them .by gaining exposure to the work environment and tasks associated with a specific fob, this help me to evaluate it aligns with my interest, skills .and long term career goals.

## **1.3 Training pre-requisites**

Training help me to have a basic understanding of the organization internship program, its objectives and the overall application process. This can include knowledge about the types of internship available, eligibility criteria and the desired outcomes of the program.

Clear understanding of the various component of an internship application. This can include knowing what information and documents are typically required, such as resumes, letter, transcripts or reference.

The general of how internship applications are typically reviewed and evaluated. this can include knowledge of criteria used of assessing applications such as relevant skills, qualifications, academic achievements or previous experience.

## **1.4 Site selection**

I was look for internship opportunities that align with my career goals and fields of interest. By consider the industry, sector or specific job function that are interested in pursuing. To choose my internship site that offers relevant experiences and exposure to the skills and knowledge I want to develop.

The company culture and values determine if they align with my own beliefs and work style. By considering factor such as work environment, employee satisfaction, diversity and inclusion initiatives and corporate social responsibility. A positive company culture can enhance my internship experience.

After evaluating the learning and development opportunities provided by the internship site. I was considering if the organization offers structured training programs, and workshops or other professional development activities. The presence of such opportunities indicates a commitment to the growth and skills development.

## **1.4 Training benefit and motivation**

Training offer the opportunity to apply academic knowledge in real world scenarios. They provide hand on experience in a specific field or industry allow inters to develop practical skills and learn how to navigate professional environment.

Training enable individual to develop a wide range of skills relevant to chosen fields. Whether its technical skills, such as programming or data analysis or soft skills like communication and teamwork internship provide and avenue for honing and expanding one's skills set.

Training allow interns to build professional networks and establish connections with industry professionals. These connections can be instrumental in severing future job opportunities obtaining references and gaining mentorship or guidance from experienced professionals.

## CHAP2. LITERATURE REVIEW

### 2.1 Class theories related to site training

When it comes to internship in software development, several class theories and concept are relevant for understanding and enhancing the internship experience. Here there are a few theories that can be applied.

Software development life cycle(SDLC): the software development life cycle is a process framework that guides the development of software applications.

Understanding different phases of the software development life cycle. Such as requirement gathering, design, development, test and deployment, can help interns grasp the overall the development process.

It provides a structured approach for managing software development project, ensuring efficiency quality and adherence to timelines.

Agile methodologies: agile methodologies, such as scrum or Kanban, focus on iterative and incremental development allows interns to experience working in cross functional teams, participate in daily stand-up meetings, and engage in collaborative problem solving.

It also fosters a mindset of flexibility, continuous learning, and adapting to changing project requirement.

**Object oriented programming(OOP):** object oriented programming paradigm that organize software design around object that interact with each other, interns in software development often encounter object oriented programming concept, such as class, objects, inheritance and polymorphism.

Understanding object oriented programming principle help interns to grasp the fundamental concepts of software design and development and enable them to write modular and reusable code.

**Test –Driven development(TDD):** Test driven development approach that emphasizes writing test before writing the actual code, this practice help to ensure the reliability and correctness of software applications.

Introducing interns to TDD principle allow them to understand the importance of testing and how to create test cases, write code to pass the test, and iteratively improve code quality.

**Version control system(VCS):** Version control system, such as Git, are tools that track and manage change to source code, inters should be familiar with VCS principle and practice, including creating branches, committing code, merging change, and resolving conflict.

Understanding VCS helps interns collaborate efficiently, maintain code integrity, and contribute to a shared codebase.

**Software documentation:** documentation is an essential aspect of software development. Interns should learn how to create and maintain technical documentation, such as design document, API documentation, and user manual.

Understanding documentation practices enable interns to communicate effectively with team members, ensure code maintainability, and support future development effort.

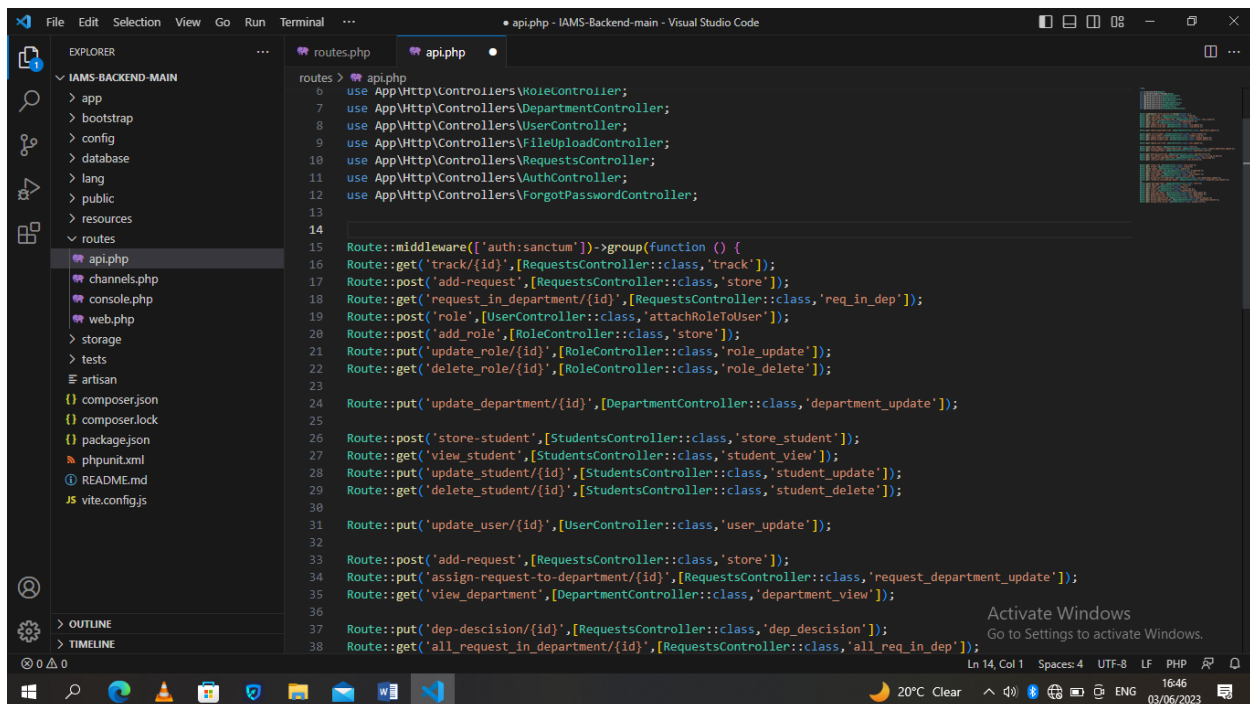
**Quality assurance(QA) and Testing:** quality assurance and testing ensures software quality and identify and fix defects. Interns should be familiar with QA principle, including creating test plan, executing test cases, and reporting and making tracking bugs.

Gaining experience in quality assurance and testing helps interns develop a quality mindset and contribute to delivering reliable software product.

Laravel is a popular PHP framework known for its elegant syntax, robust features, and developer friendly environment. Laravel follows the model view controller(MVC) architectural pattern, which provide a structural way to organize and manage application code. One of the component in laravel architecture is the laravel framework, which consist of libraries, helps and tools that simplify the development process, here a brief description of laravel theories that can be applied in training.

**Routing:** laravels routing system allows you to define application routes, which map URLs to specific actions or controller. Router can handle HTTP method (GET, POST, PUT, DELETE) and can be configured to accept rout parameters for dynamic routing.

**Middleware:** is a crucial component in laravel request processing pipeline. Middle ware sit between the client request and the corresponding application logic. It can perform various tasks such as authentication, authorization, and validation and more.



The screenshot shows the Visual Studio Code interface with the 'routes.php' file open. The Explorer sidebar on the left shows the project structure for 'IAMS-BACKEND-MAIN', including directories like 'app', 'bootstrap', 'config', 'database', 'lang', 'public', 'resources', and 'routes'. The 'routes' directory is expanded, showing files like 'api.php', 'channels.php', 'console.php', 'web.php', 'storage', 'tests', 'artisan', 'composer.json', 'composer.lock', 'package.json', 'phpunit.xml', 'README.md', and 'vite.config.js'. The 'api.php' file is selected and its contents are displayed in the main editor. The code defines various HTTP routes for different controllers, including middleware for authentication and authorization. The status bar at the bottom indicates the current line (Ln 14), column (Col 1), and encoding (UTF-8).

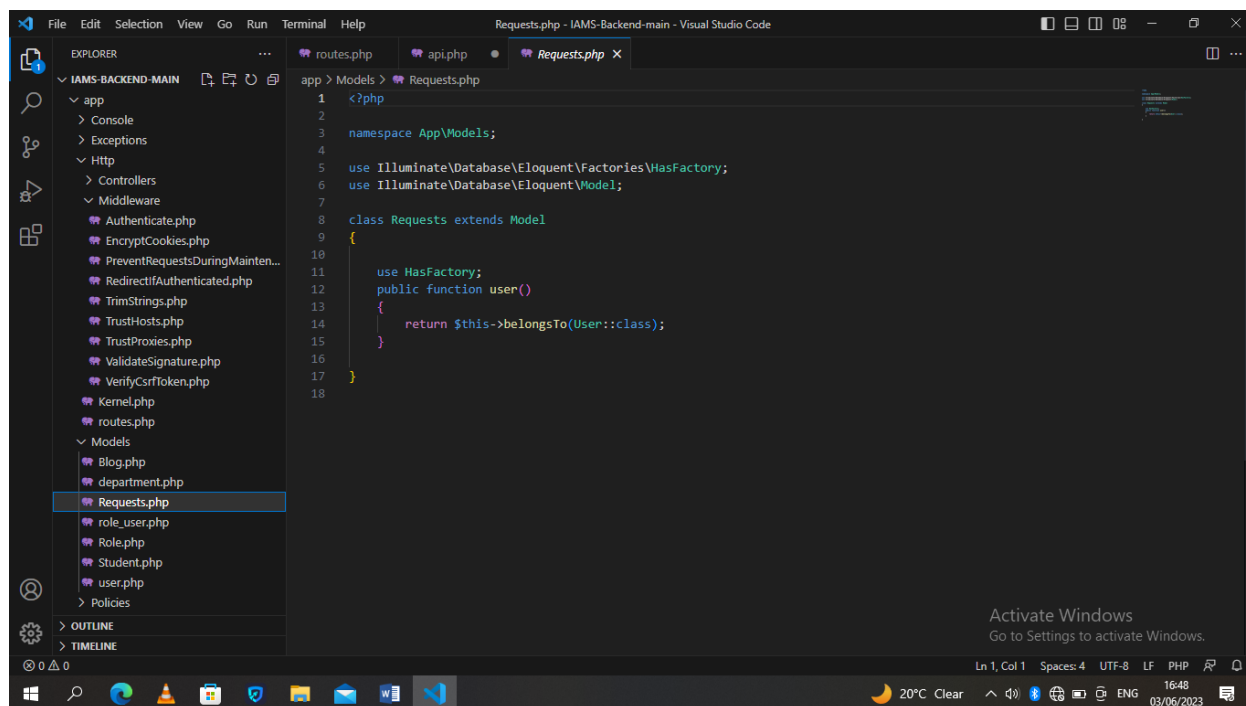
```
routes.php
api.php
6 use App\Http\Controllers\RoleController;
7 use App\Http\Controllers\DepartmentController;
8 use App\Http\Controllers\UserController;
9 use App\Http\Controllers\FileUploadController;
10 use App\Http\Controllers\RequestsController;
11 use App\Http\Controllers\AuthController;
12 use App\Http\Controllers\ForgotPasswordController;
13
14
15 Route::middleware(['auth:sanctum'])->group(function () {
16 Route::get('track/{id}', [RequestsController::class, 'track']);
17 Route::post('add-request', [RequestsController::class, 'store']);
18 Route::get('request_in_department/{id}', [RequestsController::class, 'req_in_dep']);
19 Route::post('role', [UserController::class, 'attachRoleToUser']);
20 Route::post('add_role', [RoleController::class, 'store']);
21 Route::put('update_role/{id}', [RoleController::class, 'role_update']);
22 Route::get('delete_role/{id}', [RoleController::class, 'role_delete']);
23
24 Route::put('update_department/{id}', [DepartmentController::class, 'department_update']);
25
26 Route::post('store-student', [StudentsController::class, 'store_student']);
27 Route::get('view_student', [StudentsController::class, 'student_view']);
28 Route::put('update_student/{id}', [StudentsController::class, 'student_update']);
29 Route::get('delete_student/{id}', [StudentsController::class, 'student_delete']);
30
31 Route::put('update_user/{id}', [UserController::class, 'user_update']);
32
33 Route::post('add-request', [RequestsController::class, 'store']);
34 Route::put('assign-request-to-department/{id}', [RequestsController::class, 'request_department_update']);
35 Route::get('view_department', [DepartmentController::class, 'department_view']);
36
37 Route::put('dep-decision/{id}', [RequestsController::class, 'dep_decision']);
38 Route::get('all_request_in_department/{id}', [RequestsController::class, 'all_req_in_dep']);
```



Laravel provides several built-in middleware and you can also create custom middleware to fit your application need

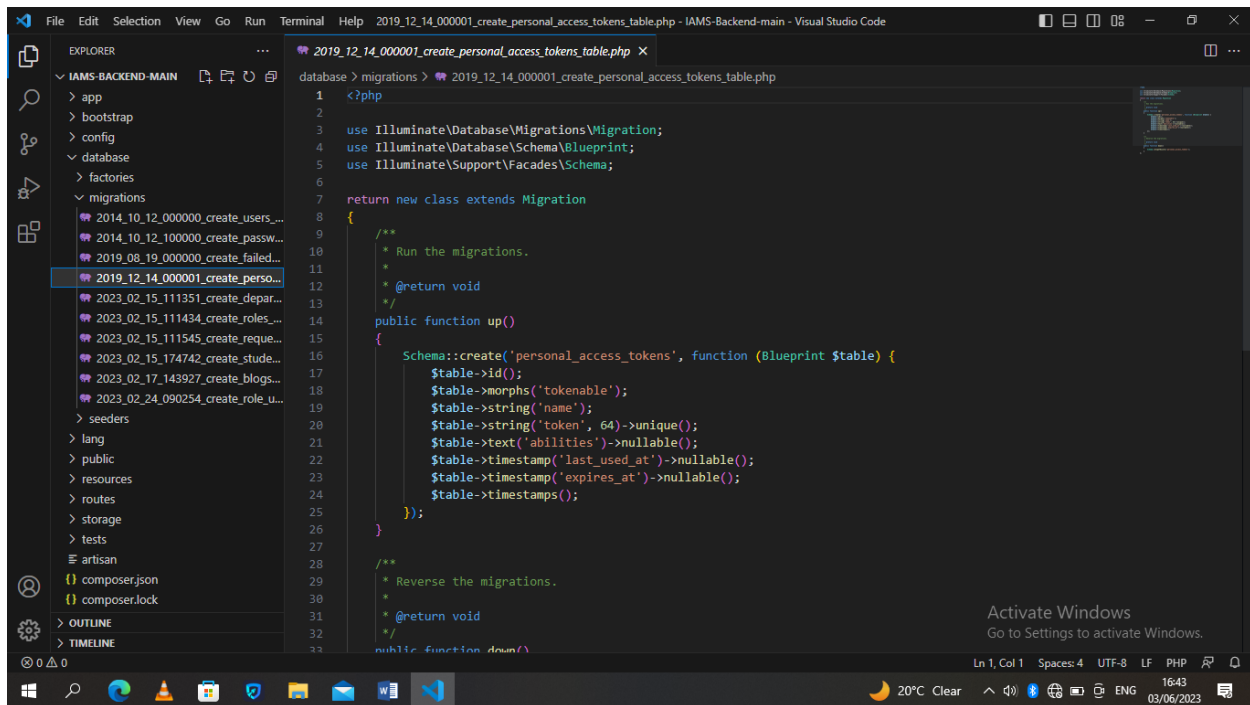
Controller laravel encourage the use of controller to handle the application business logic controller receive request from routes, process the data, interact with the models and return response. Controller help to separate the application logic from the presentation layer, improving code maintainability and reusability.

Laravel represent the database tables and allow you to interact with them a simple and expressive syntax. Eloquent support various relationship (one-to-one, one-to-many, many-to-many) and include features like eager loading, query scopes and soft delete.



**View:** laravel leverage the blade templating engine for views, which provide s concise and powerful way to create dynamic template. Blade support features like template inheritance, conditional statement, loops and more.

Database migration: migration system allows you to manage database schema changes in version controller manner. Migration use a fluent PHP API to create modify, or delete database tables and columns. With migrations, you can easily maintain database structure and keep it in sync with your applications codebase.



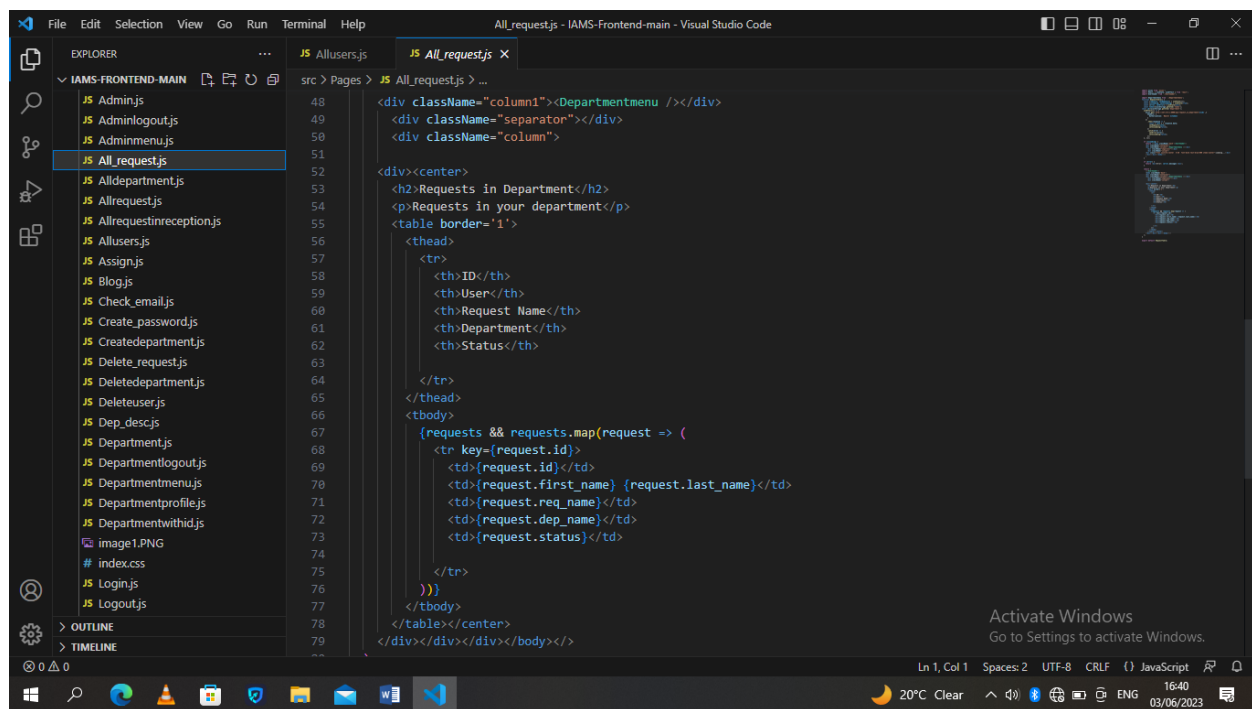
Laravel include a command-line interface called artisan, which provides a range of helpful command for common development tasks. Artisan allows you to generate skeleton, run database migration, create custom commands, and perform various other tasks to streamline development.

**Authentication and authorization:** laravel provides a robust authentication system out of the box, making it easy to authenticate users and mange access to resources it includes features like user registration, login/logout. Password reset, and session management.

React is other popular JavaScript library for building user interface. It focuses on creating reusable UI component that are composed together to form complex and interactive front-end applications. Here's a description or react front-end development approach.

Component-based architecture: react follows a component based architecture where the UI is divided into reusable and self-contained component. Component encapsulate their own logic, state and UI, making them modular, maintainable and easy to test and reuse. React promote the composition of component, allowing developers to build complex UI structures by combining smaller component.

The uses of react JSX(JavaScript(XML) syntax, which allows the developers to write HTML like code directly within JavaScript. Provide declarative way to define a structure and appearance of UI component.



**Component life cycle:** react component have a lifecycle consisting of different phases, such as component creation, update, and destruction. Developers can tap into these lifecycle methods to perform actions specific point, such as initializing stage management.

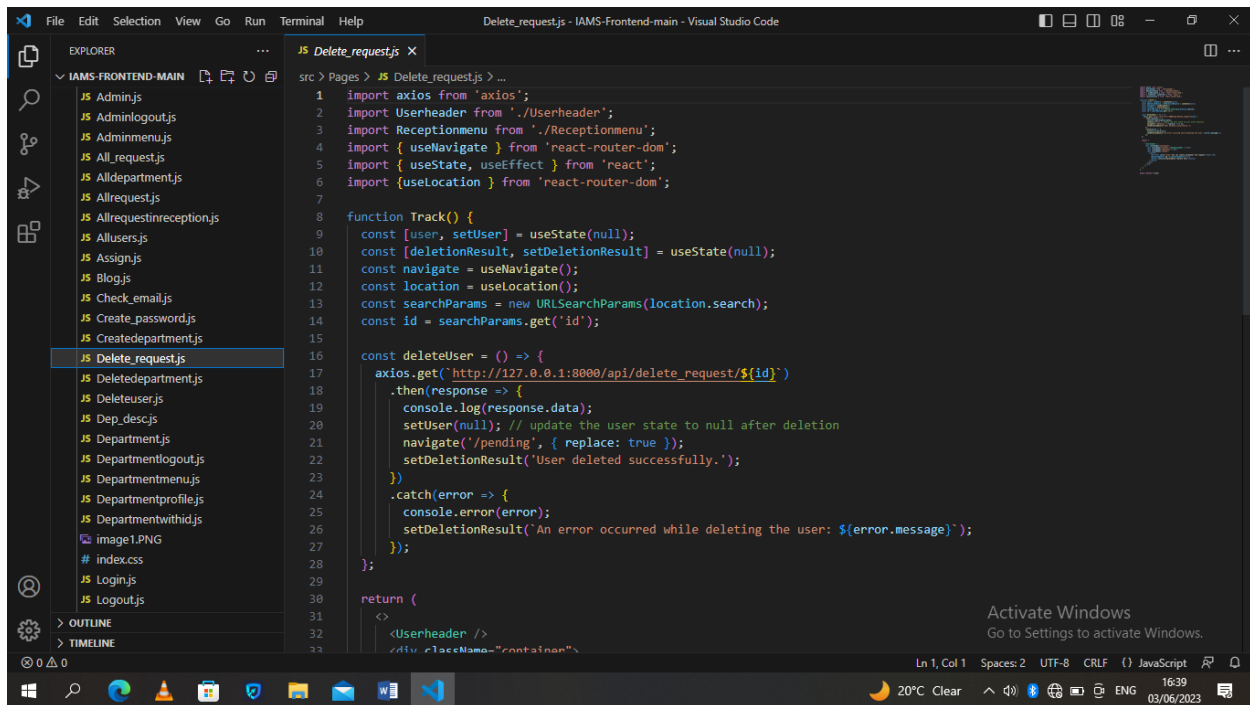
React provides a mechanism for managing component state using the usestate hook or state management libraries like redux. State allows components to store and manage data that can change overtime, such as form input, toggles, or dynamic content.

React router is other popular library for managing client side routing in react applications it allows developers to define different routes and map them to specific components, enabling navigation between different views without a page refresh.

**Reusability and composition:** react promote reusability by creating component with single responsibility and composing them to build larger, more complex UI structures. Developers can build a library of reusable components that can be easily shared and used across different projects.

**React ecosystem:** react have ecosystem of libraries, tools, and community support. Libraries like react router, redux, material-UI, and Axios extend react capabilities and provide solution for routing, state management, UI design and HTTP request.

**Restful API:** Laravel provides excellent support for building restful API, which can serve as the interface between the react front end and laravel backend. Define API routes in laravel the correspond to different resources or functionalities. Use HTTP method (GET, POST, PUT, DELETE) to handle various CRUD operation on the data.



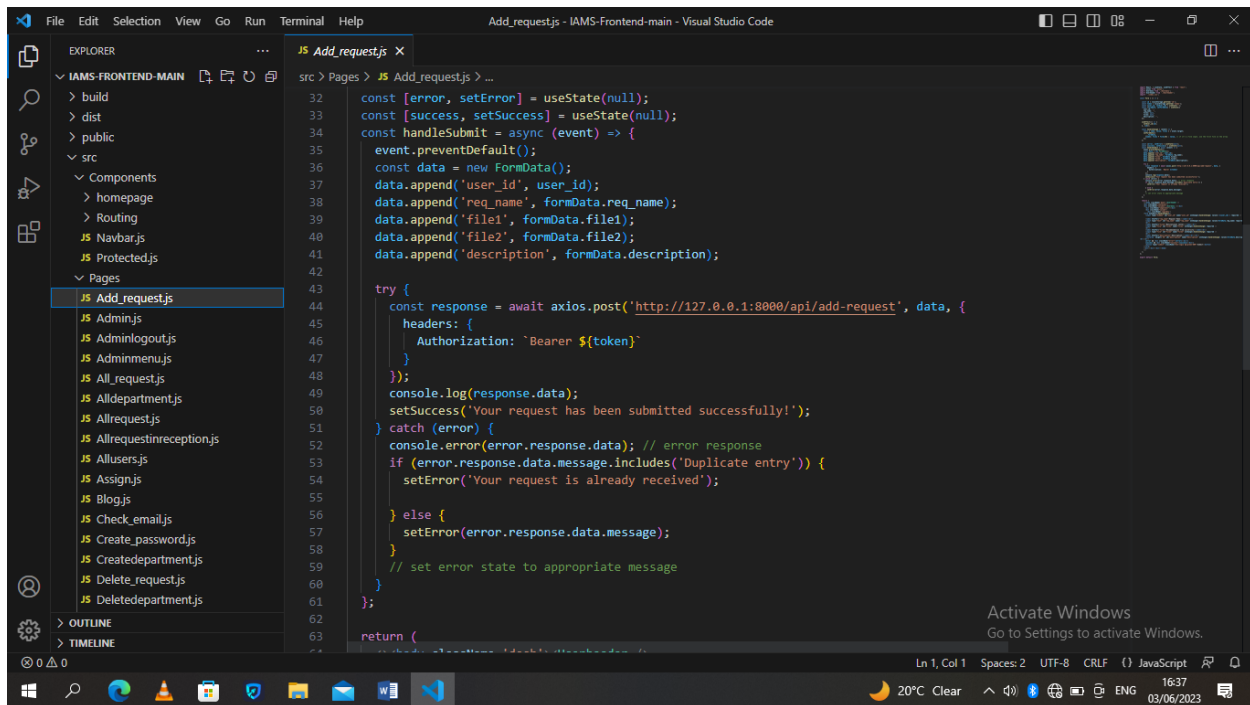
API endpoints and controllers: create API endpoint in laravel that handle the incoming request from the react from the data and interact with the database.

Map these endpoints to specific controllers, where you implement the logic to process the data and interact with the database. The controller retrieve or update the necessary data and send data back JSON response to the react front end.

Axios for HTTP Request: in the react front end use the axios allows you to make HTTP request from the client side code, such as GET, POST, PUT, DELETE request. You can send data in the request payload or as query parameters and handle the response received from the laravel backend.

Fetching data: use Axios in react to fetch data from the laravel backend make GET request to the appropriate API endpoint in laravel to retrieve data handle the response in react and update the state or UI accordingly.

Sending data: to send data from the react from front end to the laravel backend. Make POST, PUT or DELETE request to respective laravel API endpoints. Include the necessary data in the request payload and handle the response in react.



For my application in training require file upload, configure laravel to handle file uploads and implement the necessary endpoints use libraries like multer in laravel to handle file uploads and validate incoming files. In react, use Axios to send the file data to the laravel backend.

**Testing and Debugging:** test and debug the interaction between the react front end and laravel backend at different stages of development. Use debugging tools like browser developer tools and laravel logging and debugging capabilities to troubleshoot issues.

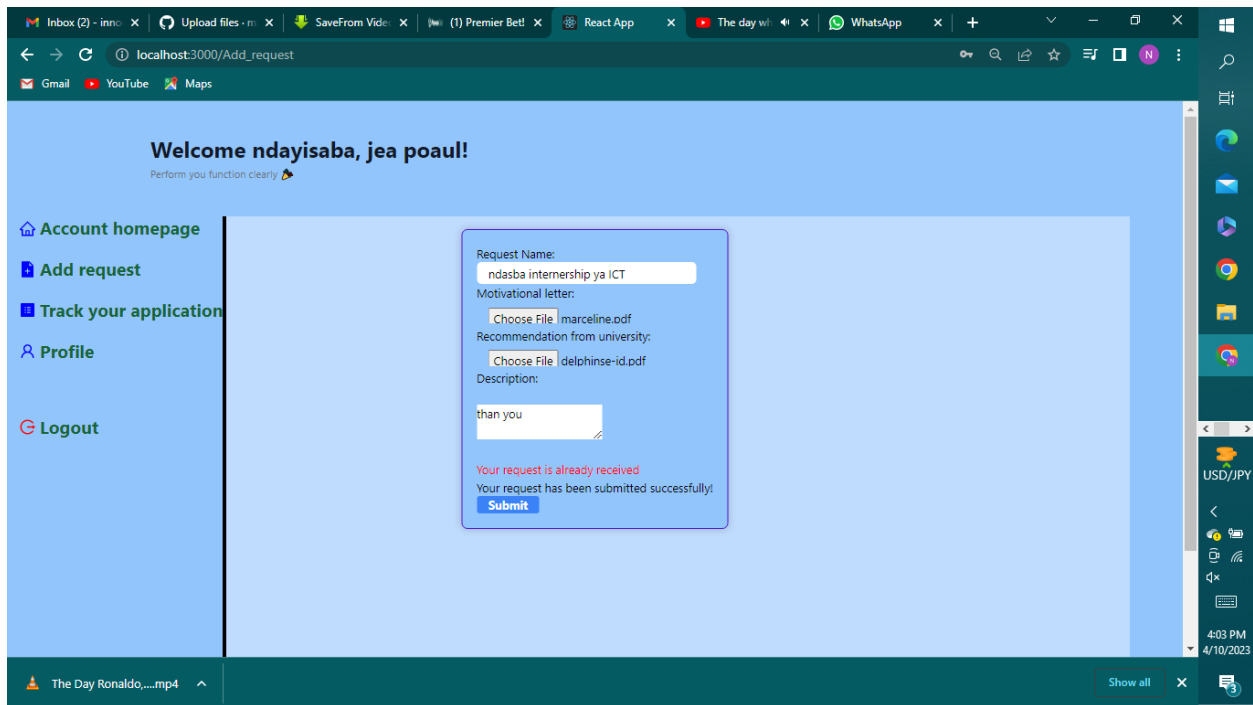


Figure 1 React front ent for send tata into laravel backend

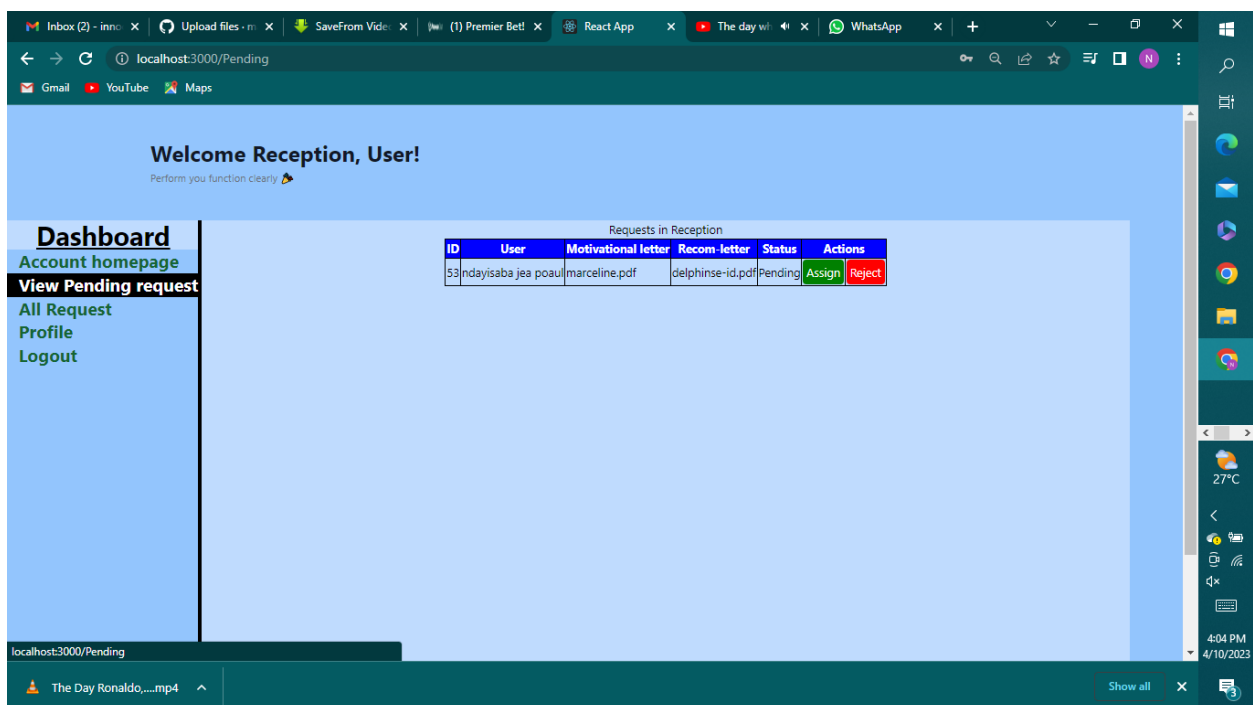


Figure 2 Perform Crud operation on database data

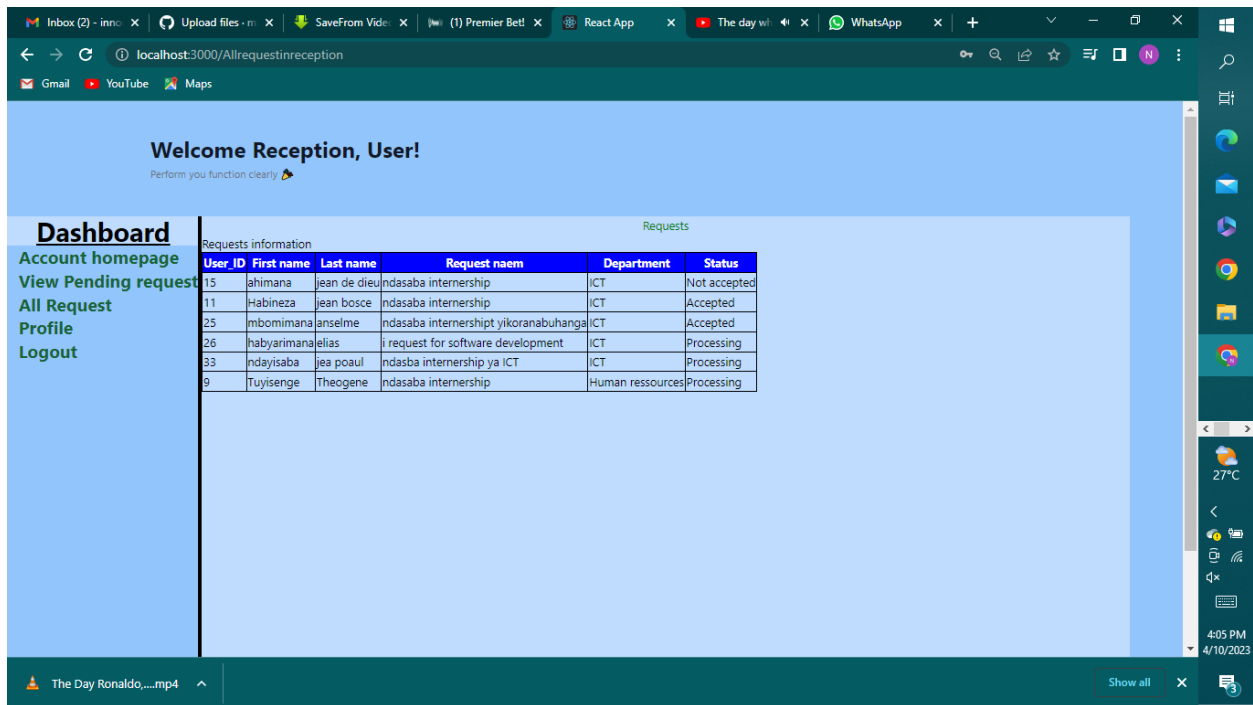


Figure 3 React front end for view data from database

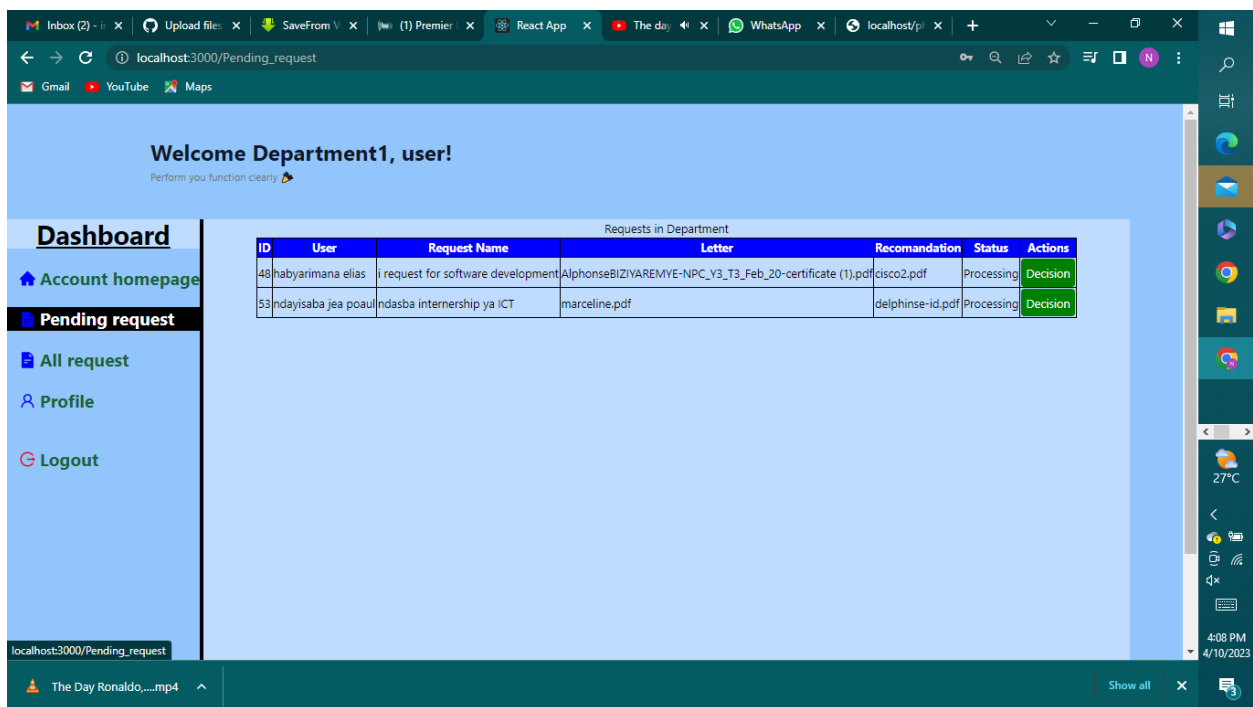


Table 1 Table to view data from database table



## **2.2 Description of the training activities**

### **INTRODUCTION**

Nowadays, finding internship or summer to enhance competitiveness before the graduation has become in increasing tendency. For university students, doing internship is a way to have a great chance to find the career in the future, but for elementary school and high school students, internship is the way to understand the different divisions of social labor so that the student can find their own interest in different areas.

That is they will establish their goals of future and not completely be in dark when choosing a major after graduation. For university students, it will not easy to find a job via social recruitment because a large number of company will require experience before a candidate apply for a job student will face the same obstacles if the lack of real world experience.

The student in many universities need to attain industrial attachments at the end of their studies where their universities request them to find the company or organization help them in these internships in other to attain the working experience.

In the process of searching where they make the internship take a long time for a student in a way of transport going to the company/organization to bring a document needed by the company before allow anyone to make an internship in the organization, the introduced internship management system is the system come for helping the students to make application in the organization easily where the students must sent their request for internship on organization with full requirement via the system and make the response via emails it the applicant must be allowed or request is rejected.

This system is used by students need to make request for internship with fill their personal information and education information in other to express their proof of education background and the receptionist of the organization must be accept the request from the students and assign the request with providing the response to the student or clients.

The purpose of the internship application management system is to help the students to request the internship on the organization and make the response without the more cost of transport and saving their time. Because the student must upload the required document for internship and make the response about their request via internship application management system.

## **REQUIREMENT**

### **FUNCTIONAL REQUIREMENT**

There is requirement needed by the all user of the system where the system request the user to enter same credential in other to assign the responsibilities of the user came to use the system.

When the user sign in the system after entering the email and password in the system. The system must assign their responsibilities based on roles in the system like the following roles for each user of the system.

### **STUDENTS**

The students must have requested by the system to enter the personal information like: First name, Last name, Age, Email, Phone numbers and the education information like University name, College, Department and the kind of internship request in the organization like software development or networking and others based on the available internship in the organization.

## **RECEPTIONIST OF ORGANIZATION**

All request from the student must be seen by the receptionist of the organization and the receptionist must be check for the request have full information needed and must be sent to the department have the responsibilities to provide that king of internship.

## **HEAD OF DEPARTMENT**

The all request for internship requested by students must be sent in their related department and the head of department must to accept or reject the request internship based on the reasons that are available in the department.

## **HUMAN RESOURCES**

The application that are accepted to start internship in the department their request is sent to human resources department to confirm the accepted starting for the internship in the organization.

## **AUTHENTICATION**

Each user must be entering in the system after providing login credentials where the system put user on the dashboard based on the role of the user in the system then the user must logout his or her account after performing the required responsibilities in the system.

## **NONFUNCTIONAL REQUIREMENT**

This system of internship application management system contains the form or registration or signup where the student requested to enter their information and upload the recommendation letter from the department.

Web server is the another requirement for the system used to serve the request from the Mysql database used to keep the information from the client and keep the information of student when the student make any request.

All user must reach to the homepage means that the homepage is the page viewed by everyone on the system and new user of the system must have button to make registration and the existing users have the login form used to come back into the system.

After login for users the system redirects the user to the corresponding page based on the role of the user in the system.

## **DESIGN**

This project, internship application management system, implement web system to provide an environment for student and organization to successfully complete the internship application. Thus the component needed to implement internship application management system are database server.

Web server, graphic user interface component and database interface application programming interface(API) to programmatically access to the database.

## ARCHTECTURE DESIGN

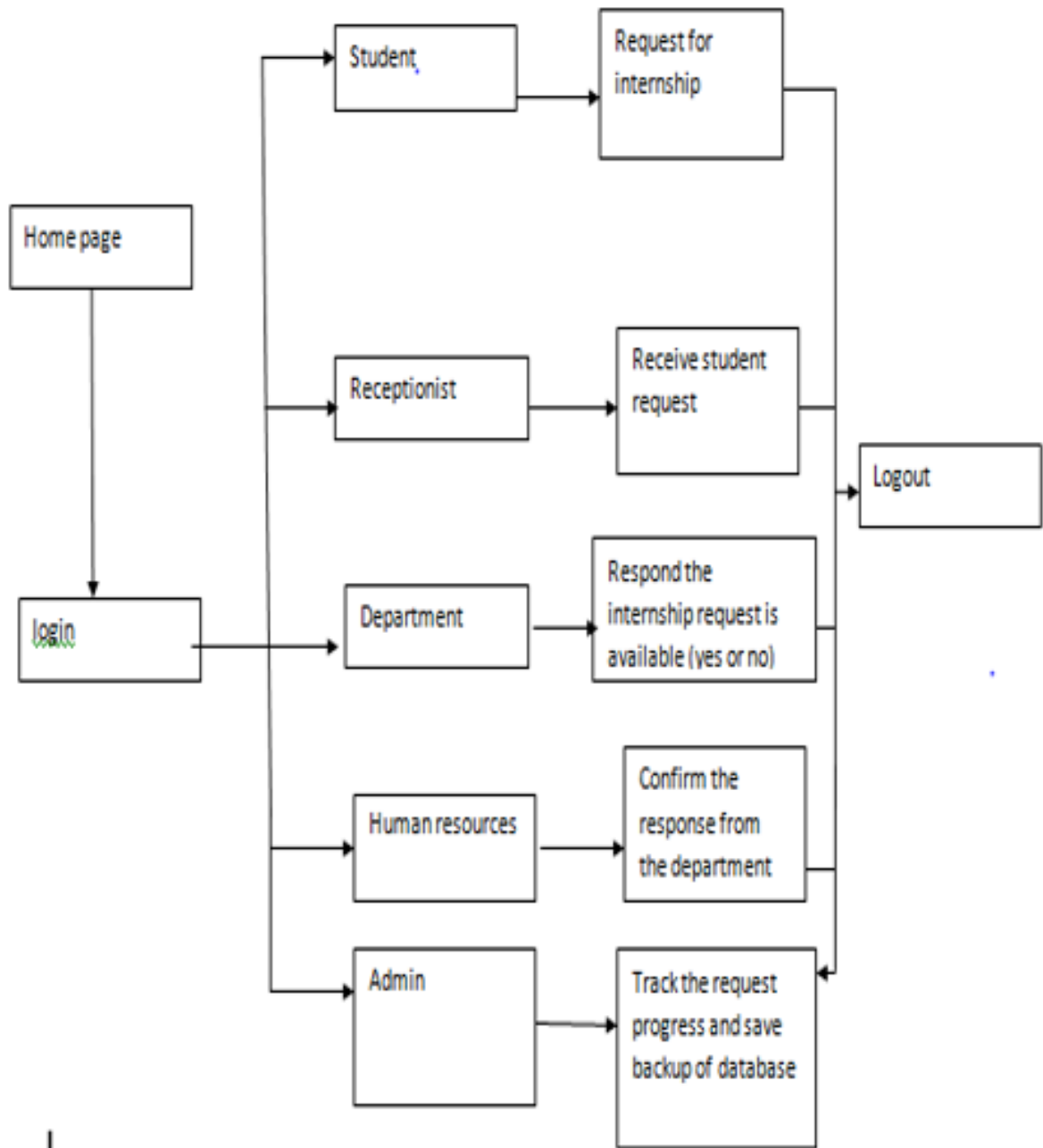


Figure 4 System architecture

## **DATABASE DESIGN**

### **DATA ANALYSIS**

The data for designing and implementing the schema of the database depend on the properties of the pages and users.

The page data needed by the internship application management system are title, header, body and several tabs to move around the web pages. The user data needed by the system are the user social security or student id, username, password, first name, last name and email address. The role of user is automatically redirect to the appropriate page. All the user data will have checked on the server side when the user is created.

All information entered by the user will be checked and appropriate error message will be checked flagged include password mismatch and missing required field. A unique number identifies every record stored in the database and that serves as a parameter to check integrity constraints and maintain true in the database.

### **DATA SCHEMA CONCEPTUAL MODEL ENTETY RELATIONSHIP**

In designing the schema for the internship application management system database, two distinct parts have been identified. The first includes entities having relationship between them. The second include a description of the entities and their attributes.

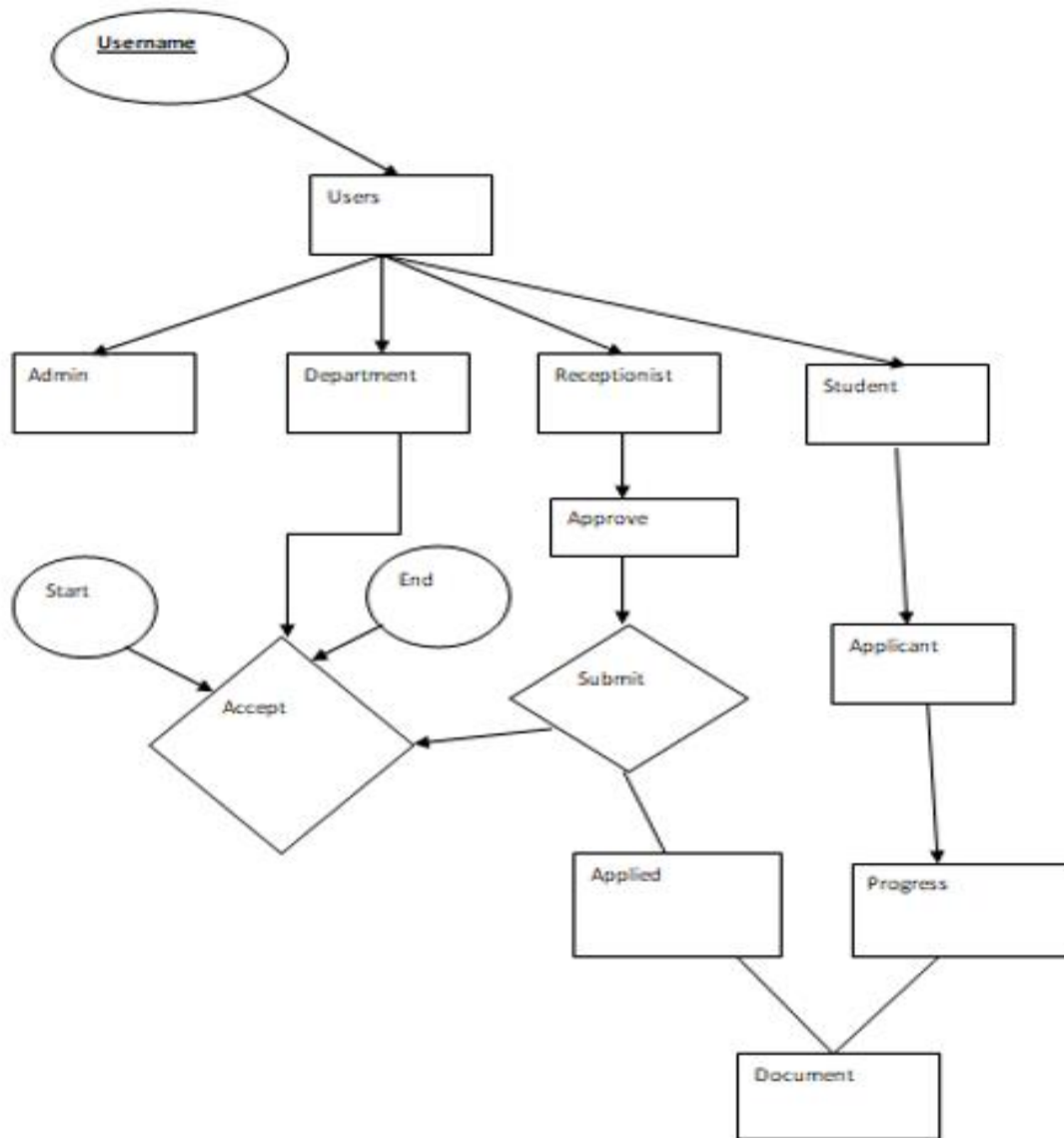


Figure 5 Conceptual model entity relationship

## DATABASE SCHEMA LOGICAL MODEL-RELATIONAL SCHEMA

The conceptual model entity relational diagram maps into the following table design, in the following tables, fields with key indicate the primary.

Table 2 User personal information fields

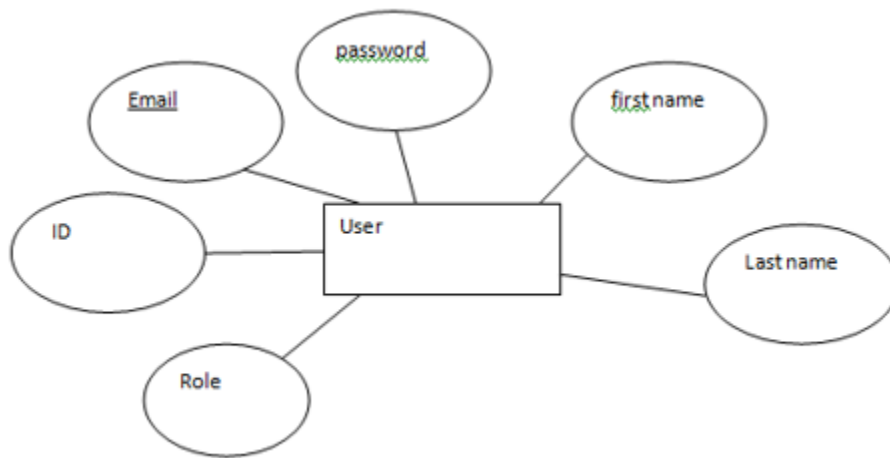
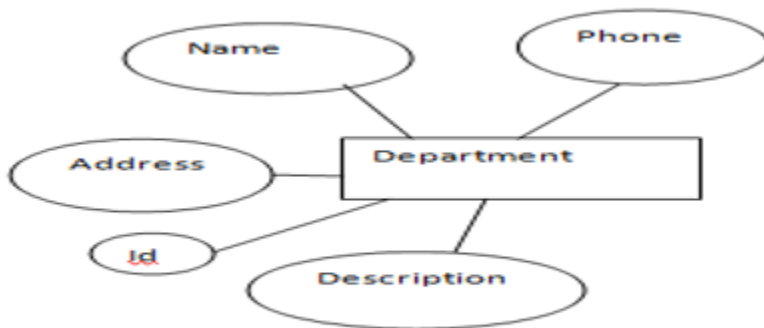


Table 3 Department details fields



## DATA TYPE AND DETAILS

The logical model establishes the following detailed design in MySQL database. The detailed following table describe data type, length, primary key, null or non-null key, and extra information in database in encrypted and it is shown in the web page as some special character repeated as many times as the length of the actual password.



## STUCTURE OF TABLE USERS

Field	Type	Null	Key	Default	Extra
id	Int				
First name	Varchar(40)	no			
Middle name	Varchar(40)				
Last name	Varchar(40)	no			
Email	Varchar(40)	no	<b>Pri</b>		
Password	Varchar(40)				
Role_id	Int(3)				
Created_time	Timestamp				
Updated_tim	Timestamp				

Table 4 Structure of table users

## Structure of table department

Field	Type	Null	Key	Default	Extra
Name	Varchar(60)				
Address	Varchar(40)	no			
Phone	Varchar(40)				
Description	Varchar(90)	no			
Created at	Timestamp				
Updated at	Timestamp				

Table 5 Structure of table department

## Structure of table document

Field	Type	Null	Key	Default	Extra
id	Int(10)				
Name	Varchar(40)	no			
Created_at	Timestamp				
Updated_at	Timestamp				

Table 6 Structure of tale documents

## USE CASE DIAGRAM

Internship application management system is designed to perform several different function for different users

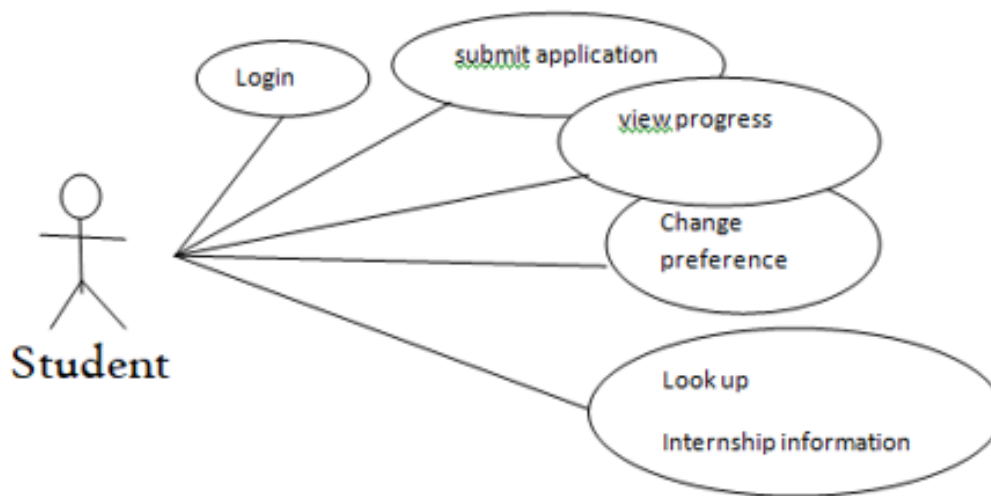


Figure 6 Student use case diagram

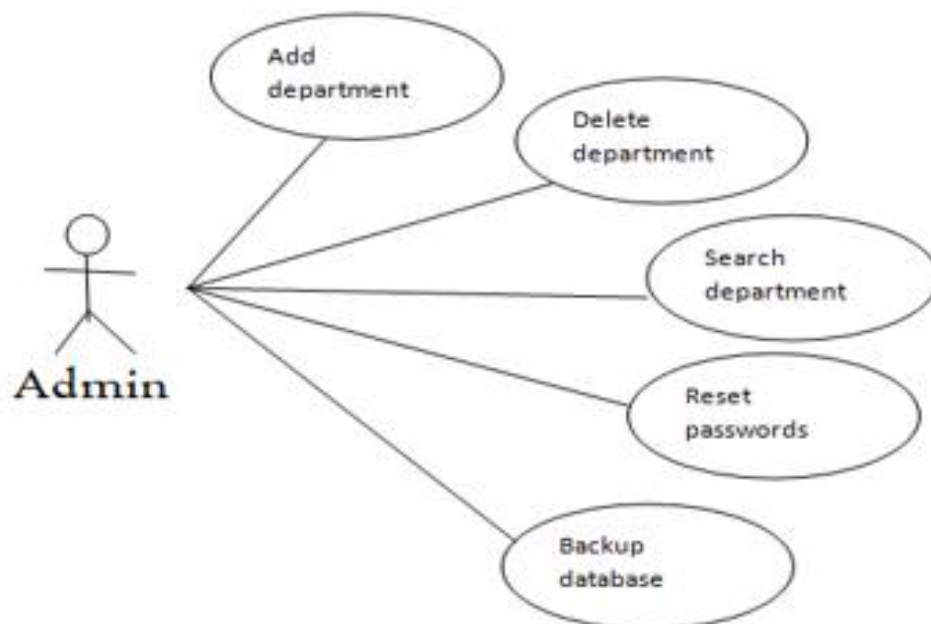
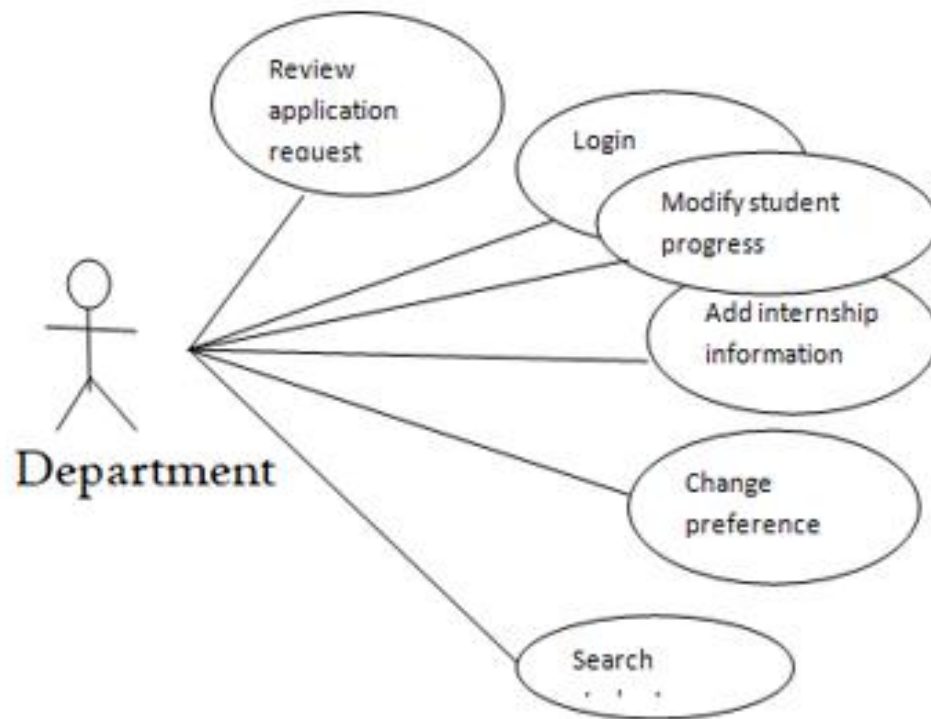


Figure 7 Department and student use case diagram

User interface design

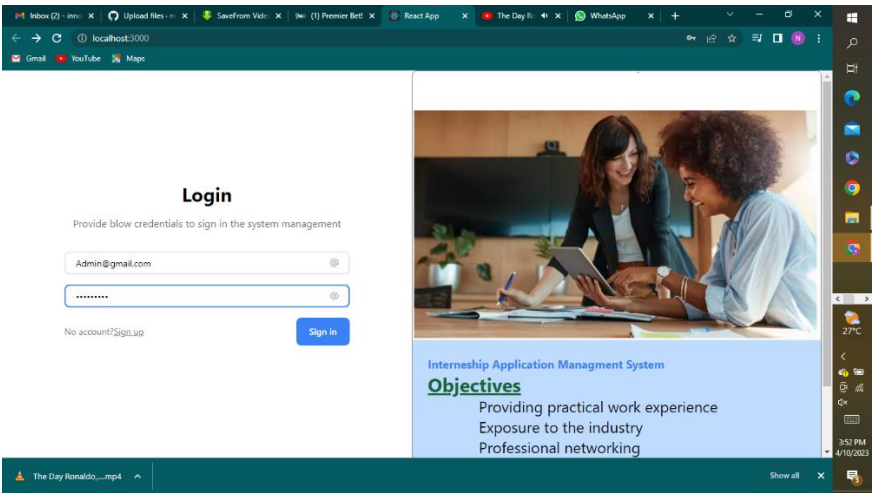


Figure 8 System homepage

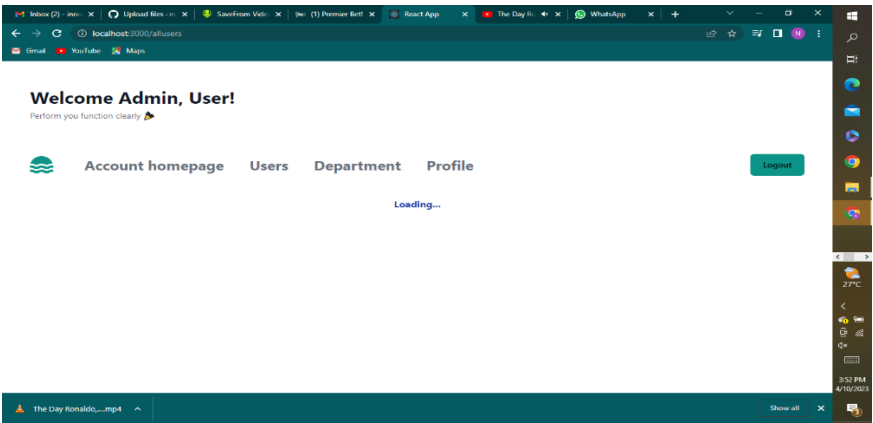


Figure 9 Admin dashboard

The screenshot shows a table of system users. The table has columns for ID, Department, User, Gender, Phone Number, Email, Role, Department, and Delete. The data is as follows:

ID	Department	User	Gender	Phone Number	Email	Role	Department	Delete
3	Department1	user	male	783857284	department1@gmail.com	Role	Department	Delete
7	Department3	User	male	783857284	department3@gmail.com	Role	Department	Delete
8	Tuyserge	Theogene	male	726347294	tuyserge@gmail.com	Role	Department	Delete
11	Habineza	jean boise	male	784858364	habineza@gmail.com	Role	Department	Delete
12	Uwamahoro	Florence	female	794704495	uwamahoro@gmail.com	Role	Department	Delete
13	Uwajenziza	Valentine	female	788969576	uwajenziza@gmail.com	Role	Department	Delete
14	Habyarimana	Elias	male	783857284	habyarimana@gmail.com	Role	Department	Delete
15	ahimana	jean de dieu	male	783857284	ahimana@gmail.com	Role	Department	Delete
17	Admin	User	male	783857284	admin@gmail.com	Role	Department	Delete
18	Reception	User	male	783857284	reception@gmail.com	Role	Department	Delete
19	Department	User	male	783857284	department@gmail.com	Role	Department	Delete
20	Ahimana	Theogene	male	783857284	ahimana@gmail.com	Role	Department	Delete

Table 7 System users table

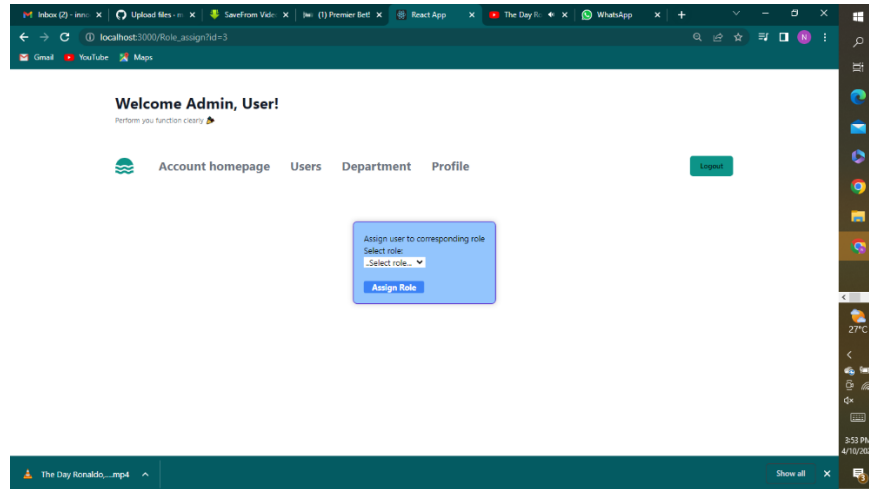


Figure 10 Admin assign the role to the users

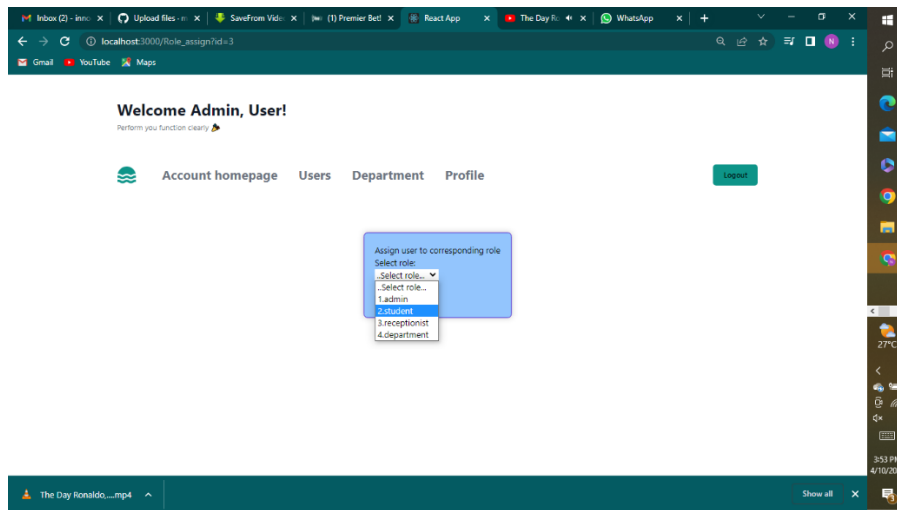


Figure 11 Assign the department to the user

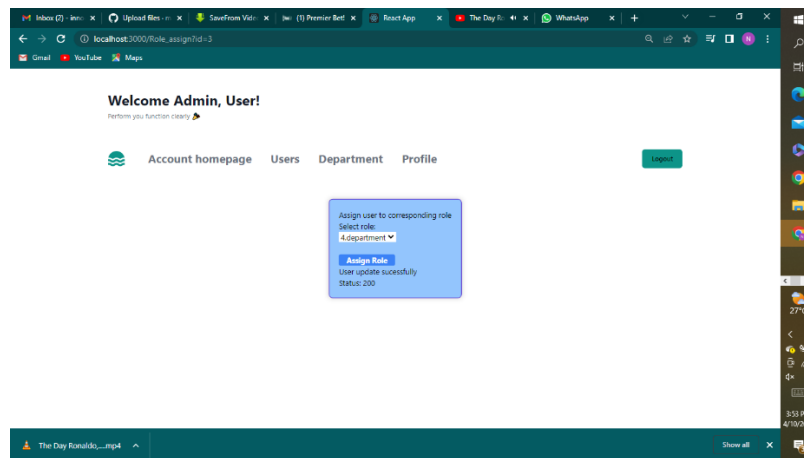


Figure 12 Assign the role to user complete

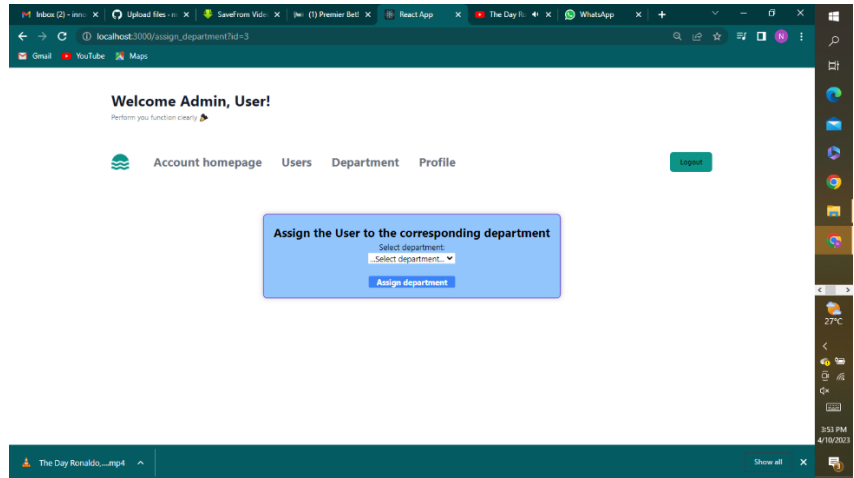


Figure 13 Assign user to the corresponding department

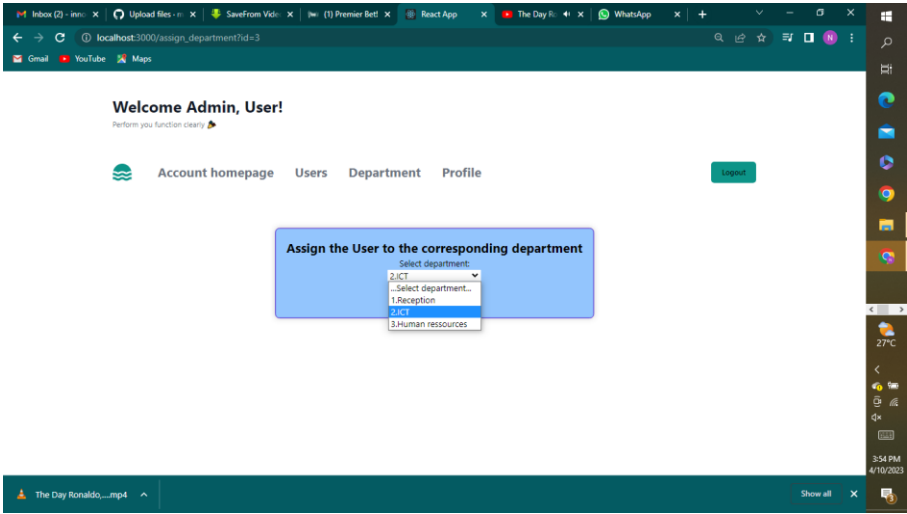


Figure 14 Select the department you want to assign to the user

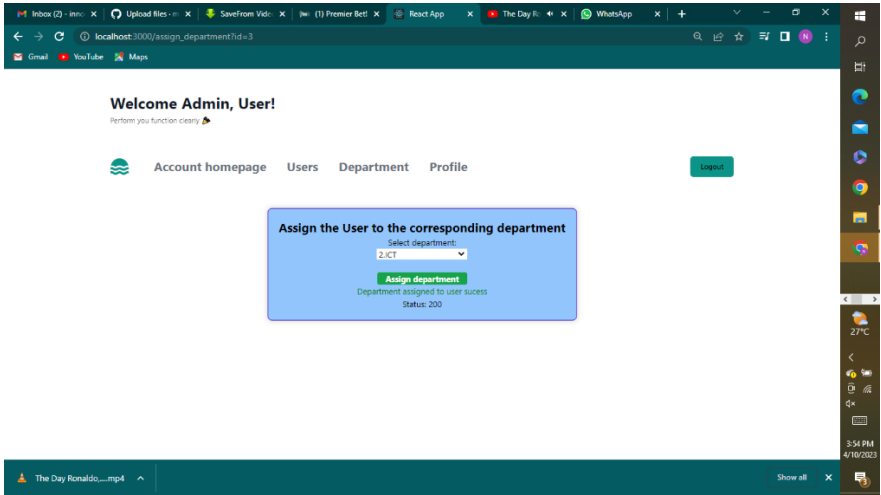


Figure 15 Assign department to the user complete

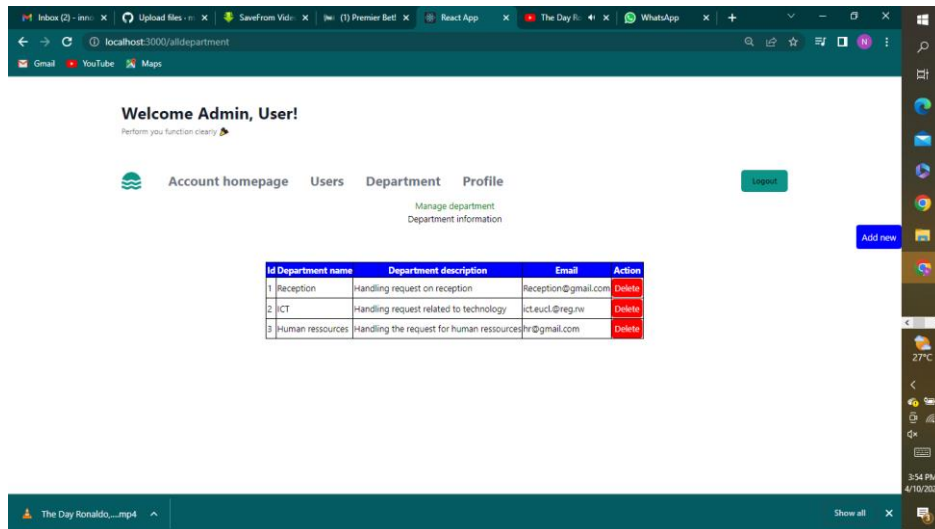


Figure 16 View the available department in the system

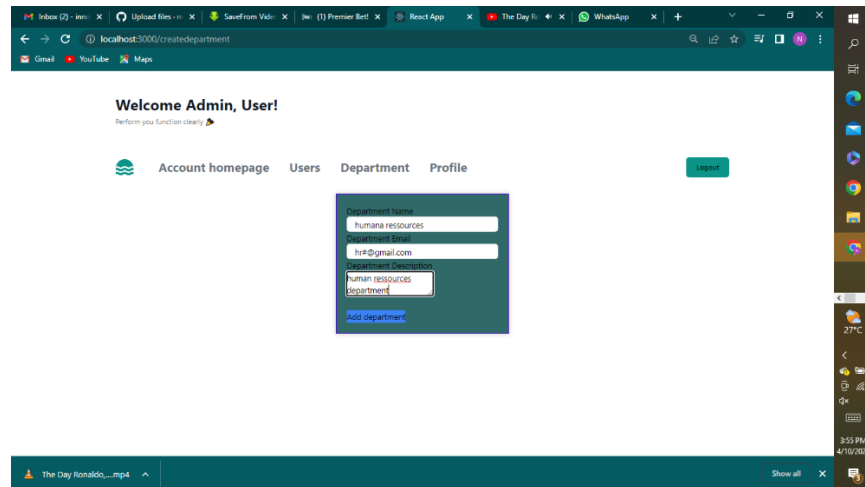


Figure 17 Adding new department to the existing department

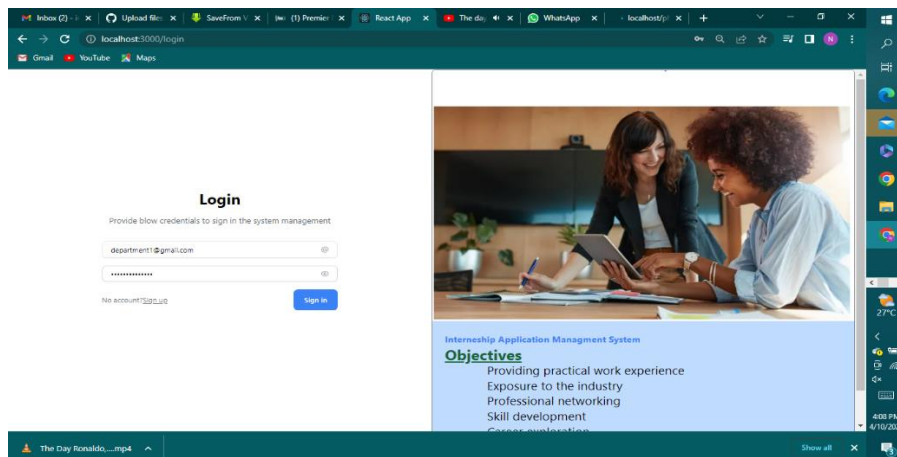


Figure 18 Login form for existing user

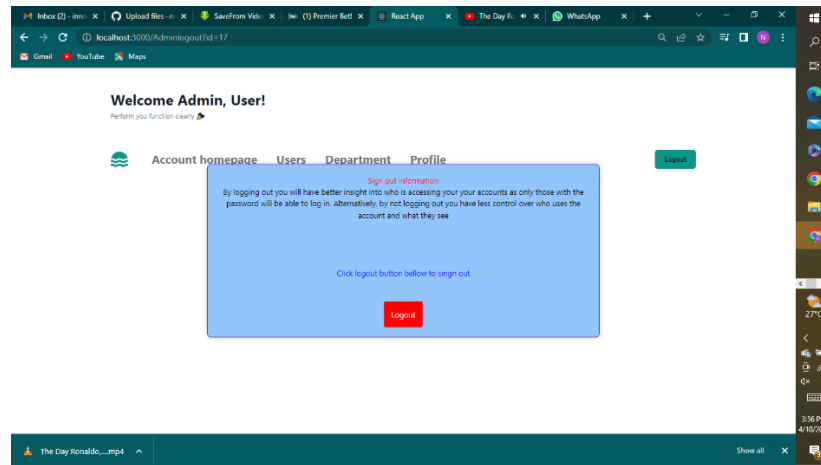


Figure 19 Logout after finish responsibilities in the system

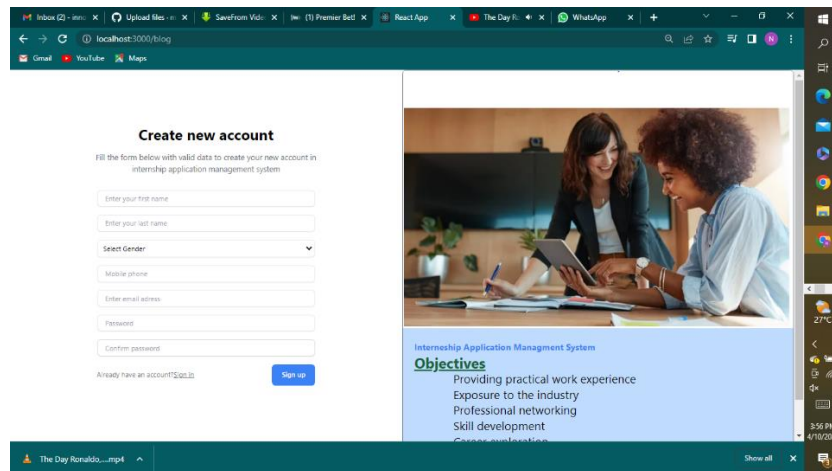


Figure 20 Registration form for a new users of the system

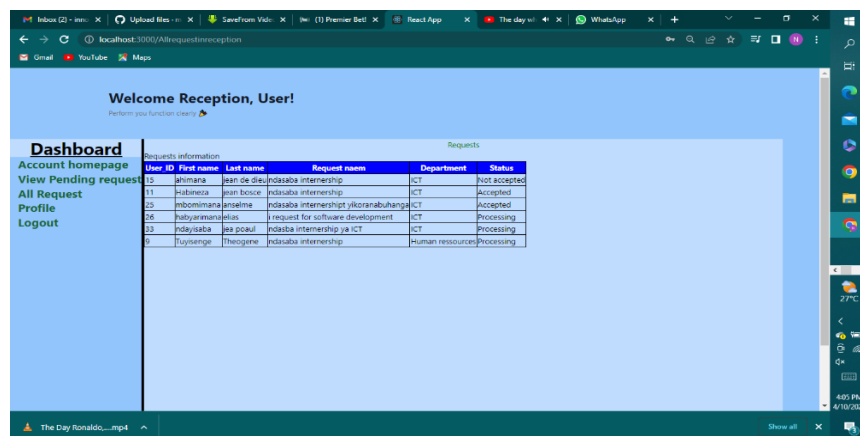


Figure 21 Tracking the application progress



## **CHAP3. MATERIALS AND METHODS**

### **3.1 Site description**

#### **3.1.1 Site localization**

I am thrilled to share my software development internship journey with you. Throughout my internship at Rwanda energy group, I had the privilege of working in a multicultural and diverse environment. As a result, I understand the importance of catering to different language and cultures, which is why I have localized my website.

You can select your preferred language from the drop down menu at the top of right corner of the page and the entire website will be translated accordingly. This way, I want to ensure that everyone regardless of their language or cultural background can fully comprehend and engage with the content.

During my internship, I had the opportunity to collaborate with talented professionals and work on a variety of software development projects I gained hands on experience in the different phases of the software development life cycle, employing agile methodologies to adapt to changing requirements and foster effective teamwork.

I am excited to share my experience showcase the projects I contributed to and highlight the technologies and programming languages I worked with by providing localization option, I aim to create an inclusive and accessible platform for visitors from all over the world.

### 3.1.2 Brief description of the company

During my internship, I had the privilege of working at Rwanda energy group, a leading software development company in the industry. This organization is known for its innovative solutions and cutting edge technologies that drive digital transformation across various sectors. As an intern I had the opportunity to collaborate with a talented team of software engineers and developers, working on challenging project that pushed the boundaries of what is possible. The company's commitment to excellence, emphasis on continuous learning and supportive work environment made it an ideal place for me to gain practical experience and enhance my skills in software development.

I had the incredible opportunity to inter at company. A dynamic startup specializing in software development. At company, the culture of innovation and entrepreneurial spirit were palpable, creating an exciting and fast pace work environment. I was fortunate to be part of a small but highly skilled team where I contributed to the development of innovative software solutions. The company focus on agility, creativity, and customer centricity allowed me to hone my problem solving skills collaborate closely with cross functional teams, and make a meaningful impact on product we delivered.

In the field of software development the tools and equipment used during an internship typically revolve around software and hardware resources rather than physical tools. Here a brief description of some common site tools and equipment used during a software development.

Development software. Interns have access to a range of development software tools including integrated development environment like visual studio code, eclipse or intellij IDEA. These IDEs provide a robust set of features for coding, debugging, version control, and project management. making them essential for efficient software development.

### **3.2 Brief description of the site tools and equipment**

In my field of software development, the tools and equipment used during an internship typically revolve around software and hardware resources rather than physical tools.

**Development software:** interns have access to range of development software tools, including integrated development environments (IDEs) like visual studio code, eclipse. These IDEs provide a robust set of features for coding, debugging, version control, and project management, making them essential for efficient software development.

**Source code management system:** source code management systems like git or subversion are fundamental tools for version control and collaboration. Interns utilize these tools to track changes, manage code repositories, collaborate with team members, and handle branching and merging of code.

**Project management tools:** Project management tools such as Jira, and asana are commonly used during software development internships. These tools on site help to organize and track set priorities. Manage workflows and facilitate communication and collaboration among the team members.

**Testing and debugging tools:** interns use a variety of testing and debugging tools to ensure the quality and functionality of software applications. Tools like selenium, Junit, Postman features provided by IDEs assist in writing and executing test cases, identifying and fixing bugs and validating software performance.

**Virtual machine and cloud platform:** Virtual machines and cloud platforms like Amazon Web Service(AWS) enable to create and deploy software applications in scalable and virtualized environment. These platforms offer resources and service for hosting, testing, and deploying software, enhancing the practical experience in cloud-based development.

**Hardware:** while software development primarily relies on computers, interns may access hardware resources such as laptops or desktop computers with sufficient processing power and memory. Additionally, access to peripheral devices like monitors, keyboards, mice and headphones is essential for comfortable and productive work.

### **3.3 Exposure of the used methodology**

During my internship, I gained exposure to various methodologies that are commonly used in the industry.

Agile methodology: agile methodology is widely adopted in software development due to its iterative and collaborative approach. I had the opportunity to work in an agile environment, where development task was divided into sprints or shorts iteration.

The team held daily stand-up meeting to discuss the progress, challenge and plan for the day. Agile methodologies such as Scrum of Kanban were utilized to manage project backlogs, prioritize tasks, and track progress on a visual board. This methodology emphasize flexibility, adaptability to changing requirement and close collaboration between team members and stakeholders.

Test driven development(TTD): test driven development is a development approach that focuses on writing test before writing the actual code. During my internship. I was introduced to TTD and had a chance to apply it in practice. I learn how to write unit test that defined the expected behavior of the code and then implemented the code to made the tests pass. This methodology helped ensure code quality, identify issues early in the development process, and foster a test-first mindset,

Waterfall methodology: while agile methodologies were more prevalent during my internship I also gained exposure to the waterfall methodology. Waterfall is a sequential approach where each phase of the software development life cycle follows a linear flow, with one phase starting only after the previous phase is completed. I observed how requirement gathering, design, development, testing, and deployment were carried out in structured and sequential manner. Although less flexible compare to agile methodologies, waterfall allow for comprehensive planning and documentation at each stage, ensuring a well-defined and predictable development process.

### 3.3.1 Site visit

**Development area:** this is where magic happens! The development area is buzzing space filled with developers working diligently on their computers. You will see rows of workstation equipped with powerful computers, multiple monitors, and comfortable ergonomic setups. Developers collaborate, write code, and test their application in this workspace.

**Collaborative space:** software development thrives on collaboration and you will find dedicated collaboration space in the office. These areas are designed for team meeting, brainstorming sessions, and code reviews. Teams gather here to discuss ideas, share knowledge, and collaborative on solving complex problems.

**Scrum board:** agile development methodologies like scrum are widely adopted in the industry. You will find scum board prominently displays representing ongoing projects. These boards visualize the follow, with sticky notes or digital cards representing tasks in different stage such as to Do in progress and completed. This helps a team to track the progress and maintain the transparency.

**Testing lab:** quality assurance is critical aspect of software development and you will have the opportunity to visit the testing lab. This dedicate areas is equipped with various device, operating system, and testing tools, testers perform manual and automated testing, ensuring that software applications meet the required standards and functionality.

**Project management area:** effective project management is essential for successful software development. In the project management area, you will find project managers and coordinators overseeing the progress of multiple project. They utilize project management tools and software to plan, allocate resources, monitor timelines, and ensure smooth execution.

**Breakout spaces:** in between coding and problem solving, software developers need a breather. Breakout space are design for relaxation and informal discussion. You find couches, bean bags, or game areas where developers can unwind, recharge or engage in friendly discussion to foster a positive and collaborative environment.

### 3.3.2 Required training information and data collection

**Goals and objectives:** clearly define goals and objectives of the internship program. Specify the desired learning outcomes, technical skills to be acquired, and professional development areas to focus on during the internship.

**Curriculum and learning plan:** develop a structured curriculum or learning plan that outlines the topic, technologies, and programming language to be covered during the internship. This plan can include a breakdown of learning module, practical exercises, coding assignments, and hands-on projects to provide a comprehensive learning experience.

**Resources and tools:** ensure have the necessary resources and tools for the training. This includes software development platforms, programming tools, documentation, and online resources for self-study and exploration.

**Collaboration and teamwork:** emphasize the importance of collaboration and teamwork in software development. Encourage interns to work on group projects, participate in code reviews, engage in pair programming, and foster effective communication skills within the development team.

#### **Data collection**

**Project assessment:** evaluate the performance and progress by assessing the work on individuals or group projects. This includes reviewing coding practice, code quality, adherence to coding standards, and ability to meet project requirements. Provide constructive feedback to help them improve their development skills.

**Code review:** conduct regular code reviews to assess interns' code quality, adherence to best practices, and understanding of software development principles. Code reviews can be performed by mentors, supervisors, or peers to identify areas for improvement and provide recommendations.

**Performance evaluation:** conduct periodic performance evaluations to assess interns' overall performance and growth during the internship. This evaluation can include a review of technical skills, collaboration, and contribution to the development team.

### 3.3.3 Questionnaire and interview

Certainly! Here are some samples questions for questionnaire and interview for software development internship

#### Questionnaire:

1. What motivated to apply for a software development internship?
2. What specific programming language or technologies are you familiar with?
3. Have you worked on any software development project in the past? If yes, please provide a brief description of your role and contributions?
4. What are your career goals in software development and how do you think this internship will help you achieve them?
5. How comfortable are you with working in a team and collaborating with other developers?
6. Are you familiar with any software development methodologies such as agile, scrum, or waterfall? If yes, please describe your experience with them.
7. How do you approach problem solving and debugging in software development?

#### Interview:

1. Tell us about your experience with software development and any relevant project you have worked on
2. Which programming language are you most comfortable with? Can you provide examples of project you have completed using those languages?
3. How do you handle challenges or obstacles that arise during the software development process?
4. Have you worked in a team setting before? if so, describe your experience collaborating with others and contributing to a team project.
5. Can you explain the difference between front-end and back-end development? Which area are you more interested in.
6. have you worked with any software development frameworks or libraries? If yes, please provide examples and discuss your experience with them.

### 3.3.4 Site illustration

Development environment: an illustration showcasing developers working at their desks, surrounded by computers, multiple monitors and various programming tools. This can depict the typical workspace of a software development team.

Collaboration space: show an illustration of a designated collaboration area with team members brainstorming, discussing code, and working together on digital collaboration tools. This emphasizes the importance of teamwork and collaboration in software development.

Agile methodology: create an illustrations representing an agile environment featuring in scrum board with sticky notes representing user stories, tasks, and progress. This visually represent the iterative and collaborative nature of agile software development.

Testing lab: depict an illustration of a testing lab, showing testers using different device and too to perform software testing, including manual testing and automated testing. This highlight the importance of quality assurance in software development.

Code review: show an illustration of a code session, with developers sharing their code on screen or using code review tools. This emphasizes the importance of code quality and collaborative code review in improving software development practice.

Learning and training: illustrate a scene where interns engaged in training sessions or workshops, with a mentor or trainer guiding them through various software development concept and technologies. This represent the learning and growth opportunities provided during the internship.

Project collaboration: create illustration showcasing developers working together on a software development project, collaborating on code, discussing solution, and sharing knowledge, this demonstrate the collaborative nature of software development projects.



### **3.3.5 Site works**

Assigned me in specific development tasks such as coding features or fixing bugs, under the guidance of experienced developers. These task may involve programming in various language, writing clean and efficient code and following coding standards and best practices.

Involved in software development testing activities, including manual tasting, test case creation, and test script execution. They may assist in identifying and reporting bugs, analyzing test result and contributing to the overall quality assurance process.

Contribute to the documentation process by creating or updating technical documentation, user manuals or API documentation. This include documenting code, APIs project requirement and software design.

Participate in collaborative projects within a development team. This could involve working on specific modules or features of a large software project, collaborating with team members and using version control system to manage code changed and contributions.

Often encouraged to explore new technologies, programming languages or framework. They may be assigned research tasks to evaluate new tool, libraries or methodologies and provide recommendation on their potential use in software development project.

Participate in code reviews sessions both as reviewers and receivers of feedback. The can learn from experienced developers code reviews and gain insight into code quality, best practices and effectives programming technique.

Provide technical support to end users or assist in troubleshooting issues related to software application. This involves understanding user requirement reproducing reporting issues, and providing solution or escalation the to the appropriate team members.

### 3.3.6 Books and e-documentation

Agile software development: principles, pattern and practices by Robert C. Martin- this book provides an in depth understanding of agile principles and patterns along with practical advice for applying agile method in software development

Scrum: The art of doing twice the work in half the time by Jeff Sutherland- this book introduces the scrum framework and shares insights on how to implement scrum effectively improve productivity and deliver high quality software.

Agile estimating and planning by Mike Cohn- this book offers guidance on writing and refining user stories an essential technique for capturing requirements in agile development projects.

Succeeding with agile: software development using scrum by Mike Cohn this comprehensive guide covers scrum practices including sprint planning, daily stand ups, backlog grooming and retrospectives to help teams succeed in agile software development.

Agile alliance (<https://www.agilealliance.org/resources/>)- the agile alliance websites offers a wide range of resources including articles, whitepapers, and case studies covering various agile methodologies, practices and tools.

Scrm.org (<https://www.scrum.org/resources>) –scrum.org provide a collection or resources including guides assessments and case studies for individuals and teams looking to learn and apply scrum.

Agile manifesto (<https://agilemanifesto.org/>)-- the agile manifesto is a foundational document that outlines the values and principle of agile software development, it is serves as a guiding reference for understanding the agile mindset.

Agile coach's toolbox (<https://agilecoachingtoolbox.com/>) – this is online resources offers a curated collection of tools, techniques, and templates for agile coaches and practitioners, providing practical guidance for implementing agile methodologies.

## CHAP4: TRAINING OUTCOMES

### 4.1 Survey map

The purpose of training survey is to gather information about software development skills and training need of individual within a specific organization or groups.

My survey conducted at the people out of organization to discuss more about the benefit of software development in today world and the importance of graduating the software development and how the software development is better for anyone become a software developer.

Based on the existing data more student in university confused about choosing the software development or networking where the person make choice based on how to learn these choice is easy do not think about the importance of learn software development another to reach to his/her goals.

After analyzing the response from the participant the main reason why we need to learn the software development is the key tools in everyday life because is used to improve the communication and the development of all sectors where all service now is available in the software systems, the many developer may choose software development based on the income for any one provide the system.

## 4.2 Description of training activities

Training activities in software development aim to equip individuals with the necessary skills and knowledge to become proficient software developers, these activities typically include a combination of theoretical instruction, practical and hand on project. Here is a description of training activities in my software development internship.

Programming fundamentals: introduction to programming concept and principles, learning programming language such as laravel, react, tailwind CSS, understanding variables, datatypes, control structures, function and basic algorithms.

Software development methodologies: introduction to various software development methodologies like: agile, scrum and waterfall. Learning the concept of requirements gathering, analysis, design, implementation, testing and deployment.

Web development: learning HTML, CSS and JavaScript for building interactive web pages, understanding front end framework like react and exploring backend technologies such as node.js or PHP for server-side development.

Database management: learning the fundamental and relational database. Understanding SQL (Structured Query Language) for data manipulation and querying, exploring database management system like MySQL and MongoDB.

Object oriented programming(OOP): understanding the principle of OOP including encapsulation, inheritance and polymorphism. Learning to design and develop software using OOP language like java

Software testing: understanding the importance of software testing and quality assurance by learning different testing techniques, including unit testing, integration testing and acceptance testing.

Deployment: understanding the deployment process and various deployment method, learning about continuous integration and continuous deployment practices.

### 4.3 Discussions and analysis of the training work

#### **Practical hands-on experience**

Hands on exercises and projects are virtual for me to apply the learning in real world scenarios, practical experience help in solidifying concept, improving problem solving skills and building confidence in the software development.

#### **Quality of instructions**

Competent and instructions instructors play a significant role in the success of training program, the instructors should possess strong technical expertise and effective teaching skills to effectively impact knowledge and guide trainers.

#### **Learning resources**

Access comprehensive and up to date learning resources such as textbooks, online tutorials, documentation and coding exercises enhances the learning experience. Availability of supplementary materials and resources helps further explore and deepen their understanding of software development concept.

#### **Collaborative learning environment**

Encouraging collaboration and teamwork among trainers fosters a supportive learning environment, group project, pair programming and peer code review promote knowledge sharing, problem solving and communication skills.

#### **Practical project work**

Assigning real world project during training allow trainer to apply their skills and gain hands on experience, completing projects enhances problem solving abilities, project management skills and collaboration with team members.

#### **Assessment and feedback**

Regular assessment and constructive feedback are vital to track trainers progress and identify areas for improvement, feedback from instructors help trainer to refine their skills, address weaknesses and reinforce their strength.

#### 4.4 Environmental aspect of the training

The environmental aspect that can impact the learning experience is the following:

##### Physical workspace

The physical workspace where take place should be conducive the learning, it should provide adequate seating, lighting, ventilation, and a comfortable environment of trainer to focus and engage in the training activities.

##### Infrastructure and equipment

The availability of reliable and up to date infrastructure and equipment is crucial for a smooth training experience, this include computers or laptops, high speed internet connectivity, software installations and access to necessary tools and development environment.

##### Learning environment

A positive and inclusive learning environment is essential for trainer to fill motivated and engaged, the training program should promote open communication, collaboration and mutual respect among the trainer and instructor.

##### Noise and distractions

Minimizing noise and distractions in the training environment help the trainer concentrate on their learning, providing separate spaces for individual's work, group discussions and interactive sessions can help create a focused learning atmosphere.

##### Health and safety

Ensuring a safe and healthy training environment is important for the well-being of trainers, compliance with safety regulations, emergency protocols and providing necessary amenities like first aid kits contribute to a secure training experience.

#### 4.5 Benefit/ cost analysis of the training

Training offer several benefits both the trainer and organization providing the opportunity.

##### **Practical experience**

Training provide an opportunity for students or entry-level professional to gain hand-on experience in the chosen field. It allows them to apply theoretical knowledge gained in academic settings to real world situation.

##### **Skills development**

Offer a platform for individual to develop and refine the skills. They can learn industry-specific tool, technologies and best practice as well as develop transferable skills such as communication, team work problem solving and time management.

##### **Confidence and self-discovery**

Training can boost and individual confidence by allowing them to take on real responsibilities and contribute to meaningful project. It also help trainer to gain self-awareness discover their strength and weakness and explore the career interest and aspiration.

## CHAP 5: CONCLUSION AND RECOMMENDATION

### 5.1 Conclusion

As conclusion, the industrial attachment provide valuable opportunities for individuals to gain practical experience and enhance skills in the field, through internship the interns have chance to apply their theoretical knowledge to real world projects, work in collaborative environment and learn from experienced professionals.

During the internship interns are exposed to various aspect of software development, including programming language, frameworks, tools, and methodologies. They have the opportunity to work on diverse projects that help them to understand different development scenario.

The internship program help interns to develop essential technical skills such as coding, debugging, testing, and problem solving. They also gain exposure to industry-standard practice, project management methodologies and teamwork, the hand on experience gained during the internship enhance their understanding of the software development lifecycle and prepares them for future role industry.

Additionally, the internship provides opportunities for personal and professional growth, interns can improve their communication skills, learn how to work effectively in teams and develop a strong work ethic. They also have chance to network with professionals in the industry and build connections that can be valuable for their future career advancement.

From the perspective of the organization the internship program allows them to identify and nurture talented individuals who may later become valuable assets to the company. It also provides a platform the evaluate the interns for their future employment.

Overall, the software development internship is mutually beneficial experience for both the interns and the organization. It bridges the gap between academic learning and practical application, equips interns with valuable skills and prepare them for a successful career in software development.



## 5.2 Recommendations

### 5.2.1 Useful remarks

#### Mentorship

Providing interns with dedicated mentors who can guide and support them throughout the internship can greatly enhance their learning experience, mentor can offer valuable insights, share their experiences, and provide feedback to help intern grow in their skills and knowledge.

#### Feedback and evaluation

Regular feedback session and performance evaluations provide interns with a clear understanding of their strengths and areas for improvement constructive feedback helps them track their progress and make adjustments to enhance their skills.

#### Networking opportunities

Creating networking opportunities for interns within the organization or industry can be beneficial for their professional growth, this could include organizing meetups, inviting guest speakers, or facilitating interactions with professionals from different departments.

#### Continuous learning

Encouraging interns to in continuous learning and providing access to learning resources, online courses, or conferences helps them stay updated with the latest trends and technologies it software development field.

#### Professional development workshops

Conducting workshops or training sessions on topics beyond technical skills, such as resume writing, interview preparation and personal branding can assist interns in their future job search and career advancement.

#### Collaboration and team work

Fostering a collaborative environment where inters can work together on project or participate in group activities enhance their team work and communication skills. Encouraging knowledge sharing and peer learning can also contribute to their overall development.

### **5.2.2 Suggestion to the organization**

I can provide some suggestions to organization hosting the software development internship, these suggestions aim to enhance the effectiveness and value of the internship program

#### **Clear program structure**

Establish a well-defined program structure with clear objectives, timelines, and expectation for both interns and supervisor. This provide a roadmap for the internship and ensure that interns understand what is expected of them.

#### **Onboarding and orientation**

Develop comprehensive onboarding process that familiarizes interns with the organization culture, values, policies and tools. Provide an orientation session to introduce them to the team, key stakeholders and overall structure of the organization.

#### **Mentoring and guidance**

Assign experienced mentors to each interns who can provide guidance support, and regular feedback throughout the internship. Mentors can help interns to navigate challenge, offer career advice and assist with professional development.

#### **Collaboration and teamwork**

Encourage the collaboration and teamwork among intern by assigning them to work on group project or fostering a cooperative environment. Provide opportunities for knowledge sharing, brainstorming session and cross functional collaboration.

#### **Professional networking**

Facilitate networking opportunities for interns by organizing event, inviting industry professionals for talks or panel discussion. And encouraging participation in relevant conference or meetups. Networking helps interns expand their professional connections and gain industry insight.

### **5.2.3 Recommendation towards the future trainings**

Needs assessment: conduct a thorough needs assessment to identify the specific skills and knowledge gaps within target audience, this will help trainer in future training program to address those specific need efficiently.

Practical hands-on exercises: increase emphasis on practical hand on exercises and real world project this provide trainers with opportunities to apply their knowledge and skills in realistic setting, enhancing their problem solving abilities and confidence.

Guest speakers and industry experts: invite guest speakers and industry expert to share their experience, insights and success stories with trainers. This exposure to professionals from the industry can inspire and motivate trainer and provide them with valuable perspectives.

Soft skills development: include modules or workshop that focus on developing essential soft skills such as communication, teamwork, leadership, and time management. These skills are crucial for success in software development industry.

Agile methodology and project management: introduce trainer to agile methodologies and project management principle commonly used in software development. This equip them with necessary skills to work in collaborative and iterative development environment.

## REFERENCES

Here is the same websites and online documentation user to achieve the training goals and writing this report that can serve as reference.

Laravel official documentation

<https://laravel.com/docs>

laravel news

<https://laravel-news.com/> news, tutorials and resources

laravel news you tube channel

<https://www.youtube.com/channel/UCpEljqxVxy1AOtEcJ5ZjXvw>

## APPENDICES

In the real world project in my training the project on internship management system have database with different tables used for storing the information of student, department and users of the system where student table keep the first name, last name, email, phone number and password. And department table store the name of department and email of department.

The system also uses API for handling the request from the client and sent the data into the database where the user use API endpoint to make request and get the response from the database and authentication for anyone need to make login in the system and make any specific requirement for using API.

My project is designed in two different technologies where the backend is developed in laravel framework and front end is developed in react, this means that the react front end sent the data or retrieve in database with the help of API where each request from the react front end have the corresponding laravel backend to handle them.