



**Daffodil**  
*International*  
**University**

## **Software Engineer Intern at Akij Group Limited**

### **Supervised by**

**Dr. Imran Mahmud**

Associate Professor & Head

Department of Software Engineering

Daffodil International University

### **Submitted by**

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ID: 191-35-2757

Department of Software Engineering

Daffodil International University

This Internship report has been submitted in fulfillment of the requirements for the Degree of Bachelor of Science in Software Engineering.

**Fall-2022**

## APPROVAL

This Internship report, submitted by MD SHAHDAT HOSAIN, ID: 191-35-2757 to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Software Engineering and approved as to its style and contents.

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## DECLARATION

I hereby declare that I have taken this internship under the supervision of **Dr. Imran Mahmud**, Associate Professor & Head, Department of Software Engineering, Daffodil International University. I also declare that neither this information nor any part of this has been submitted elsewhere for award of any degree.



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## ACKNOWLEDGEMENT

First of all, I would like to thank my God, for helping me starting from the beginning to the end of my internship period. With great pleasure, I would like to express my sincere gratitude and thanks to my parents for their wholehearted support they have given me.

I would like to thank my supervisor **Dr. Imran Mahmud**, Associate Professor & Head, Department of Software Engineering, Daffodil International University. He inspired me by providing valuable guidance, time and monitoring the progress of our work. Without his inspiration and help this internship would have been completely impossible to develop.

And also I would like to thank my internship company supervisor **Mr. Kazi Md. Golam Kibria**, Manager of Akij Group IT division. He inspired me by giving valuable guidance, time and supervising my working progress. It is completely impossible to develop this internship without his motivation and help.

Special thanks to **Dr. Imran Mahmud**, Associate Professor & Head of the department, Department of Software Engineering, Daffodil International University because of his valuable effort for our department and giving permission to join the internship program.

I express my utmost gratitude to the Department of Software Engineering, Daffodil International University, for providing such an opportunity for students to broaden their understanding of what the real world looks like in the field of Software Engineering as well as organizing the entire internship program and its efforts to ensure the entire internship program achieves its desired goals.

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## **EXECUTIVE SUMMARY**

I chose an internship program to motivate myself and prepare myself for the industry. I started my internship program at Akij Group Limited. This internship report is aimed to increase and use the knowledge of Enterprise Resource Planning development & maintenance acquired during my internship period. I chose an internship and my designation is to be a software developer and the responsibility is to develop Enterprise Resource Planning (ERP) software and applications in the web development field.

## **CHAPTER 1: INTRODUCTION**

Through the internship I got to know the real work environment which was very special for my course studies. I am really happy to work in the department to learn about how a corporate industry develops software products as applications used by various functional requirements. I am employed as a software developer in Akij Group Limited IT department. My responsibility is to develop new Enterprise Resource Planning applications of Akij Group and maintain the company's existing software in parallel. I attended the project discussion meeting and they defined my responsibilities for the project. I participated and contributed to the creation of API end-points for the project. These experiences increase my knowledge and improve my confidence and prepare myself for the next project. I faced many problems during my internship period. My team members help me overcome both technical and non-technical issues. I attend some client meetings and gather new requirements for the project. All my experiences help me get the part like group work and working with a team. I got the full taste of working in a corporate field. Thus, the internship period gives me an opportunity to expand my knowledge, recognize strengths and weaknesses which will be helpful for my future career. I feel really proud to be a student of the Software Engineering department of Daffodil International University. Because my university allowed me for an internship within the bachelor program. I am also thankful to Akij Group Limited, they gave me the opportunity to work with them and they made me a part of their IT developer team, and gave me the opportunity to apply my theoretical knowledge and experience in real life projects.

## **1.1 Background**

I have joined Akij Group Limited on 1st June 2022. I joined the company as a Software Engineer (Development & Integration). First I trained for about 2 weeks. Then they defined me as a member. Our team is responsible for developing new Enterprise Resource Planning solution software and maintaining and supporting existing applications. First I started with design and then they gave me the responsibilities of some modules to develop back-end and front-end as well. I got the opportunity to work with the latest technologies and also gained knowledge about development & business logic integration. I mainly use JavaScript, React, Redux, .NET Core and MySQL as programming languages to perform my duties.

## **1.2 Motivation**

The internship program gives me the opportunity to enhance my skills, gather experience through industrial work in advanced manufacturing, and my aim is to get familiar with the real-life corporate environment. Internships help me connect with an organization and provide an opportunity to work with them. Through this engagement I was able to sharpen my knowledge and improve my experience. I am able to learn a lot of technology both old and new. I always want to be a valuable resource for a rework company. And for this I am determined to give my best service. Through this internship program I was able to gain proper knowledge about software development & integration.

## **1.3 Objectives**


My goal in participating in the internship program is to obtain experience working in an industrial setting and to learn real-world skills through interacting with consumers. Prior to beginning the work, my objective is to understand the customer's requirements. Since its beginning, Akij Group Limited has improved its quality management procedures. I participate in project meetings to gather requirements, after which my project-related tasks are specified. They assist me in adhering to industry standards. I'm learning how to properly construct a project as I get ready to work on one with a group and team.

## 1.4 Scope

The objective is to get me ready to be a Software Developer. And I'm carrying out my intern duties in order to become a full stack developer. Additionally, I am receiving and understanding that it is my official responsibility to maintain the time and complete my tasks on schedule. It aids in the improvement of my data exchange and communication.

- Requirement analysis for new Enterprise Resource Planning software
- Review my approach of workflow by my supervisor
- Code with React Js, Redux and Javascript for frontend
- Integrate API with frontend
- Create new API Endpoint as need by .NET CORE 3.2/6.0
- Deploy new changes into dev.akijvg.net server

## 1.5 Internship Offer Letter



**AKIJ FOOD & BEVERAGE LTD.**  
(A concern of AKIJ GROUP)

AFBL/ HR /2022/108048 DATE: 01 /06/2022

**MR. MD. SHAHADAT HOSAIN**  
C/O – Md. Ashraful Islam Khan  
Address: Vill: Khidir Chapila, PO: Bripathuria, PS: Gurudaspur, Dist: Natore

**Subject: Internship Placement.**

Dear Mr. MD. SHAHADAT HOSAIN,

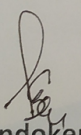
With reference to your application, we are pleased to offer you 5 months Internship Program at our **Akij Food & Beverage Ltd**, at Akij House, Dhaka-1208, under **Kazi Md. Golam Kibria (Manager, IT) Akij House ,198 Bir Uttam, Mir Shawkat Sarak, Dhaka-1208.**

You may join from **June 01,2022** at Akij House, Dhaka-1208. You are also advised to contact our Human Resources Department immediately during office hour.

As per our policy, you are entitled to an internship allowance of TK. 5,000 (Five Thousand) only per month.

*(Internee should have specific working program, reporting manager will provide necessary working program & report to be duly submitted to the undersign through proper channel.)*

Sincerely yours



**Khandoker Golam Azam**  
Chief People Officer, AFBL

**C.C. To:**

1. Head of Finance & Accounts, AFBL.
2. Admin, Department.
3. Concern Department Head, AFBL
4. Personal File.

HEAD OFFICE: AKIJ HOUSE, 198 Bir Uttam Mir Shawakat Sarak (Gulshan Link Road), Tejgaon, Dhaka-1208, Bangladesh.  
Hotline : 16609. E-mail: afbl@akij.net. Web: www.akijfood.com  
FACTORY: Barobaria, Dhamrai, Dhaka, Bangladesh, Phone: 9563008-9, 7169017-8

*Brings Quality to Life®*

Figure 1.1: Internship Offer Letter

## **CHAPTER 2: COMPANY OVERVIEW**

## **2.1 About**

The Akij Group is one of Bangladesh's leading industrial giants. The industries covered by this conglomerate include textiles, tobacco, food and beverage, cement, ceramics, printing and packaging, medicines, consumer goods, etc. The largest local tax payer in 2009, Akij Group paid 390 million euros in taxes, making about 2% of the country's total budget. Additionally, Akij offers services in the fields of healthcare, IT, and communications. It had a revenue of 129 billion Taka in 2019. Some IT services of Akij IT team:

- System Architecture and Design
- Enterprise Resource Planning Development
- Project Management
- IT Support
- Network Administration Testing
- Quality Assurance
- Feasibility Studies

### **2.1.1 Mission & Vision**

The main goal is to assist business owners in establishing their internet presence without having to deal with the overwhelming obstacles presented by technology. In order to maximize the value of the services provided, BD Soft believes that the client's effort should be kept to a minimum. Since it is extremely difficult to stand out with only one product in this day of mass production, Akij Group concentrates on producing the finest in every industry. A company's vision is truly its ultimate goal, one that it works tirelessly to achieve whether it is feasible or not. The Akij Group is not unique in any way. The goals of Akij Group include growing their business internationally and dominating their respective markets.

Akij Group's vision is to be the market leader by their best efforts, appropriate and competitive marketing strategy, and consumer support. Since they are now in the challenger position, their vision is focused on those missions, aims, and objectives that will enable them to move up the market hierarchy from challenger to leader.

- To offer customers a high-caliber service with value
- Become a market leader using Information Technology
- Consider the customer potential
- Expand the business of specific solutions by forming an arrangement with strategic partners with the help of IT

### **2.1.2 History**

Akij Group was created in 1950 by Mr. Sheikh Akij Uddin. It is now one of the largest companies in Bangladesh. Akij Group was born through Akij Biri Factory Limited. History of Akij Group stretches back to the later part of the 1940s. The founder, late Mr. Sheikh Akij Uddin, to do something for this country is to do for its people. He made a sense of how to develop & customize whatever growers are grown like Tobacco, Jute, Food etc. Now the group has various types of companies and people in various types of products in various categories. Now it has around 216 departments and a total 35,000+ employees.

### **2.1.3 Location**

#### **Head Office:**

198, Akij House,

Bir Uttam Mir Showkat Sarak, Tejgaon Sarak, Tejgaon, Dhaka 1208

#### **Contacts:**

Phone: 08000016609

Email: [info@akij.net](mailto:info@akij.net)



### 2.1.4 Management

Akij Group Limited has an effective management structure in place. Every action is taken after discussion, and the decision considers the views of all parties. Client service and handling are excellent. Providers of customer service are genuinely concerned about it. All employees get along well with one another, and higher authorities are equally approachable.

### 2.1.5 Services

















 SME BUSINESS	 RMG SECTOR	 MANUFACTURING	 ENTERPRISES
 AGRO	 STEEL & ALUMINIUM	 FMCG	 STARTUP
 DEALERS	 TRADING	 AUTOMOTIVE	 SHIPPING
 FITNESS	 ISP & CABLE NETWORK	 TEXTILE	 SERVICE

Figure 2.1: Akij Group IT Services

## 2.2 Organogram

Each business unit of the Akij group of industries has its own administrators. The administrators are the successors of founder Late Mr. Sheikh Akij Uddin. Akij Group of Companies contains a bureaucratic operating atmosphere wherever the decision making method is extremely centralized from higher level administrators.



Figure 2.2: Organogram of Akij Group Limited

### **2.3 Sister Concerns**

The Akij Group Limited has a lot of sister concerns. It also has two specific Software companies named -

- iBos Limited
- Blue Pill Limited

The whole company's software related service provided by Akij IT team. It has a total of 65+ dedicated employees in this department.

### **2.4 Software Products of Akij Group Limited**

- Point Of Sale (POS) of Akij FPS
- Accounting And Inventory Management Software
- HRM & Payroll Management Software
- CRM Software
- MLM Software
- Factory Management Software
- E-Commerce Website (Aladin)
- Enterprise Resource Planning Software
- VAT management Software
- Micro Credit Software
- Building Management System (BMS)

### **Web Experience**

Although GUI design, backend database hooks, and other aspects of Windows and Web programming are comparable to both platforms, a thorough understanding of these distinctions is necessary to build effective Web-based applications. Through Akij Group IT's initiatives in both the Windows and Linux systems, Akij IT has amassed this kind of experience over time. With the help of Akij IT, numerous web-based systems have been created, backend databases have been used, and web servers and FTP sites have been set up and managed. The market for web development is a fast-moving place where technology is always evolving. We keep up with the most recent developments in tools and languages, such as JSON, XML, and others.

## **Complete Turnkey System**

For Akij Group IT outsourcing, fully integrated systems are no issue. Integrating hardware and software to create a new automated system is a classic use of Akij IT's resources. To help our clients find a low-cost supplier for their hardware needs, It has arranged discounted hardware reseller agreements with Network Appliance Computer Services. Whatever your hardware requirements, Akij IT. can source it for you—often for less than buying it directly—from big file servers to desktop PCs.

## **Testing & Quality Assurance**

With our experience in the software development area, Akij IT can provide an exceptionally beneficial third-party perspective when called in to test/QA another vendor's software. System testing is essential for any software's quality. We at Akij IT constantly advise our clients to incorporate a distinct testing phase to each software project, despite the fact that many developers take shortcuts and settle for merely testing their software during development (Alpha-Testing). During this testing step, which is typically carried out by someone other than the developer, the system can be tested as a finished product. Prior to the software's first release, more user feedback on its usability and usefulness can be incorporated in this way. The testing process is finished through initial use of the program by real end users in the practical settings of the client's site (Beta-Testing).

## **Feasibility Studies**

Before committing substantial resources to a given project, clients often want more information on the obstacles associated with successfully completing the project. Members of the Akij IT team have prior experience performing this type of "recon" duty. They can create a feasibility report for the client after swiftly and effectively locating the primary and secondary "hot spots." This report includes a ranked list of all the management, logistical, and technological issues related to the project as proposed. Additionally, it offers rough time and cost estimates.

## Technical Documentation & Training Services

Over the years, Akij IT Consultants have produced a large number of user manuals, reference manuals, and introductory training materials to go along with our proprietary software. It has the ability to produce documents of production quality quickly because of this expertise. Many of our clients choose to have Akij IT create the supporting materials rather than hiring technical writers, who frequently lack familiarity with the underlying technology. The consultants at Akij IT have gotten so good at this that many clients have hired them just to develop comprehensive training programs and technical documentation.

### 2.5 Clients



Figure 2.3: Akij Group's Client

### 2.6 Summary

Akij IT has the experience and expertise to assist web entrepreneurs in reaching their customers across the digital space. Additionally, it is concerned with the welfare of its employees. The internal working environment is cordial and welcoming.

### **CHAPTER 3: COMPANY CULTURE AND CARRYING OUT**

The goal of Akij IT's Core Values is to create a family, not just a team. By reducing barriers and fostering his direct reports' success, a team leader benefits those he leads. Team members collaborate and engage in office collaboration because they share relationships that go beyond the norm for coworkers.

### **3.1 BD Soft IT Solutions Departments**

- Enterprise Resource Planning Development Department
- Software Development Department
- Website Development Department
- Business Development Department
- Digital Marketing Department
- Management Department
- Customer Support Department

### **3.2 Web Development Team I Work With**

- Requirement analysis for new Enterprise Resource Planning software
- Review my approach of workflow by my supervisor
- Code with React Js, Redux and Javascript for frontend
- Integrate API with frontend
- Create new API Endpoint as need by .NET CORE 3.2/6.0
- Deploy new changes into dev.akijvg.net server

### **3.3 Working Environment & Protocols**

The working atmosphere at Akij IT Solutions is excellent and offers many amenities. Tea and coffee breaks are provided during working hours, and each month we are given a total of 8 days off, including 2 weekly holidays. Every employee, including interns, is required to keep accurate time records and adhere strictly to the rules.

### **3.3.1 Rules & Regulations of BD Soft IT Solutions**

- Must have to present in Office time from (8AM – 6PM)
- Anyone who is unable to arrive at the office on time must notify the project manager
- Must have to be cooperative with team members
- Senior members must have to cooperate with juniors
- Without prior notification no one is allowed to be absent for 3 days in a row
- Daily updates must be uploaded to the project manager or line manager
- No one is allowed to disobey the company regulations
- The project's source code cannot be shared with outsiders
- Must be present at the meeting to discuss new projects

### **3.3.2 Motto Of Akij IT**

Making business simple - that's what we've been working on for years.

### **3.3.3 Handling Clients**

For problem-solving and customer support, both technical and non-technical, Akij IT has a customer feedback portal and support center. If a problem cannot be resolved by a member of the support associate team, an agent will be sent immediately.

### **3.3.4 Facilities**

- Seniors and all other members assist to anyone who is stuck in a bug
- Directly work in production server
- Yearly 18 paid leaves
- In-house medical facilities
- Excellent working environment
- Lunch facilities
- Unlimited tea/coffee
- Also have permission if anyone want to work from home
- TA/DA bill from office for official work



### **3.4 Comparative Analysis of Office Culture**

A good office environment exists at Akij House. Additionally, a team that has personnel with varying levels of experience always performs better. Every month, the project manager evaluates each team, and the top team receives an award.

#### **3.4.1 Mixed Up With Office Culture**

Every member is accustomed to the official surroundings and culture. I am pleased to participate in this because I am accustomed to the culture. To discuss issues and concerns, members are required to attend the weekly and monthly meetings.

#### **3.4.2 Entertainment & Refreshment**

Each employee can have enough time for rest. Additionally, we have an hourly tea and food break. Members who need to rest can do so in the restroom. Also Akij IT arranges monthly & annual team outings for employees and their family.

#### **3.4.3 Escalating Motivation & Capability**

As compared to the previous five months, I am now more confident in my ability to accept any responsibility and the challenge of completing a job on time. I came to the conclusion that this flaw will persist throughout my future career.

### **3.5 Internee Life Cycle**

I have to follow several regulations and standards as an intern in order to begin my first chapter in my profession. Each intern reports to the office and works with the team for four months. Then, the top performers were given the chance to join the team permanently.

#### **3.5.1 Getting Started**

On June 1st, 2022, I began my internship with Akij Group Limited. After an interview & short assessment process, the internship was approved for me.

### **3.5.2 Recruiting Policies**

I first sent my resume to Akij Group Limited IT department. Following a positive interview, they decided to hire me as an intern for their IT Integration & Development team. The HR department posts other permanent positions, after which they hire people for their organization.

### **3.5.3 Professional Environment**

As I mentioned earlier, the workspaces provide a good professional atmosphere. Additionally, it contains certain beneficial components and staff members who improve the environment. Akij House(Akij HQ) is one of the best corporate office environments in Bangladesh.

### **3.6 First Day at Office**

I initially signed up for the Akij Group IT team at the Akij House(Akij HQ). I arrived at work on time on my first day; my reporting time is 7:30 AM. I make touch with the front desk clerk, who refers me to the development division. I don't have a desk or official laptop to start because I'm new. At the guest room, I must wait.

Then they introduced me to my supervisor and the other members. He helps me immensely and defines my activities while also assisting me in understanding my obligations. Once more, my boss conducted a brief interview with me regarding design, development, and programming. My boss then appointed me to the 15-day training. They also give me a desk and a laptop for work.

## **CHAPTER 4: TECHNOLOGY EMPLOYING**

## 4.1 Fundamental Technologies

I must use both new and old technology to collaborate with the team and the needs. We occasionally use modern technology and other times we use outdated technology in our initiatives. To create the projects, we use javascript, .NET and PHP. For the project's smoothness, we utilize modern frameworks like React, Redux, Express, Vue & etc.

- ❖ New Technology that I Use
  - React JS
  - Redux JS
  - Node JS
  - Vue JS
  - Bootstrap 5.2.2

For the project's design and responsiveness across desktop, mobile, and tablet computers, we use Bootstrap 5.2.2. For the project's design and development, we also use React JS, Redux JS and Node JS.

- ❖ New Technology that I Use
  - JQuery
  - Ajax
  - JSX

To send, get, and manipulate data to and from databases, we use Ajax. JQuery is used to add functionality to the project and JSX is used for markup tags.

## 4.2 Supportive Technologies

In order to support both web and mobile applications, we are developing a cross platform. To create mobile applications from web technology, we use React Native and Flutter. This program assists in converting a hosted website into an APK file for usage as a mobile application and also we use PWA (Progressive Web Application) to make users more comfortable and easy to use.

### **4.3 Technology I Use for the Projects**

For the running project(Akij new Enterprise Resource Planning) I'm using

- React JS
- Redux JS
- .NET Core
- Bootstrap 5.2.2

The primary programming language for development is Javascript, and Bootstrap is used for design and responsiveness. To expand the project's capabilities, we use ReactJS & ReduxJS. Additionally, for the backend development I am using .NET Core 3.2 version.

**CHAPTER 5: PROJECT EXERTION**

## 5.1 Training

I've had experience working on several projects at once. Most of the projects are now operational. I focus primarily on those projects' admin panels. My duties are to develop the front-end for the application and also help my seniors to create new API endpoints.

## 5.2 Working Methodologies

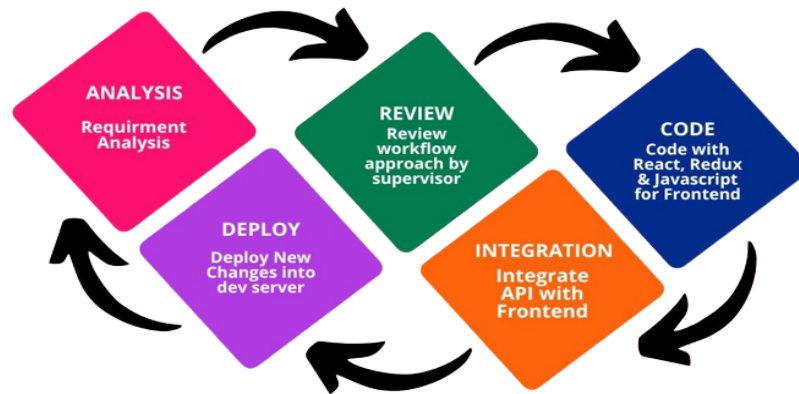


Figure 5.1: Working Methodology

### 5.3 Project Name: Akij Group Enterprise Resource Planning

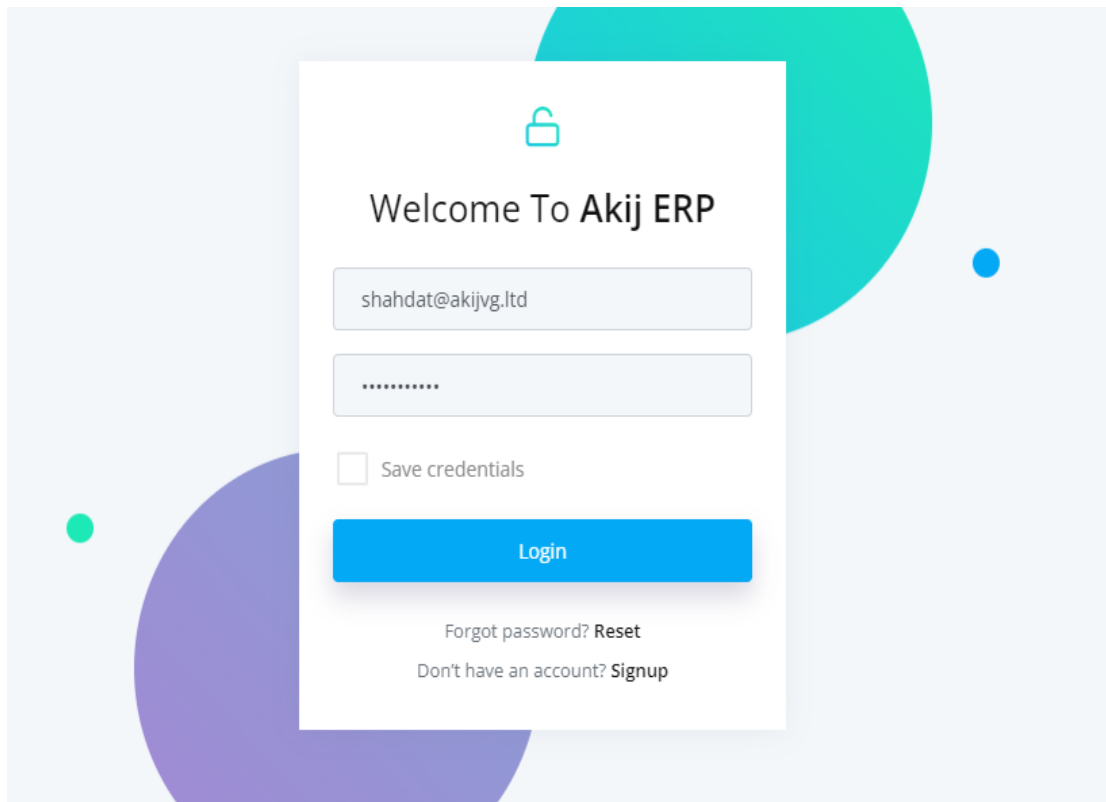


Figure 5.2: Akij Group Enterprise Resource Planning

#### 5.3.1 Project Plot & Requirements

Enterprise resource planning (ERP) is the integrated administration of key business operations, frequently in real time, and mediated by software and technology. Enterprise Resource Planning is commonly referred to as a class of business management software that an organization can use to gather, store, manage, and understand data from several business activities. It is typically a suite of connected applications.

#### 5.3.2 Solution Providing

To simplify and intelligently run the business, we created this software for Akij Group Limited so that they could conveniently manage their business. Here, the administrator may quickly monitor the employees and business analytical graphs in real-time.



### 5.3.3 Akij Group Enterprise Resource Planning Admin Panel UI

#### 5.3.3.1 Admin Dashboard:

In this segment, admin can check the overall performance of employees and the other assets condition and manage their stock. It's a role-dependent sector. It will show differently based on the user's role. Users must login to show the dashboard. This page has a lot of API integration. All of the data is getting from the Akij internal server and based on the data it creates the necessary pie chart, graph chart and progress bar. It is in the development server. After fully done it will go to the production build.

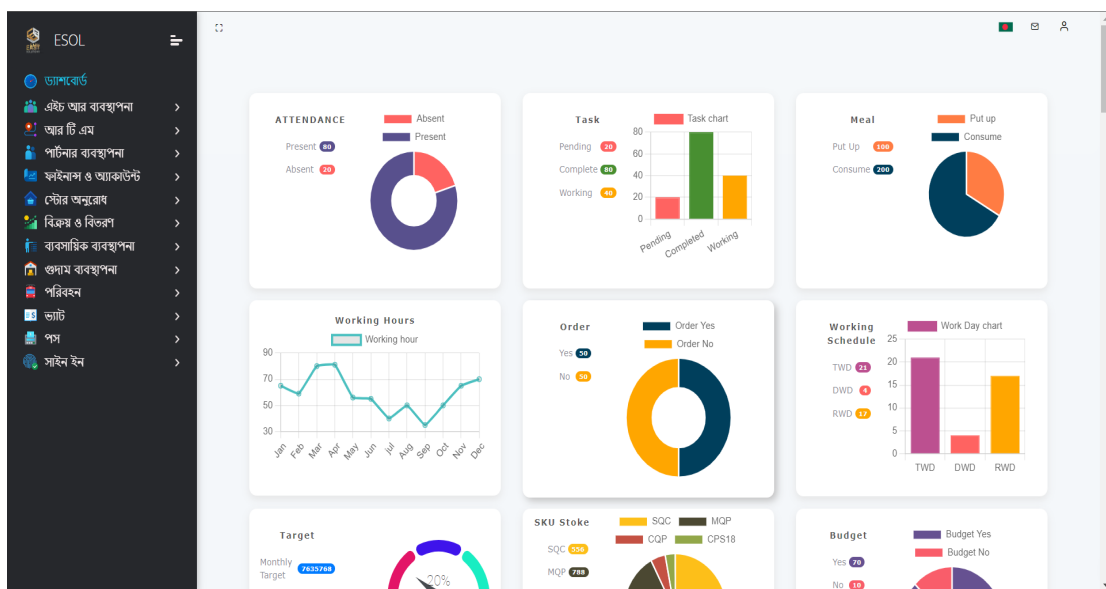


Figure 5.3: Enterprise Resource Planning Dashboard

### 5.3.3.2 Responsive Collapsible Sidebar:

The sidebar column that appears on the left side of Akij Enterprise Resource Planning dashboard pages provides quick access to links and commands. It has some interesting features. If the user wants to show only the small icons of the menu then s/he can collapse the sidebar. Even when the user collapses the sidebar, it will automatically spread the main page responsibly according to its ratio of sidebar and screen size.

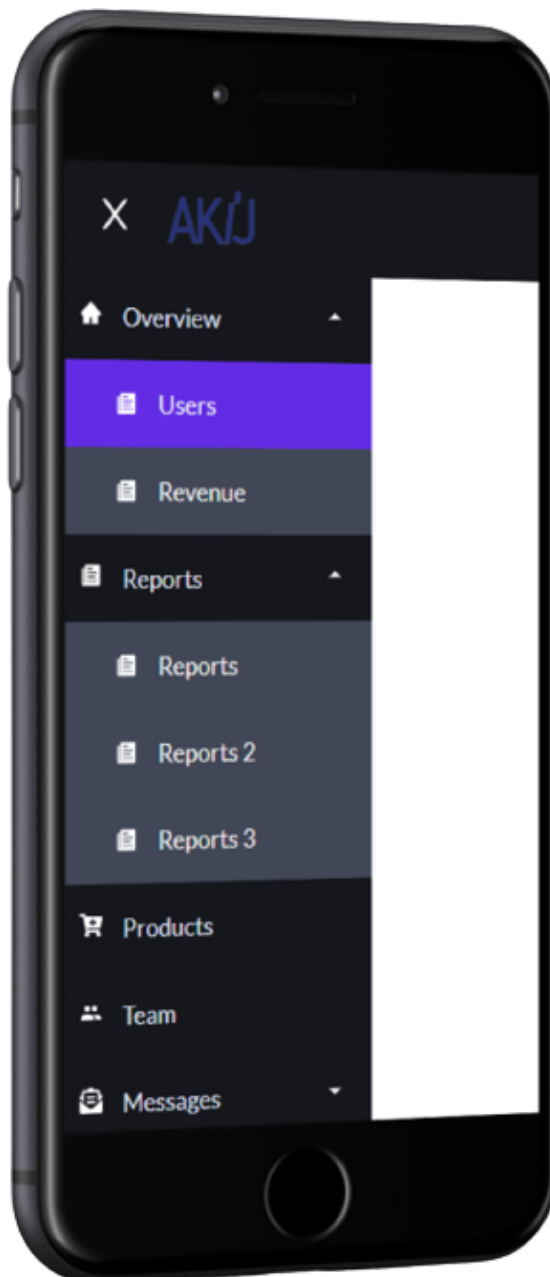


Figure 5.4: Collapsible Sidebar

### 5.3.3.3 Multiple Language Conversion:

The new Akij Group Limited Enterprise Resource Planning has multiple language features. It can convert the whole website in either Bengali or English. The default language is English though. User can choose his/her language by tapping on the flag icon positioned top of the website. Surprisingly it changes the icon based on the user's selected language. Currently it is available in only Bengali and English. But after some days other languages like Hindi & German will be integrated with the system. It is not an automated language system, It is a full conversion of the system by calling the necessary web APIs from its internal server.

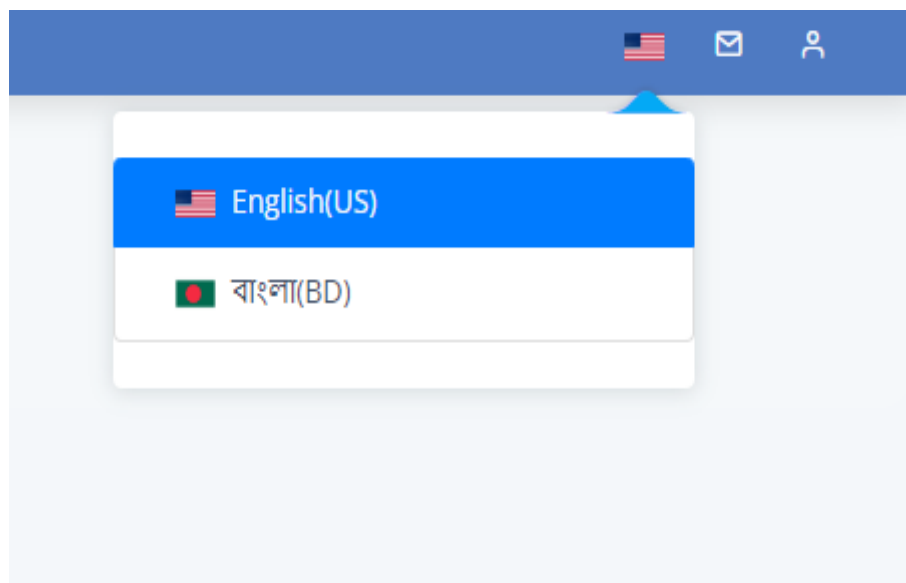


Figure 5.5: Multiple Language Feature

### 5.3.3.4 Navigating to Another Page Without Refreshing The Site:

The entire website is reload free. If users navigate to other pages the site will not be reloaded. It's a modern system for better usability. We can move between pages in our site using react-router-dom with or without refreshing the entire component. By default, BrowserRouter in react-router-dom does not refresh the entire page.

### 5.3.3.5 Secondary Sales Operation:

In this Enterprise Resource Planning, the first developed module is Road to Market (RTM) that is basically known as the secondary sales operation. In other words it is called Road To Market (RTM). This module has a lot of features including google map API integration and employees location & distance calculation from a specific sales point. Besides live stock management and promotional items and their price calculation is also developed by the Akij IT Team. The Geo Punching method is a new method that helps admins to identify new positions of store and secondary sales man.

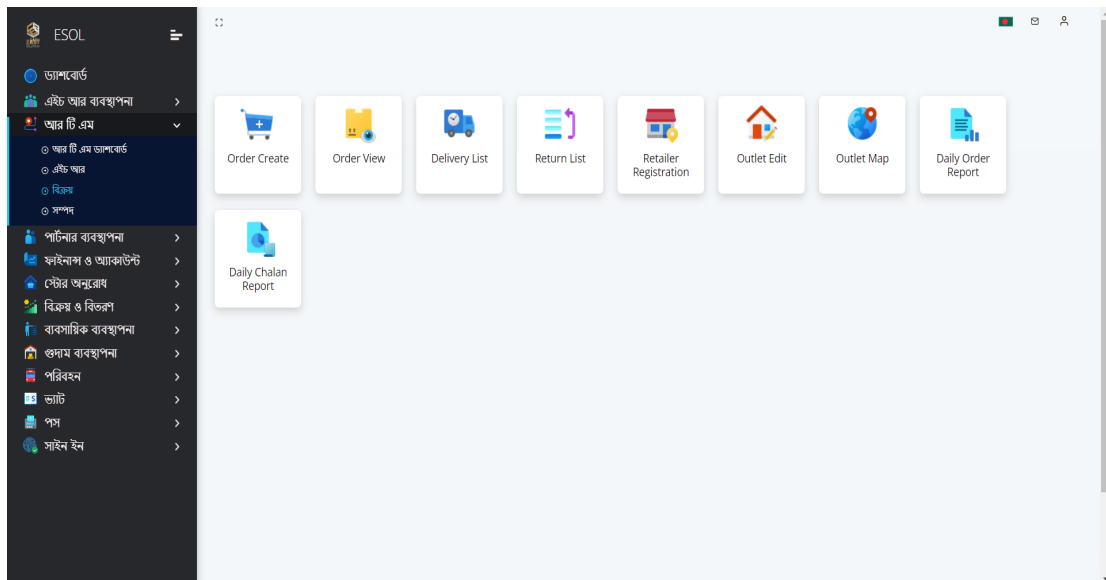


Figure 5.6: Road to Market (RTM) Secondary Sales Components

### 5.3.3.6 Daily Order Report:

In the Road to Market (RTM) module, the store owner and Akij Inventory section can generate the daily report including in which SKUs how many products have been ordered. It has also an option to Add or Remove SKU/s for the final modification before generating the printing report from the system.

Sku Code	CS	PCS	Pack Size	Trade Amount	Promo Item
CHP	6	0	24.00	3240	CHF
MQP	4	0	24.00	1280	MQF

Order Quantity	10 CS
Order Price	4601.28
Discount	0
Net Price	4601.28
MRP Price	7200
Regular Profit	2598.72
Trade Offer Profit	2598.72
Total Profit	
Margin	56.48%

Figure 5.7: Daily Order Report

### 5.3.3.7 SKU Return:

The Road to Market (RTM) module can also re-calculate the full inventory process from the factory to production if any SKU has been returned. This section can calculate the unit price and re-calculate the return amount in net price.

The screenshot shows a mobile application interface for the 'SKU Return' module. At the top, there is a blue header with a back arrow and the text 'SKU Return'. Below the header, the form contains the following fields and buttons:

- Replace Type:** A dropdown menu with 'Cash' selected.
- Returned Sku:** A text input field containing 'MZQC'.
- CS:** A text input field containing '5'.
- PCS:** A text input field.
- Qty:** A text input field containing '120.00'.
- Unit Price:** A text input field containing '23.8461538461538'.
- Return Amount:** A text input field containing '2861.54'.
- RECALC:** A blue button to recalculate the return amount.
- Damage Type:** A dropdown menu with 'Swelling' selected.
- Image:** A black square placeholder for a photo of the returned item.
- TAKE PICTURE:** A blue button to capture a photo.
- SUBMIT:** A blue button to submit the return information.

At the bottom of the screen, there is a navigation bar with four icons and labels: 'Dashboard', 'Home', 'Settings', and 'Notification'.

Figure 5.8: SKU Return Module

#### **5.3.4 All the Modules of Akij Enterprise Resource Planning that are in development:**

- Human Resource Management
  - ❖ Profiling & Setup
  - ❖ Employee Management
  - ❖ Attendance
  - ❖ Advance Salary
  - ❖ Payroll
  
- Administration
  - ❖ Canteen Management
  - ❖ Document Management
  - ❖ Meeting Room Booking
  - ❖ Visitor Booking
  
- Finance & Accounting
  - ❖ Charts of Accounts
  - ❖ Bank Management
  - ❖ Cash Management
  - ❖ Cost Center Accounting
  - ❖ Voucher Entry
  - ❖ Expense Management
  - ❖ Budget Entry
  - ❖ Reporting
  - ❖ Billing
  
- Procurement
  - ❖ Standard Procurement
  - ❖ Milk Procurement
  - ❖ Wood Procurement

- Sales & Distribution
  - ❖ Customer Manager
  - ❖ Item Manager
  - ❖ Territory Manager
  - ❖ Price Manager
  - ❖ Sales Rebate
  - ❖ Sales Order
  - ❖ Distribution
  
- Secondary Sales Solution
  - ❖ Market setup
  - ❖ Product Setup
  - ❖ Administrative Setup
  - ❖ Attendance
  - ❖ Target Management
  - ❖ Primary Sales
  - ❖ Trade Offers
  - ❖ Damage & Production Fault
  - ❖ Re-carrying
  - ❖ Expense Management
  - ❖ Payment Management
  - ❖ Invoice Management
  - ❖ Reports & More



### 5.3.5 My Contribution

My role is to develop responsive pixel perfect frontend and to help my seniors in backend technology and API endpoints creation also. My contribution for the project Akij Enterprise Resource Planning till now:

- Responsible sidebar with hidden functionality
- Full Enterprise Resource Planning multi language functionality (English & Bangla)
- Dashboard custom component with MUI
- Google map integration with positioning real-time
- CRUD operation in secondary sales Road to Market (RTM)
- Database connectivity with remote server
- API Endpoint creation
- Regular Merge and resolve conflicts in github private repo
- Regular deployment of up to dated build

### 5.3.6 Attachment of my contribution (GitHub commit)

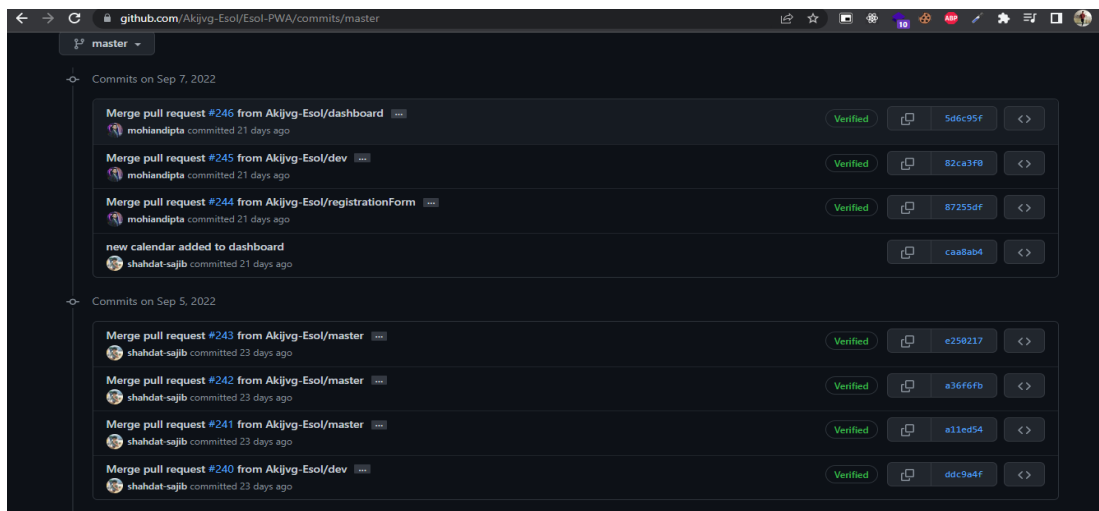


Figure 5.9: Github commit screen-shot 1

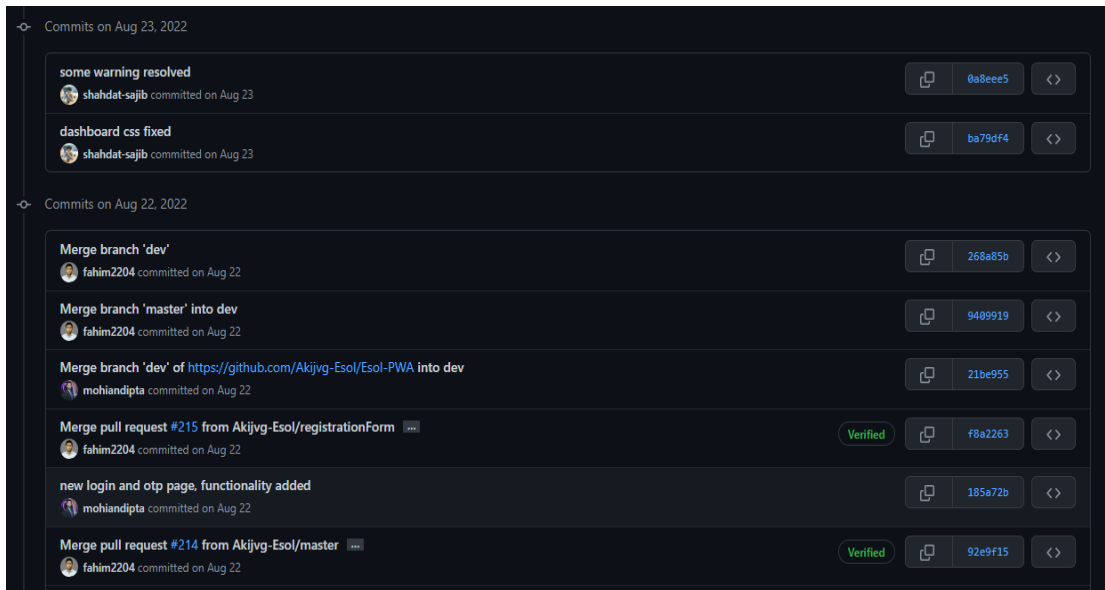


Figure 5.10: Github commit screen-shot 2

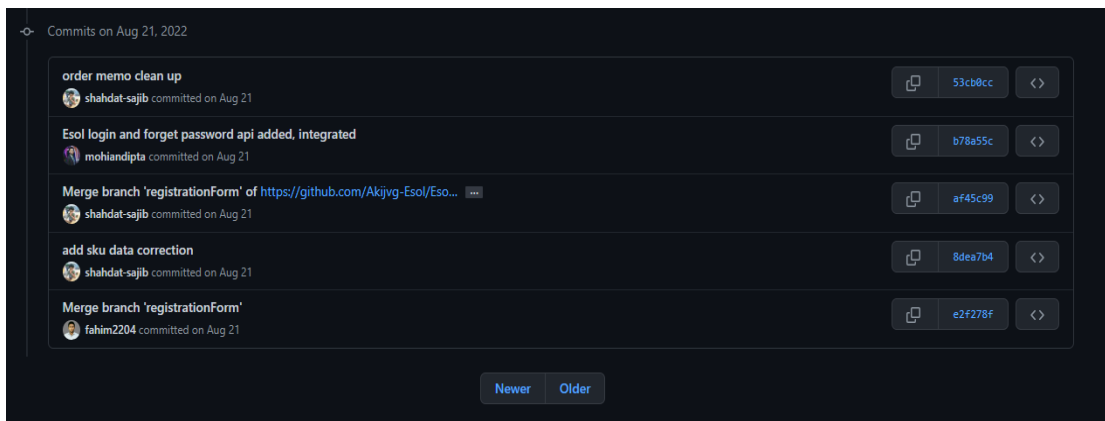


Figure 5.11: Github commit screen-shot 3

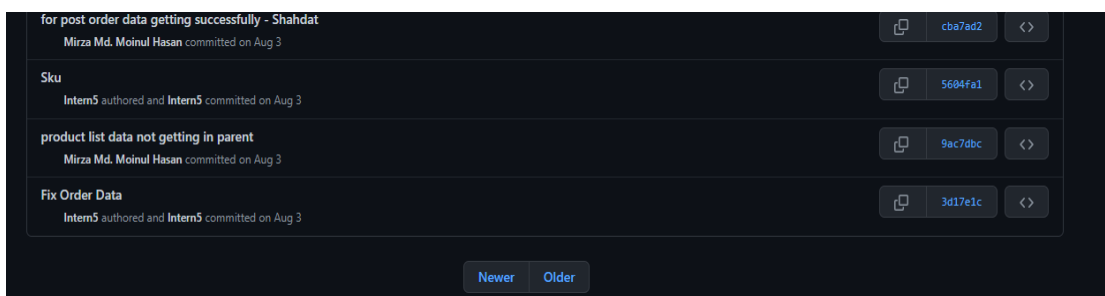


Figure 5.12: Github commit screen-shot 4

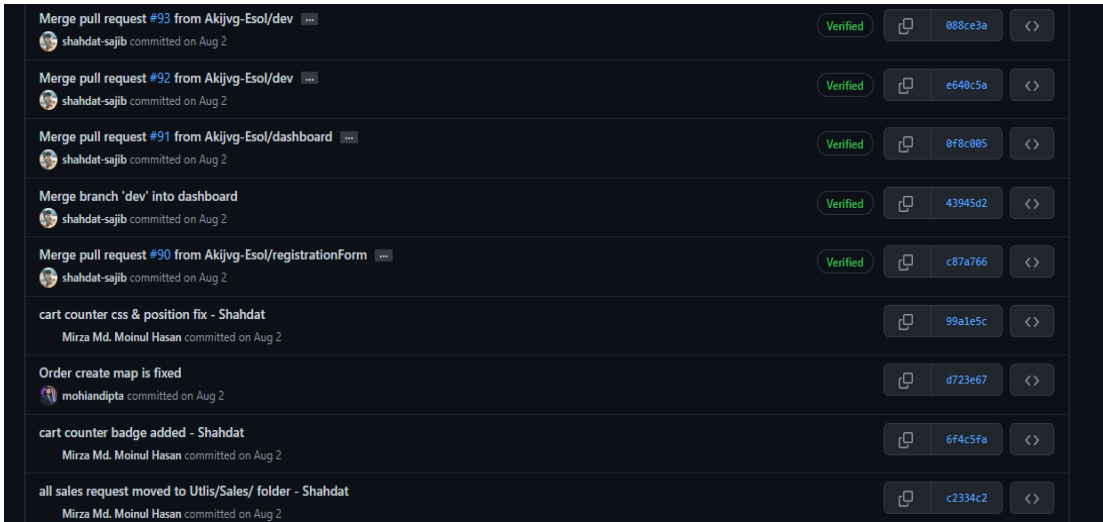


Figure 5.13: Github commit screen-shot 5

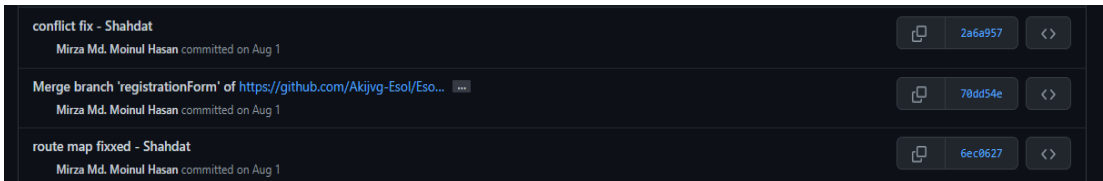


Figure 5.14: Github commit screen-shot 6

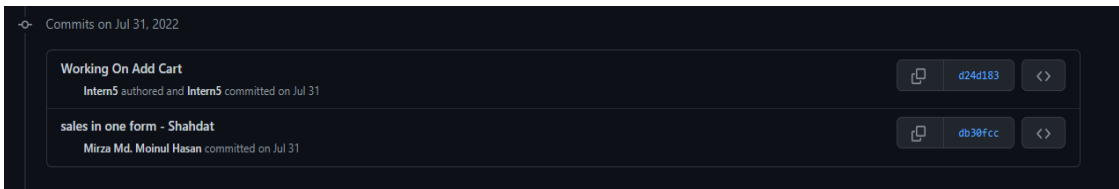


Figure 5.15: Github commit screen-shot 7

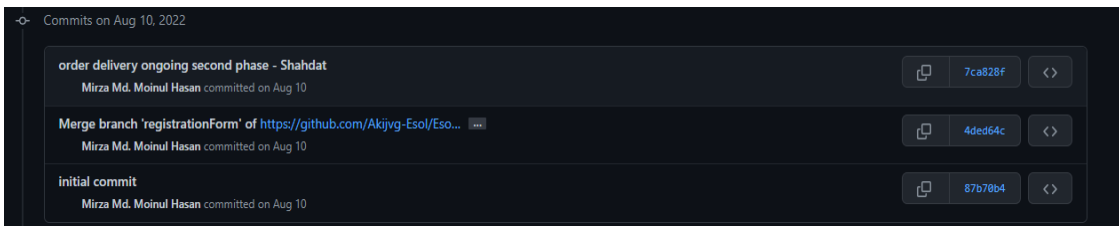


Figure 5.16: Github commit screen-shot 8

### **5.3.7 Challenges**

The main challenge with this project is creating a database that meets customer requirements and designing the user interface. The project isn't finished yet because of various adjustments. Client needs must be gathered, but since the client is a non-technical person, we must also obtain market requirements, and the client's requirements are constantly changing. After finally completing the requirements collection, we proceed to the development stage and continue to work on it.

### **5.3.8 Technical Findings**

As an Enterprise Resource Planning website, we must prioritize customer experience and security. I've never created such a multi-functional website before. The project is being developed using javascript, react, .NET & SQL server. Additionally, we must link the site's payment gateway to it. For this project, we make use of a third-party payment gateway provider known as "SSL Commerce Limited".

### **5.3.9 Delivery**

This project has not yet been finished and delivered due to several adjustments. Due to the client's request, the project delivery was put on hold while our team continues to work on it. 40% of that project has already been completed. As it's a multi-functional website, one by one modules are being developed and delivered for UAT(User Acceptance Test). After the UAT, the developed modules are going to the production server as a test basis.

## **CHAPTER 6: EXPERIENCE AND ACHIEVEMENTS**

My skills in creating intricate solutions for clients and putting concepts for corporate and virtual private networks, databases, and software development into practice are growing.

## **6.1 Overcome Problems and Difficulties**

While creating such projects, I ran into a lot of issues and mistakes. My staff has been very supportive and helpful in helping me to solve challenges. As I worked with databases, I encountered numerous issues and made numerous naming convention errors. I resolved the issues by heeding sound advice.

## **6.2 Working Practices**

I first had to construct the admin interface for the project using React JS & Bootstrap 5.2.2. Then, using Redux and .NET, I had to build the APIs and dynamically create the pages. Although I have completed numerous master detail forms, managing the master details data is difficult for me. I'll be able to finish up my duties for those projects one at a time.

### **6.2.1 Fixed Time Schedule**

For each admin panel chart, Akij IT gave me four hours, and for the master detail page 2 days. I must convert the forms into a condensed set timetable. It improves my capabilities for more rapid work.

### **6.2.2 Testing**

I have never conducted professional or industrial testing before. I need to test the application with a few sets of attributes and make sure my forms are functioning properly. Also have to check if the graph has been created dynamically according to the data or not.

## **6.3 Technological Enhancement**

I have to use several new tools that I am familiar with during this phase of development. I've never done a cross-platform project before. Working in a field that uses modern tools is new to me. I also picked up a lot of new skills and technologies.

#### **6.4 Non-Technical Growth**

I must also fulfill my obligations regarding client interactions and project requirements. I accompany the sales team when they deliver and set up software. I am becoming more knowledgeable about proper protocol and how to follow it.

#### **6.5 Achievement**

I chose an internship to learn new skills and get a feel for the business world in preparation for my future profession. I was able to handle an internship and begin working as a developer thanks to the support of various people and the approval of my university. As a developer intern, I've gained knowledge of the formal guidelines and patterns for creating projects that adhere to the industry's best practices. I work on software development, testing, and delivery alongside the sales team. These experiences are my accomplishments, and I've decided that they will be beneficial to my future career.

## **CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS**



## **7.1 Findings and Contributions**

Creating an Akij Group Enterprise Resource Planning website and web application was my duty as an intern. I have successfully completed my internship program. As an intern, I had the chance to work with an established team and benefit greatly from their expertise. I've learned how to work in a team, how to divide up tasks, and how to finish responsibilities in the beginning. Additionally, I pick up a lot of crucial skills for full-stack development. I have many restrictions and little experience in development. Now that I have learned how to work cross-platform, I am able to fix my constraints.

## **7.2 Recommendation for Future Work**

Due to my constraints as an intern, I cannot fulfill all of my obligations. I focused primarily on the admin panels of the main Enterprise Resource Planning website. I've already made adjustments to my limitations and am working to increase my skill. The Akij Enterprise Resource Planning dashboard & Road to Market (RTM) module was the project I was given by the Akij Group IT team. My academic department head & industry supervisor always supports me to do better. It's the main motivation for me to move forward.

## REFERENCES

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