

Developing Web Applications for eKYC and Transaction Tracker - Project By Fintech Hub Ltd BD

by

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A Report submitted to the Department of Computer Science and Engineering
in partial fulfillment of the requirements for the degree of
B.Sc. in Computer Science

Department of Computer Science and Engineering
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Declaration

It is hereby declared that

1. The thesis submitted is my/our own original work while completing degree at Brac University.
2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. We have acknowledged all main sources of help.

Student's Full Name & Signature:

A handwritten signature in black ink, appearing to be 'Shafin Abrar Mufdi', written over a horizontal line.

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Approval

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Abstract

Here is a comprehensive report of my internship experience as a Software Development Engineer Intern in Fintech Hub, a company that specializes in Core Banking Solutions and financial technology software. The report explains the diverse projects worked upon, from simple applications like the Fruit App and Task Tracker to complex enterprise-level systems such as the AirGate Admin Panel and FinJet Management Console. The internship provided real world exposure to the cutting edge web development technologies such as using the .NET platform and Blazor for dynamic, scalable and secure software applications.

The course of study is laid out over a chronological roadmap, beginning with environment setup and Blazor fundamentals, progressing through intermediate component development and culminating in large-scale administrative and financial applications. Of special mention is the FinJet Management Console project, created independently to deliver secure, role-based data administration for an online money transaction system.

The paper also discusses challenges encountered, including API integration, state management and secure data handling and solutions that were used to address these.

Along with literature review, the report covers experiential knowledge to existing software engineering literature and best practice. From internship, technical as well as professional skill-set at enterprise level of the software solutions have developed very effectively along with the gain in experience for future studying and working.

Acknowledgement

Firstly, all praises for the Almighty Allah for whom all my works have been completed without any major interruption.

Secondly, Dr. Md.Golam Rabiul Alam who had encouraged me so much from the beginning of this journey and advised me to complete my tasks in internship. He helped us whenever I needed any help.

Third, to my supervisor Mr.Rafeed Rahman sir who guided me the whole time during the internship period.

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Chapter 1

Introduction

1.1 Preamble

An internship forms a privileged avenue where students or freshers get to bridge the gap between academic learning and on the job experience. The students get hands-on exposure to real-life challenges that give them an opportunity to apply theoretical knowledge in a dynamically professional environment. This mutually symbiotic relationship enhances not only the capability of an intern but also increases employability by enriching the portfolio and making them competitive in the job market.

While doing internships during higher education in universities is in vogue with students, because such an attempt is considered both practical and more career-oriented when compared to purely theoretical thesis type projects. Though a relatively a smaller number of students at BRAC University go for internship opportunities at organizations when compared to academic thesis writing by students, due to the proper encouragement from its management, internship students are guaranteed to make every moment count on such occasions.

The eligibility for an internship at BRAC University requires students to complete more than 72 university credits as well as being placed in a well-renowned organization. The tenure of the internship should be six months at least, which would give adequate exposure to the corporate world.

Being a student at BRAC University, I chose an internship instead of a thesis paper to gather practical working experience along with professional skills. I have selected Fintech hub Limited, which is a leading technology-first organization with an ambition to transform the financial industry with software solutions at an enterprise level, mainly associated with banks of Bangladesh. This internship really means a lot for learning purposes and I will be carrying these experiences with me for my future academic and professional life.

1.2 Purpose of the Report

This report is one of the major requisites for finally completing my Bachelor's at BRAC University. It encapsulates my experiences and learning during the internship period at Fintech Hub Limited. In this report, a comprehensive explanation of the working environment, corporate culture and professional development reached through the length of this very internship will be provided. Also, it underlines the projects in which I was involved, the skills developed and the practical challenges found during the work process. I hope that with this documentation, I will be able to make a holistic presentation of my responsibilities and growth throughout this internship and reflect on how this experience shaped my perception of the professional world and better prepared me for all future endeavors.

The internship at Fintech Hub is a life changing hands-on opportunity combining theory and practice in software development. As a Software Development Engineer Intern, I am acquiring a rich opportunity to work with projects in terms of Core Banking Solutions.

From day one, I was taken through the maze of building scalable applications using the.NET framework and Blazor. My responsibilities have been multidimensional - designing user-friendly interfaces to smoothly integrate APIs that enhance performance. Still etched in my memory is that feeling when, after such a long time trying, I managed to integrate an API which to me at first seemed to be overly complex. The victory taught me persistence and how to solve problems in software development.

That set this internship apart: the scale of projects with other, relatively smaller ones requiring creativeness and attention to important details. As such, developing a lightweight module for user administration allowed me a real taste in the development of clean, compact code. Though modest in terms of its dimensions, such small-sized ventures necessarily played a significant role in my development in re-emphasizing fundamentals and enhancing developer confidence. Apart from technical skill, such an exercise instilled in me the skill for dealing with changing requirements, collaboration and critical thinking in taking important design decisions.

Below, in my report, I detail my multi-faceted journey of learning, overcoming obstacles and key contributions defining my internship at Fintech Hub, a journey of development, determination and achievement.

1.3 Problem Statement

We had projects of an eKYC application and an Online money transaction tracker App in our queue. Fortunately, I got chance to work in these projects. I worked in developing the UI and connecting the API in these apps.

1.3.1 The eKYC app (AirGate)

This product is an application which will let a bank officer to know their customers electronically by viewing their information. This app also had a requirement to

view a customer's nominee information saved in the systems server. Our team proposed an application named AirGate, which we were developing following these requirements.

1.3.2 The transaction tracker (FinJet)

This product is application to store and show the information of the transactions of customers. Our team named the product as FinJet.

1.4 Objective

1.4.1 Aim

- To get the practical exposure to implement theoretical knowledge in the working environment.
- To learn the work cycle of the technology-based company with software development.
- To enhance various technical and interpersonal skills through the undertaking of different projects by working with various professionals.
- Reduce the gap between academic learning and professional implementation.

1.4.2 Specific Goals

- To gain appropriate industrial experience as well as learning in the arena of software development, keeping in view the web technologies.
- Valuable contribution towards the ongoing projects of the organization while developing problem-solving and technical skills in the process.
- Design and implement dynamic and interactive user interfaces by using component-based architecture.
- Developing debugging and state management skills.

1.5 Methodology in Brief

The present report solely revolves around my working experience and learning at Fintech Hub. Most of the information contained in this report is from my personal experience, coupled with input from relevant sources. The sources may be sub-grouped into the following:

1.5.1 Primary Data

- Practical Work Experience: This is the actual job involvement and contributions to projects during the internship period.
- Sharing knowledge and ideas with colleagues and guidance by the seniors within the team.

- Seminars and Team Meetings: Insights from organizational events and collaborative sessions were obtained.

1.5.2 Secondary Data

- Details about the company's background, its products and services.
- Internet Resources: Other references on technical solutions and documentation of Blazor (dot).NET.
- The combination of primary and secondary data thus provided a very solid basis of knowledge on software development best practices and effective contribution to the projects the company was dealing with.

1.6 Scopes and Challenges

It has not been totally smooth sailing while working at this Fintech Hub internship. Some of those issues that it had to sort through have shaped my problem solving and critical thinking. Confronting those head-on helped the improvement not just of my technical skills but furthered my esteem for the layers associated with developing software.

The biggest persisting challenges that I came across were those in state persistence and consistent UI updates upon API calls. Quite a few reviews initially pointed out that data wasn't refreshing, or how inconsistent states could result in janky user interactions. This led me to integrate the services of state management with dependency injection so as to maintain a single source of truth across components. This way, data synchronized so much better and really smoothed over the user experience.

1.7 Key Learnings and Insights

My internship at Fintech Hub was a life-changing experience that contributed a lot to my technical and personal growth. The hands-on projects, collaborative environment and exposure to real-world challenges provided a well-rounded foundation for my development as a software engineer.

Chapter 2

Company Background

2.1 Overview

Fintech Hub is a technology-first organization with an ambition to transform the financial industry with software at an enterprise level. Having a background in Core Banking Solutions (CBS), the organization helps financial organizations streamline processes and enable an enriched digital experience for its customers.

2.2 Company's Objective

Fintech Hub fosters innovation and growth in the financial technology sector by supporting startups, facilitating collaboration, driving economic growth, offering education, promoting regulatory compliance, enhancing financial inclusion, and encouraging sustainable practices.

2.3 Working Environment

What sets apart Fintech Hub is its commitment towards utilizing newer technology with unique ideas.

I was most impressed with the ease with which efficiency and innovation have been woven in development work. There is a lot of collaboration and an environment that is free and conducive to innovation and even an intern can contribute effectively.

I experienced firsthand during my work at Fintech Hub, the organization's willingness to work towards developing financial sector related solutions in harmony with changing requirements. There was a strong practice of continuous learning and collaboration, challenging me to break out of traditional thinking and actively contributing in ideation sessions with development professionals.

2.4 Technology and Framework

- .NET Core 8.0 as the development SDK and Runtime
- Blazor
- Oracle Database
- SQL Server and RESTful APIs developing strong, scalable and secure offerings.
- REDIS as the high-performance key value storage.
- C sharp as the primary software development language.
- Microsoft Visual Studio Community Edition and Microsoft Code as the primary IDE
- Azure DevOps Server as the source control system.

2.5 Projects

Several Projects are running simultaneously in the company.

I worked in the development engineering team and our running projects which are –

- AirGate – An Mobile Banking eKYC(electronic Know Your Customer) app.
- FinJet – An Online Money Transaction App.

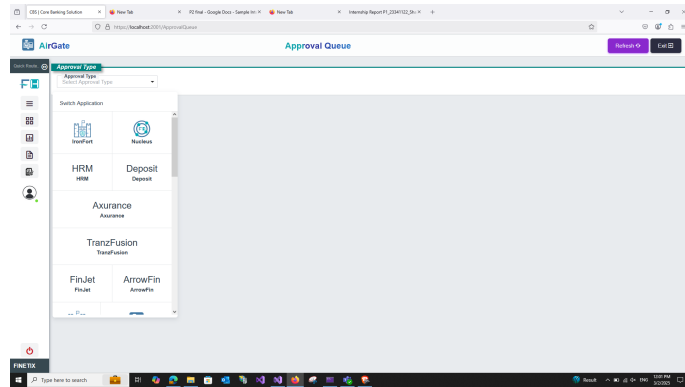


Figure 2.1: Running projects in Fintech Hub

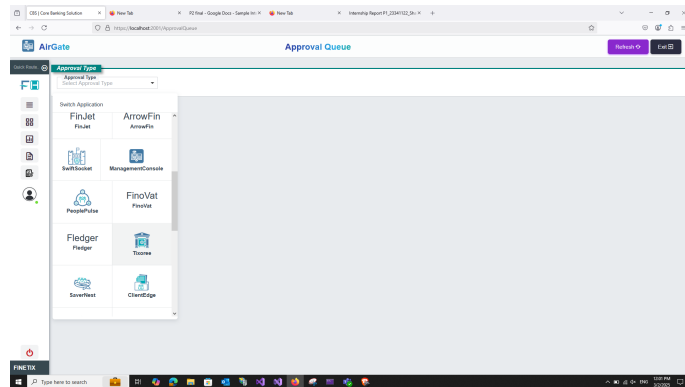


Figure 2.2: Running projects in Fintech Hub

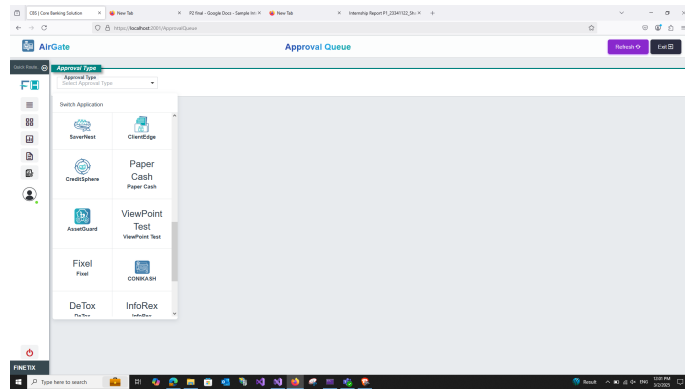


Figure 2.3: Running projects in Fintech Hub

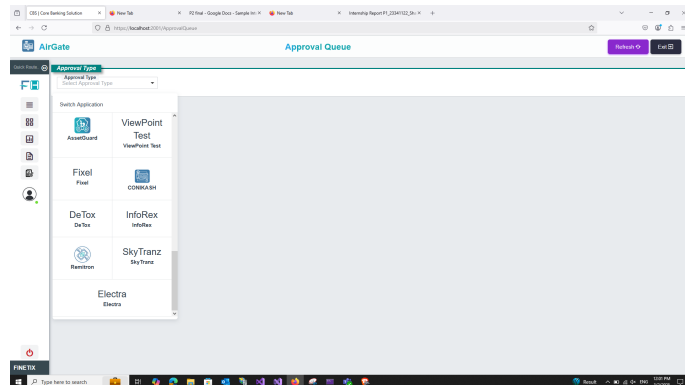


Figure 2.4: Running projects in Fintech Hub

Chapter 3

My Initial Learning Journey

3.1 Initial Learning and Setup

The first month at my internship with Fintech Hub involved an in-depth journey through the universe of Blazor and the .NET stack. Having little background in these technologies, I understood that this period would be a make-or-break stage for creating a strong foundation. Installing and configuring the development environment took my first task, including configuring Visual Studio, connecting Git repositories for version control and having a smooth development pipeline.

I took considerable time studying Blazor fundamentals such as routing, component structure and data binding. To apply theory, I have constructed a simple form submit and dynamically-bound data app in Blazor. Practicing hands-on, I have consolidated my grasp of Blazor's model for message events and its constituent parts.

Building a Fruit App in one of my most memorable experiences during this period is one that I recall in specific detail. It was a simple but useful web app allowing a user to add, update and view a collection of fruits. Simple as it seems, it changed my life for real. It helped me grasp fundamentals of CRUD operations and understand the value of proper messaging between components.

3.1.1 Fruit App

A simple CRUD-based web application for maintaining fruit records. The project helped me to gain knowledge over the basic CRUD operations and solidify my understanding of Blazor's data binding and state management features. I also applied simple SP stored procedure calling and API calling on this later to understand the basics.

But no journey is free of obstacles and I soon enough encountered a similar challenge with my learning curve, too. I grappled with lifecycle methods such as `OnInitializedAsync()` and I struggled with state persistence between my components. I recall a particularly infuriating one-afternoon session when my state kept getting mysteriously reset in my components. Not one to ever yield, I dove headfirst into reading through documentation and tedious state management tutorials in a desperate search for a solution. Stumbling over session storage and discovering it to be

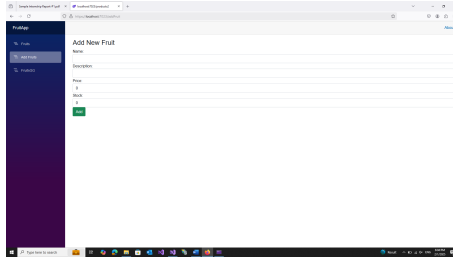


Figure 3.1: Fruit App UI

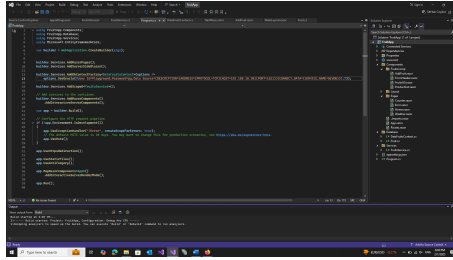


Figure 3.2: Fruit App Code

a state saving remedy for a bug in a desperate session not only plugged a critical leak but boosted my confidence in diagnosing complex cases, too.

Retrospectively, even its intensity, that initial learning curve actually geared me for a strong foundation in my internship stint. I discovered patience, problem-solving and that thrill of creating a creation out of nothing.

3.2 Intermediate Component Development and High-Level Solution Design Discussions

The second month of my internship experienced a considerable transition towards deeper development work and high-level discussion regarding solution planning. It was during this period that I began enjoying, in earnest, the value of reusable Blazor components. I coded form input, output and behavior for a user, each of them requiring a proper understandability of event-based parental and child component communications.

A peak during this period was working with the Task Tracker App, a simple yet efficient web app for creating and tracking a daily task for a user. What value added to this exercise lay in having to work with feature integration such as a completion status for a task and filtering capabilities. It was here that I gained an in-depth understandability of data validation and the dynamic capabilities of Blazor. Debugging and fixing faults in event-handling was an educational exercise and I gained a strong skill in becoming detail-aware and problem-solving oriented.

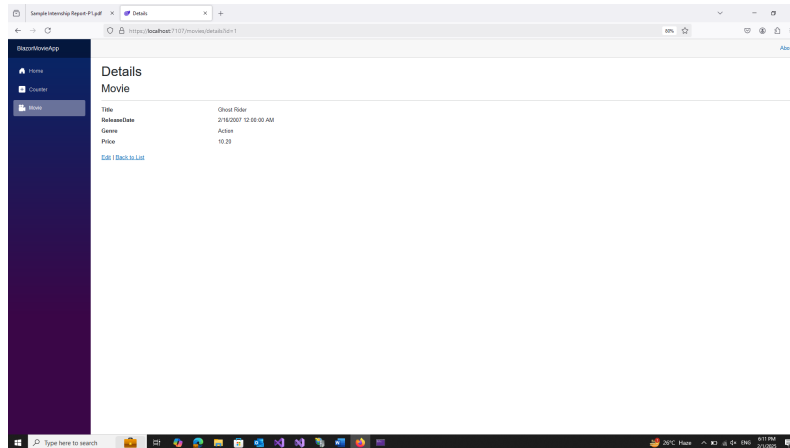


Figure 3.3: Movie App UI

3.2.1 Movie App

A high-priority work involved developing a Movie App. It was my first time working with consuming an external API, a challenge that involved a thoughtful consideration for reading and processing information asynchronously and in working with faults. Watching the app become a flawless platform for searching for a movie, seeing information and working with personalized lists filled me with a deep sense of accomplishment. It was a lesson in developing a high functionality, yet an ease to use, UI too.

Dynamic movie search and management application based on external APIs. The processing of asynchronous API calls and error management was difficult, but it taught me a lot about designing responsive and resilient applications.

Aside from specific work, I enjoyed working with High-Level Solution Design (HLD) sessions for HR Payroll and CBS modules for working with a base of a customer base. These sessions involved a lot of information in translating theoretical solution architectures to workable and useful UI blocks. Learning about working with complex and yet workable, high-performance workflows and designs with experienced engineers was a breakthrough in my development journey.

Managing state coordination between a variety of components posed a significant challenge in this stage. I initially encountered state mismatches between components and that affected overall user experience. After discussing with senior developers and reading about best practice, I utilized state services and callback events in a try to have a uniformed flow of information.

Learning through hands-on problem-solving and actually fixing a problem helped me appreciate careful planning in state management.

The activity best characterizing me involved developing a simple admin dash with Blazor components. With developing smart nav structures and configuring mock contents for presenting, the project helped me appreciate holistically how UI components integrate in a larger system structure. Having constant collaboration with

senior developers helped me have an inside view in developing software solutions that can expand and can stand tests of maintenance.

Now in reflection, my internship at this stage involved a mix of problem-solving, technical development and group learning. Every discussion and project challenged me to become a critical thinker and develop a strategic outlook in development.

3.3 Final Specifications and Requirements

3.3.1 API Integration and Advanced UI Development

By December, my work included blending backend APIs with Blazor components for dynamically loading, updating and representing information. It was an important part of my internship and I gained hands-on experience in connecting frontend components with real sources of information, and in enhancing application usability and performance significantly.

My principal work during this period included developing an in-depth Admin Panel. It was a challenging work that involved developing individual User, Role and Dashboard Widgets and balancing them with an overall uniform UI in consideration. Integrating such standalone capabilities with a harmonized UI involved meticulous planning and careful execution. Information transmission between components challenged me to explore deeper capabilities in Blazor and stressed modularity in developing components.

Another principal work during this period included developing a Channel Management page. It included developing dynamic drop-down lists for channel selection with respective form controls for updating information about a product. Smooth usability and feedback necessitated high form validation and state-awareness in binding. I recall overcoming a recurring issue with form information not resetting post submission, an issue that in the long run helped me understand form field binding and state-clearing in Blazor.

API integration joined my work at this stage. Successfully retrieving and returning database records in Blazor components via API calls was most satisfying. That being said, it wasn't a problem-free journey. One of the most taxing ones involved dynamically updated information not updating in real-time in UIs and API error messages. At First, I experienced cases when updates appeared successful but I failed to update until a full-page refresh. After deep analysis and discussion with senior engineers, I included strong error-handling capabilities and state management services to drive effective UI updates. Not only did it correct the issue, but it optimized app performance and responsiveness.

A particularly taxing and immersive one involved developing a Book Store App, emulating an online bookshop in which users could search, add and update book records.

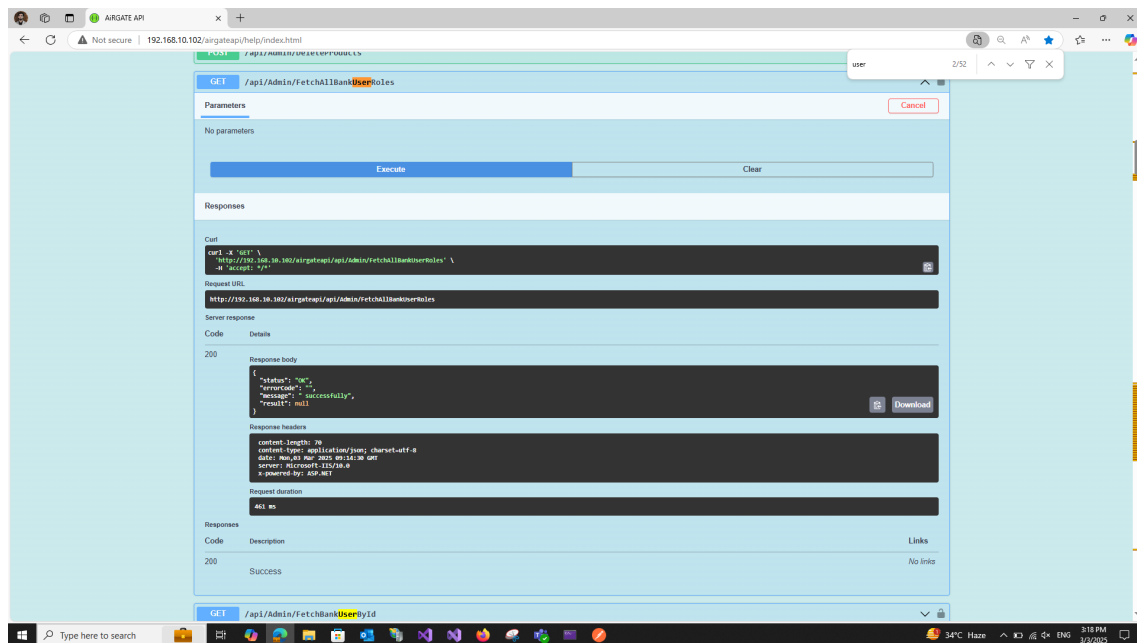


Figure 3.4: API Implementation 1

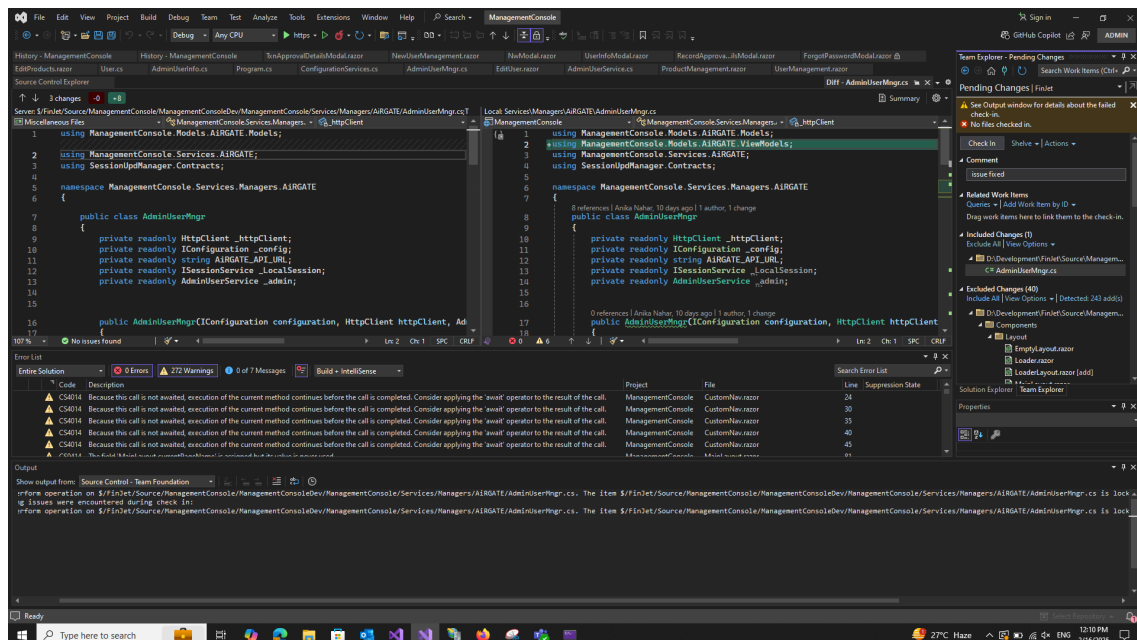


Figure 3.5: API Implementation 2

Challenge posed a full-fledged investigation of persistence and error-handling approaches towards data. It was satisfying to witness how minor UI responsiveness and API integration improvements maximized overall user's experience.

In reflection, this stage represented a breakthrough in my development career journey. Problem solving experiences have been increasing my expertise in developing complex UI, making me feel ever more confident in integrating frontend platforms in which I do not doubt will be so useful during my future work.

Chapter 4

Contributions in Project 1 Analysis and Design

In the last 3 months of my internship I worked on 2 projects simultaneously. Beside the AirGate Admin Panel, I started working in another project of Finjet Management Console. Here are the details and successful work outcomes from these two projects.

4.1 Project Responsibilities

Full-Stack Module Implementation and Integration

I actively used and implemented different functional modules of the FinJet core banking platform during my internship. I had both frontend and backend tasks, which provided me with hands-on experience with full-stack development. On the client side, I built user interfaces on top of Blazor components and mapped them to backend services via API calls in AirGate. On the server side, I used API consumption and testing, user behavior and data flow management.

These included activities such as:

1. Development and deployment of CRUD operations for Channel Management and User Management;
2. Deployment of service classes for handling safe communication through APIs;
3. Debugging and testing modules through Postman and Visual Studio;
4. Integrating frontend and backend code to assist in the process of migration from SQL Server to Oracle SQL;

By undertaking these activities, I assisted in enhancing the usability, maintainability, and efficiency of the system by adhering to industry best practices.

4.2 Implementation of Selected Design of AirGate Admin Panel

This is an enterprise-level admin panel where, in the process of working, I managed to improve the UI/UX and integrated role and user management functions. Working on this project with seniors helped me understand how best to handle scalable design.

The most significant technology that I've seen during my internship is middleware software called AirGate. AirGate is essentially an API Gateway literally a centralized, secure gateway through which all frontend UI (developed using Blazor) has to communicate with the underlying core banking services.

What was so unique about AirGate was how it added simplicity to calling advanced backend functionality without making underlying business logic available to the UI in the open. In every place where the application needed data retrieved or an operation performed such as creating a new user account or obtaining products available for a specific banking channel the call went through AirGate first.

It served several important functions:

- Security validation such as token validation and ensuring that the user had the proper permissions.
- Directing requests to the correct backend service or database endpoint in a smart way.
- Logging activity for audit, something extremely crucial in banking applications.
- And even support for multiple versions of the API to allow for future upgrades without sacrificing existing functionality.

This enabled me, from a development standpoint, to focus more on writing tidy frontend logic and handling well-structured APIs, without the annoyance of the internal workings of the core banking system.

Here are the outcomes of the UI of the AirGate Admin Panel pages. Picture given below –

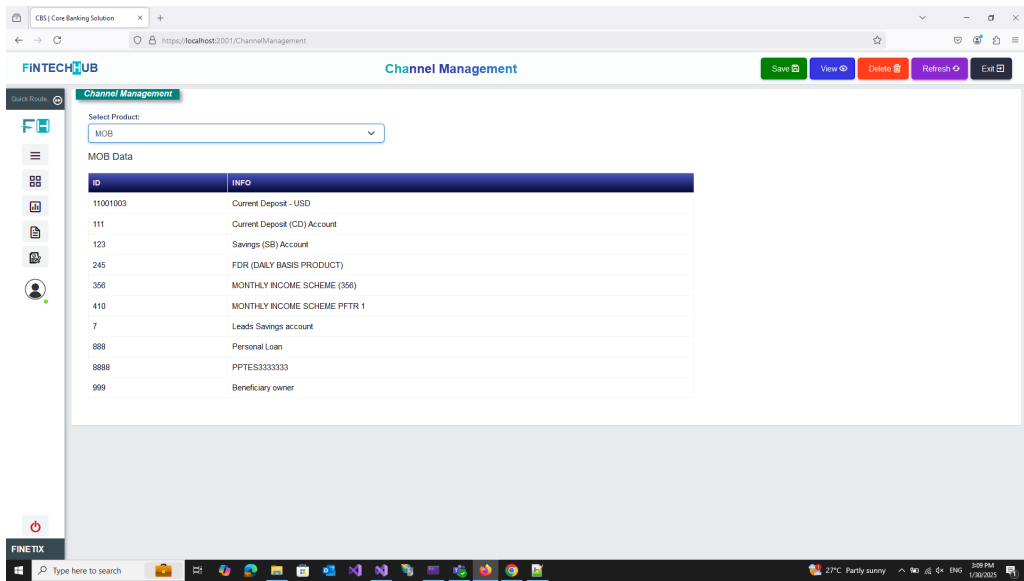


Figure 4.1: channel management

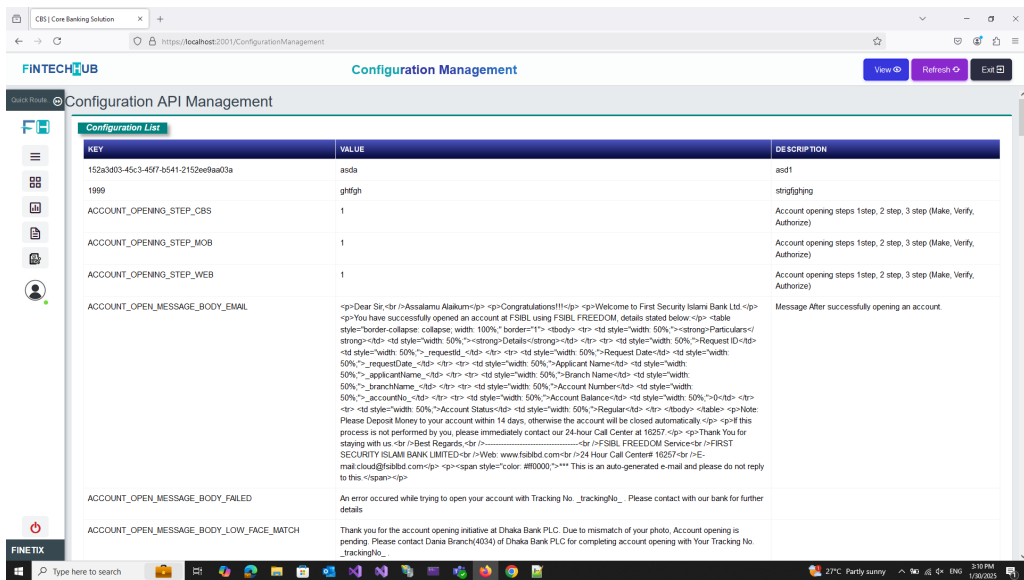


Figure 4.2: Configuration management

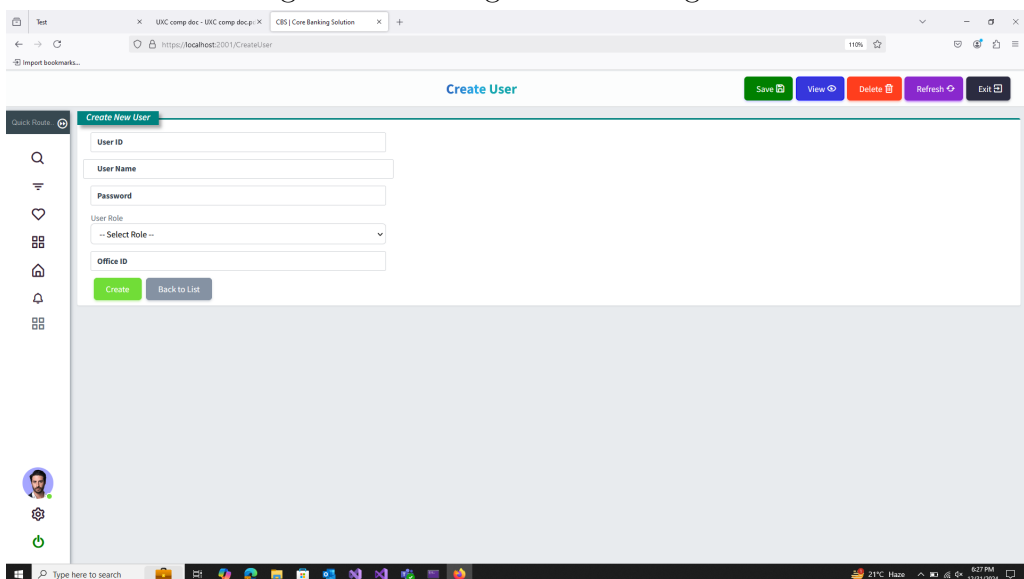


Figure 4.3: create user

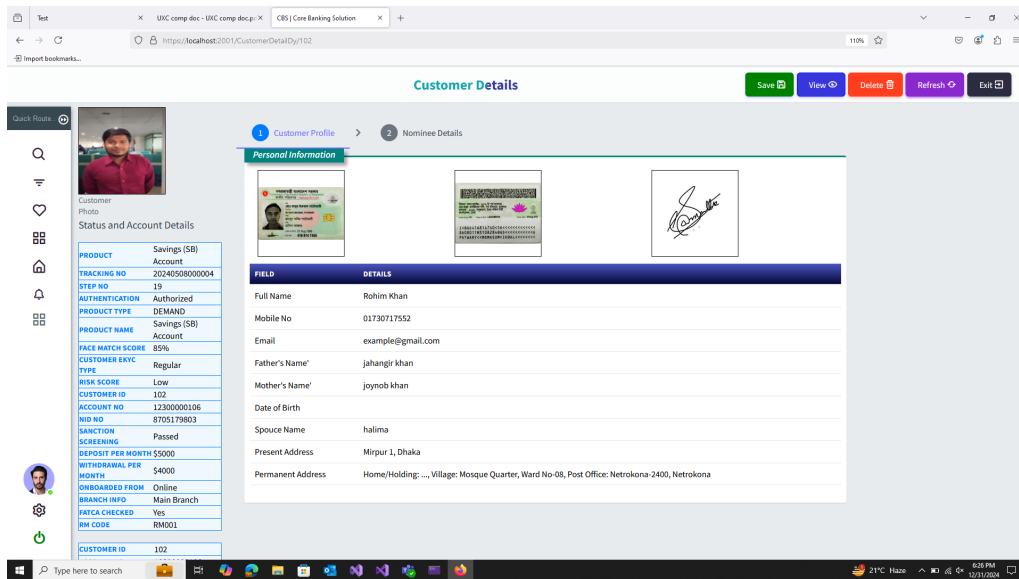


Figure 4.4: customer detail

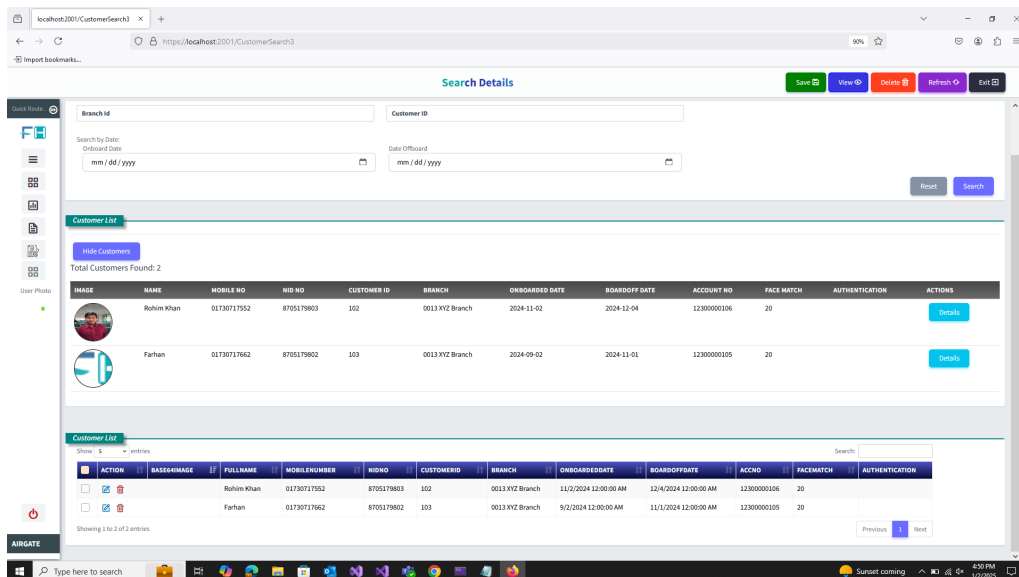


Figure 4.5: customer search

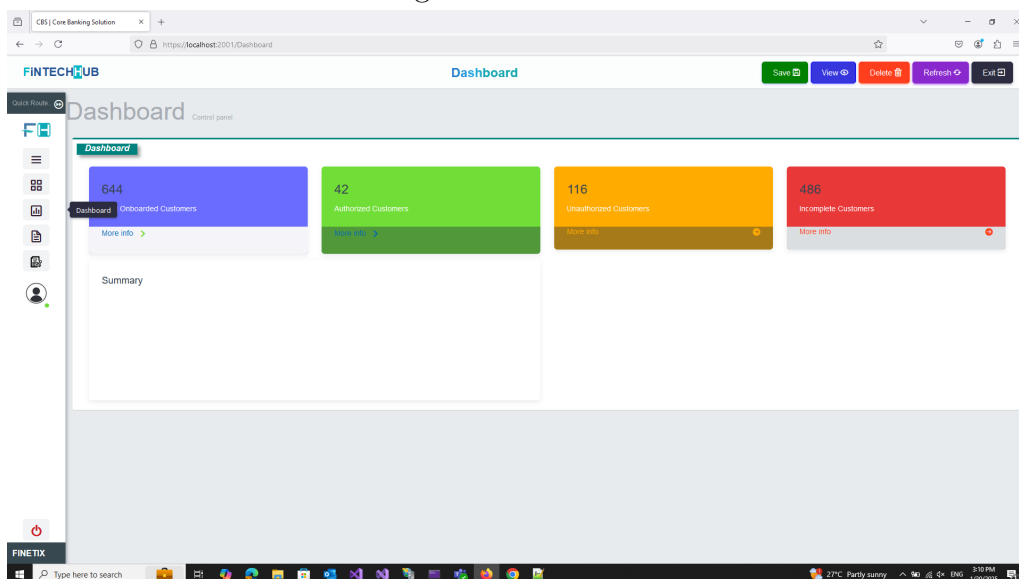


Figure 4.6: Dashboard

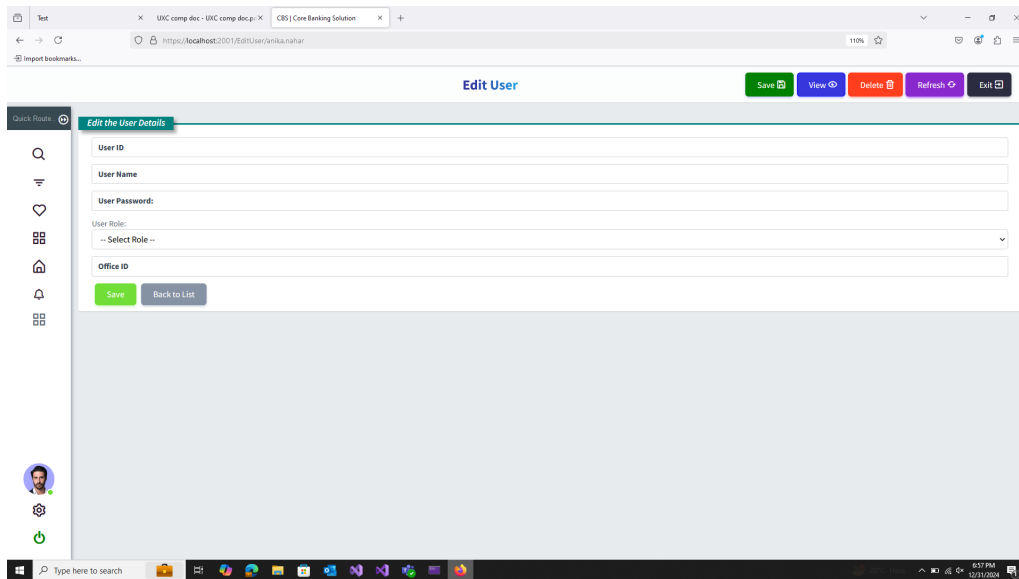


Figure 4.7: Edit user info

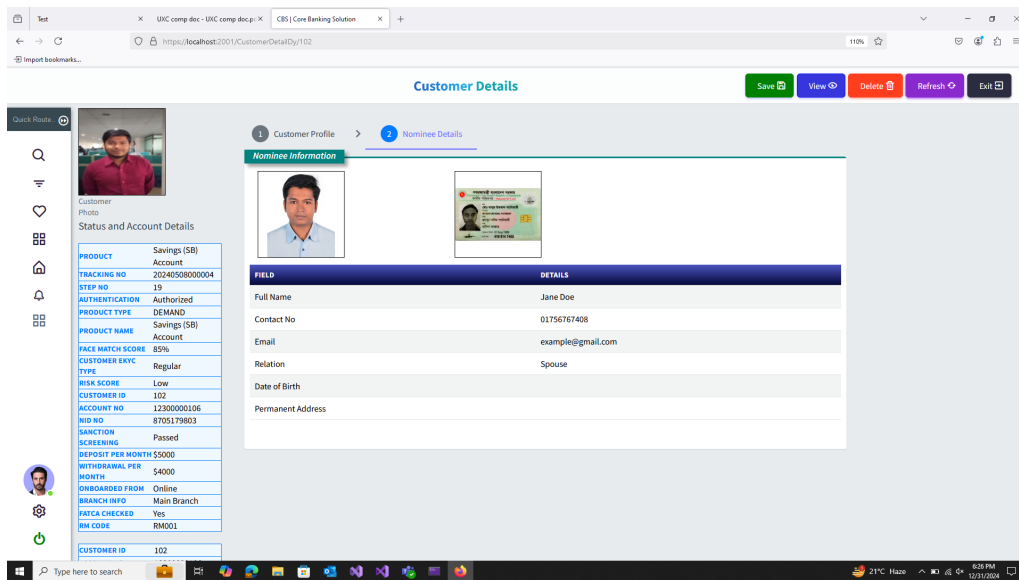


Figure 4.8: nominee detail

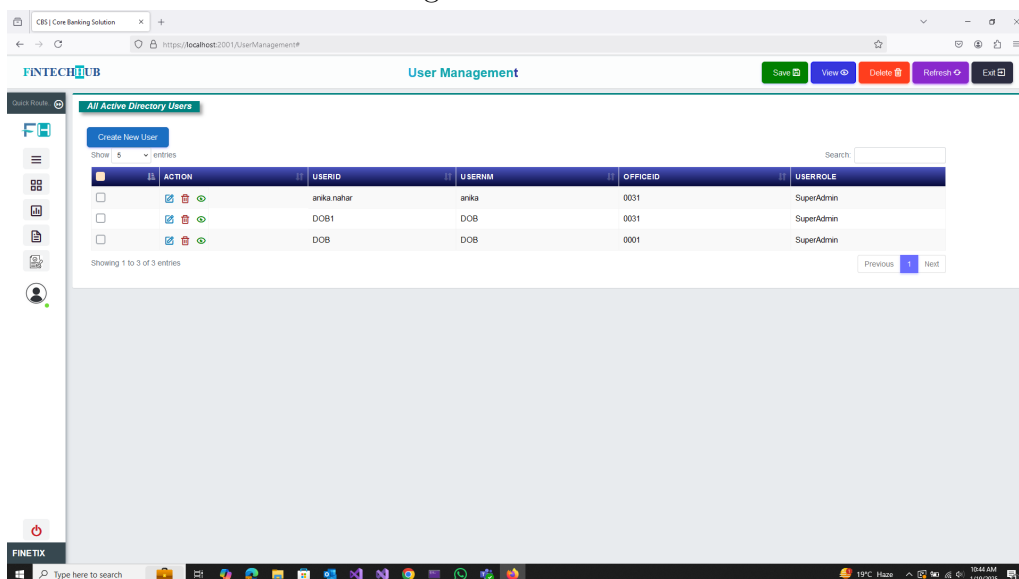


Figure 4.9: user management

Chapter 5

Contributions in Project 2 Analysis And Design

5.1 Implementation of Selected Design of FinJet Management Console

Technical Features of FinJet:

- Frontend: Developed with Blazor (C), Razor components and HTML/CSS
- Backend: ASP.NET Core Web APIs

Database: Oracle SQL

Source Control: Git and Microsoft Team Foundation Server (TFS)

The application is divided into independent functional modules.

- CRUD operations on users based on code, role allocation and control of access through custom input forms and data grids;
- Designed dynamic UIs for channel and product data selection and processing for banking;

My task was: • Configuring frontend elements to backend APIs with AirGate;

- Implementing Blazor components with Razor code and lifecycle methods;
- Including service classes for interactions with APIs;
- Testing and debugging with Postman and Visual Studio;
- Getting used to the switch from SQL Server to Oracle SQL in data access layers;
- In this real-world scenario, I learned how enterprise banking software is implemented and how clean architecture, modular architecture and version control are crucial in real development.

Here are the outcomes of the UI of the FinJet management Console pages. Picture given below –

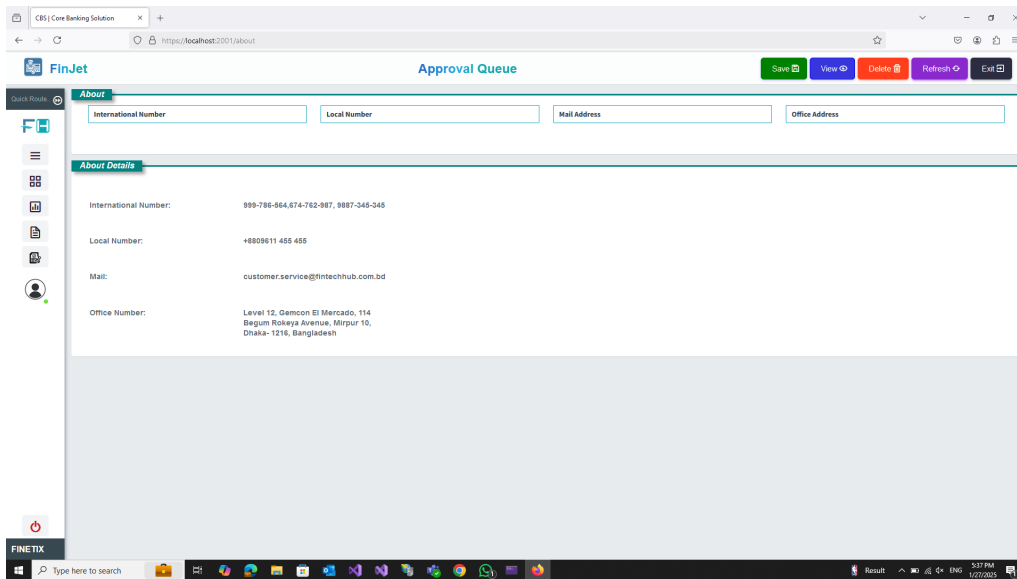


Figure 5.1: about

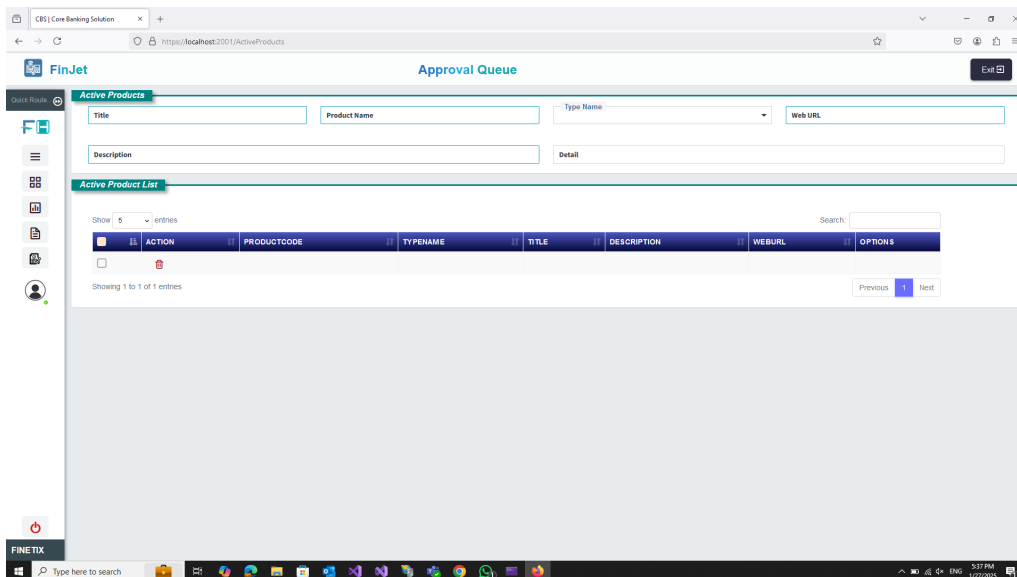


Figure 5.2: active products

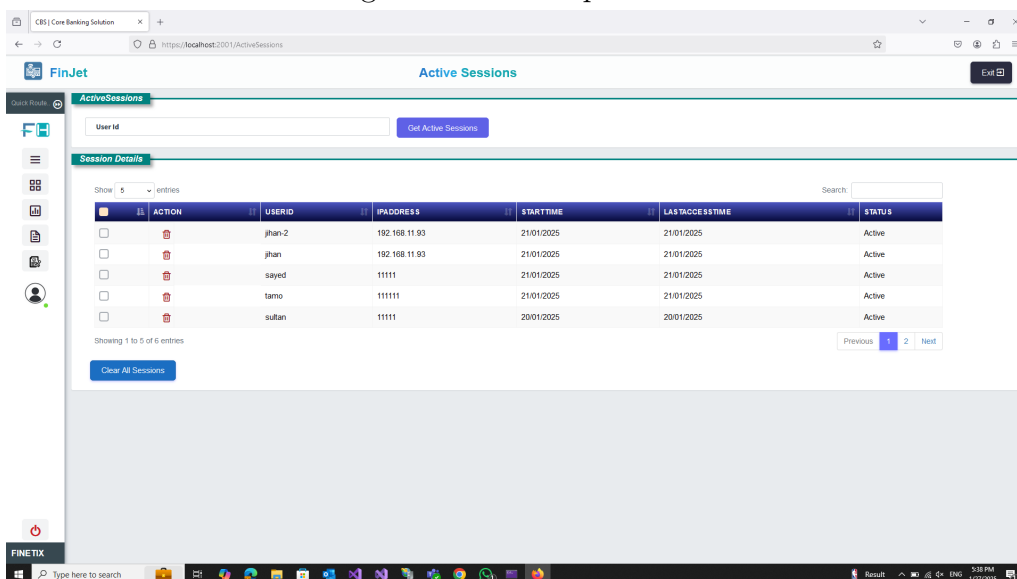


Figure 5.3: active sessions

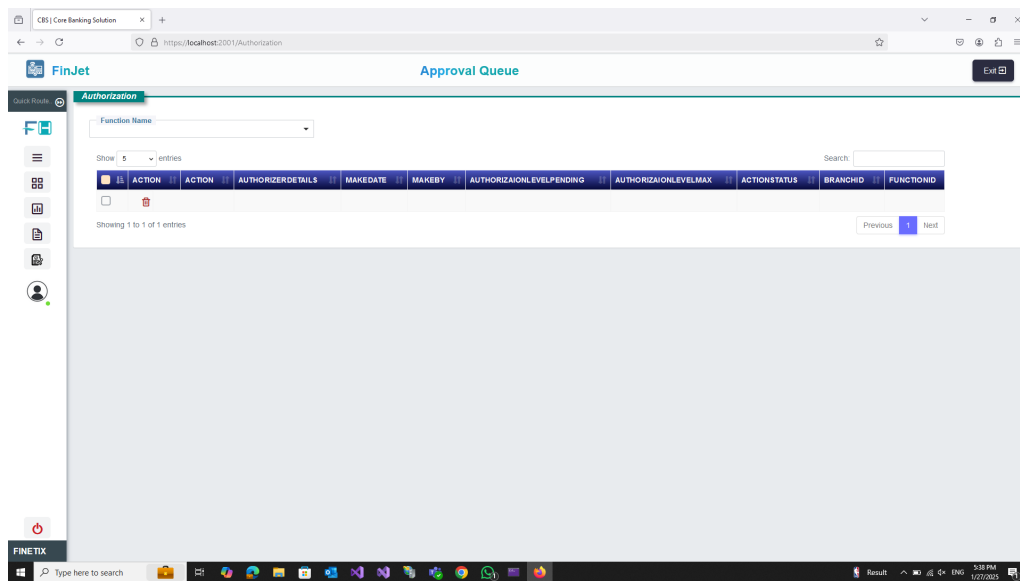


Figure 5.4: authorization

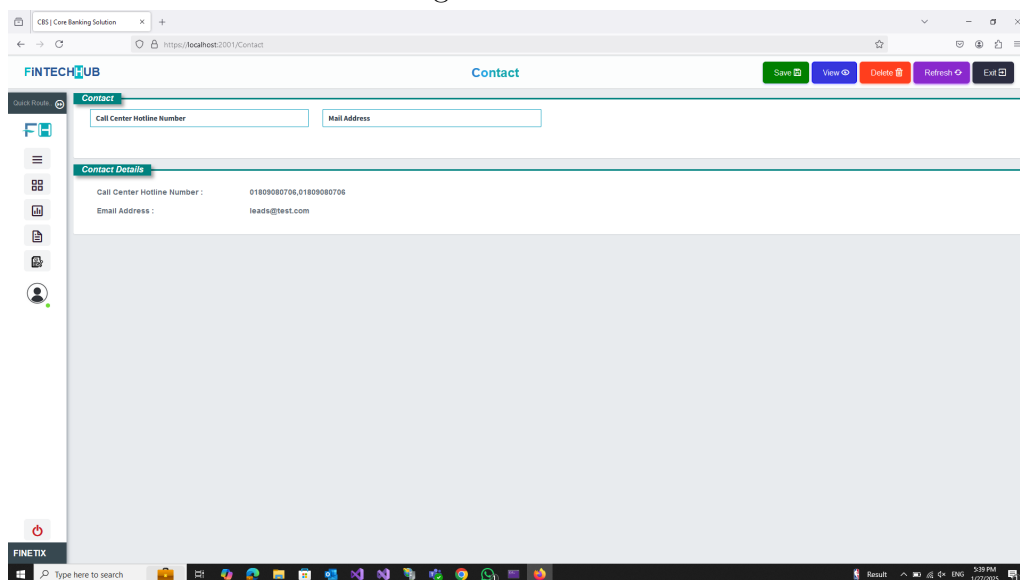


Figure 5.5: contact

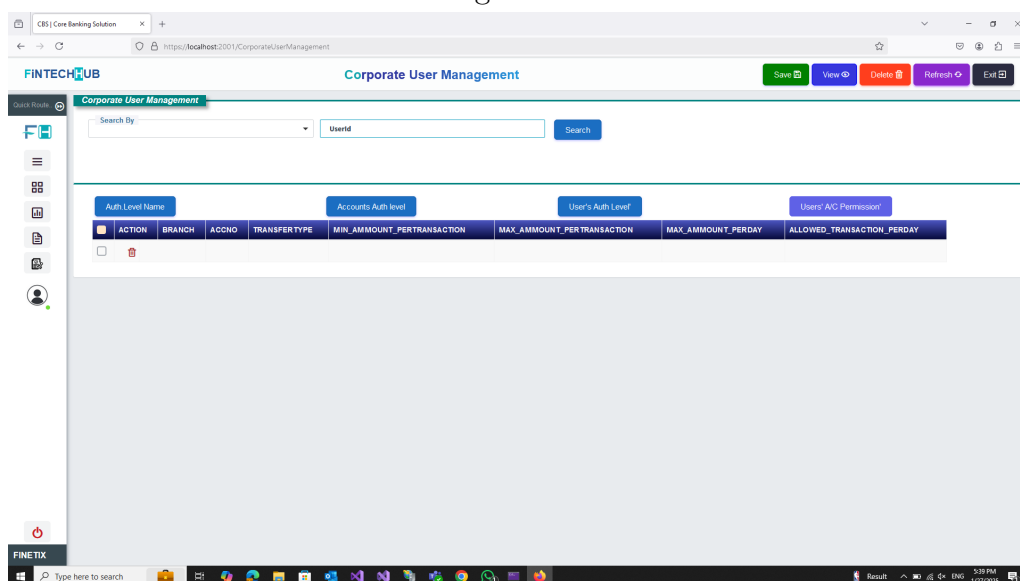


Figure 5.6: corporate user management

The screenshot shows the 'Fund Transfer Limit' form in the FinJet application. The form is divided into two main sections: 'Individual Client' and 'Corporate Client'. The 'Individual Client' section includes fields for 'Transaction Amount Allowed Per Day (BDT)' (10), 'No. of Transaction Allowed Per Day' (1000000), 'Amount Allowed Per Transaction (BDT)' (300000), 'Minimum Amount Per Transaction (BDT)' (10), and 'Global Max Limit (BDT)' (1000000). The 'Corporate Client' section includes fields for 'Transaction Amount Allowed Per Day (BDT)' (20), 'Transaction Amount Allowed Per Day (BDT)' (2500000), 'Amount Allowed Per Transaction (BDT)' (500000), 'Minimum Amount Per Transaction (BDT)' (100), and 'Global Max Limit (BDT)' (1000000). Below these sections is the 'Account & Charge' section, which includes fields for 'Principal Branch', 'BEFT Account No.' (90300000256), 'BEFT Branch', 'NSPB Account No.' (90300000039), 'NSPB Branch', 'Q CASH Charge Rule ID', 'Q CASH Account No.' (90300000039), 'Q CASH Branch', 'BB BEFT Head', and 'BEFT/NSPB Charge Rule ID' (0154). The form has buttons for 'Save', 'View', 'Delete', 'Refresh', and 'Exit'.

Figure 5.7: fund transfer 1

The screenshot shows the 'Fund Transfer Limit' form in the FinJet application. The form is divided into two main sections: 'Individual Client' and 'Corporate Client'. The 'Individual Client' section includes fields for 'Transaction Amount Allowed Per Day (BDT)' (10), 'No. of Transaction Allowed Per Day' (1000000), 'Amount Allowed Per Transaction (BDT)' (300000), 'Minimum Amount Per Transaction (BDT)' (10), and 'Global Max Limit (BDT)' (1000000). The 'Corporate Client' section includes fields for 'Transaction Amount Allowed Per Day (BDT)' (20), 'Transaction Amount Allowed Per Day (BDT)' (2500000), 'Amount Allowed Per Transaction (BDT)' (500000), 'Minimum Amount Per Transaction (BDT)' (100), and 'Global Max Limit (BDT)' (1000000). Below these sections is the 'Account & Charge' section, which includes fields for 'Principal Branch', 'BEFT Account No.' (90300000256), 'BEFT Branch', 'NSPB Account No.' (90300000039), 'NSPB Branch', 'Q CASH Charge Rule ID', 'Q CASH Account No.' (90300000039), 'Q CASH Branch', 'BB BEFT Head', and 'BEFT/NSPB Charge Rule ID' (0154). The form has buttons for 'Save', 'View', 'Delete', 'Refresh', and 'Exit'.

Figure 5.8: fund transfer 2

The screenshot shows the 'Fund Transfer Limit' form in the FinJet application. The form is divided into two main sections: 'Individual Client' and 'Corporate Client'. The 'Individual Client' section includes fields for 'Transaction Amount Allowed Per Day (BDT)' (10), 'No. of Transaction Allowed Per Day' (1000000), 'Amount Allowed Per Transaction (BDT)' (300000), 'Minimum Amount Per Transaction (BDT)' (10), and 'Global Max Limit (BDT)' (1000000). The 'Corporate Client' section includes fields for 'Transaction Amount Allowed Per Day (BDT)' (20), 'Transaction Amount Allowed Per Day (BDT)' (2500000), 'Amount Allowed Per Transaction (BDT)' (500000), 'Minimum Amount Per Transaction (BDT)' (100), and 'Global Max Limit (BDT)' (1000000). Below these sections is the 'Account & Charge' section, which includes fields for 'Principal Branch', 'BEFT Account No.' (90300000256), 'BEFT Branch', 'NSPB Account No.' (90300000039), 'NSPB Branch', 'Q CASH Charge Rule ID', 'Q CASH Account No.' (90300000039), 'Q CASH Branch', 'BB BEFT Head', and 'BEFT/NSPB Charge Rule ID' (0154). The form has buttons for 'Save', 'View', 'Delete', 'Refresh', and 'Exit'.

Figure 5.9: fund transfer 3

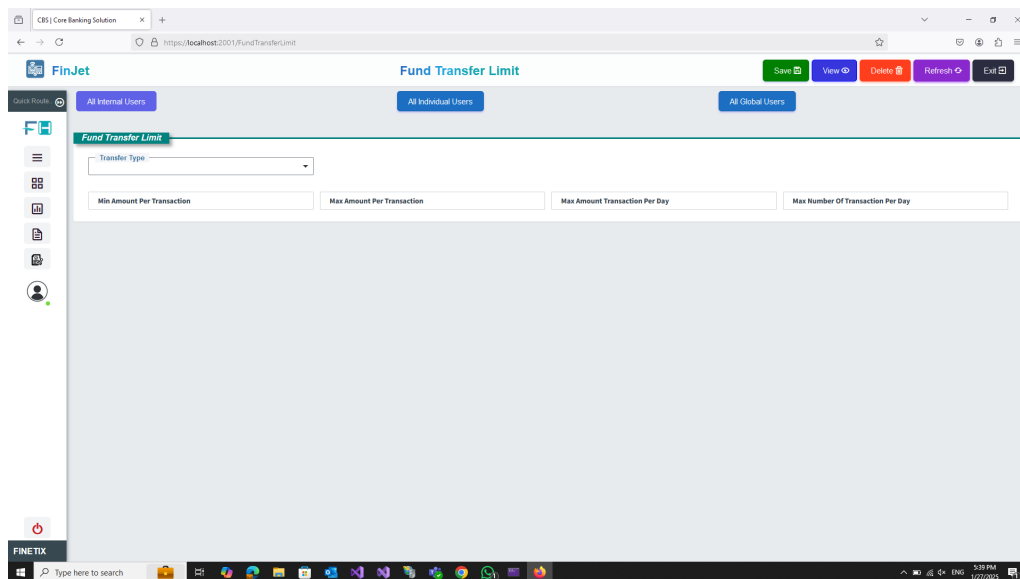


Figure 5.10: fund transfer 4

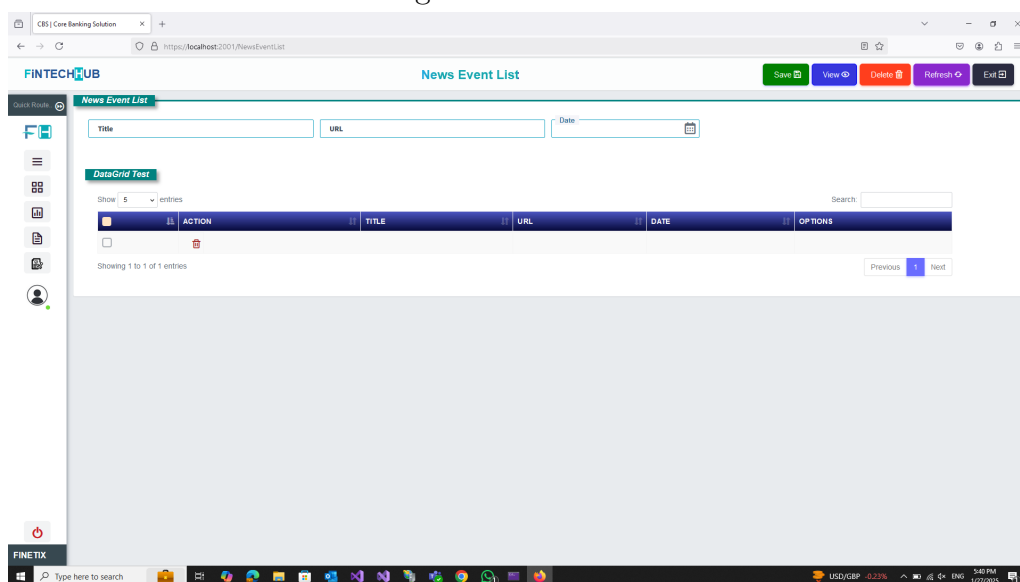


Figure 5.11: news event list

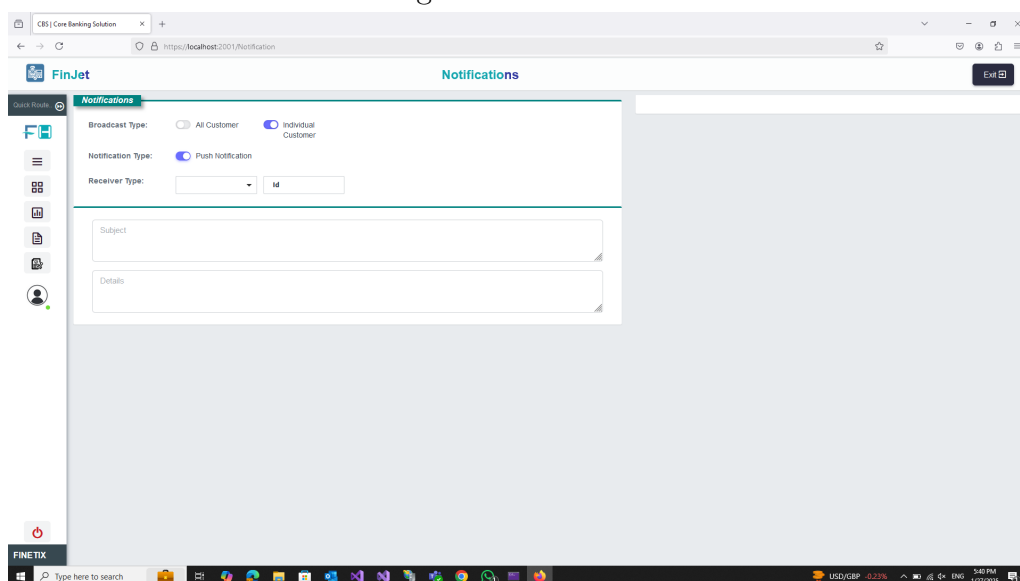


Figure 5.12: notifications

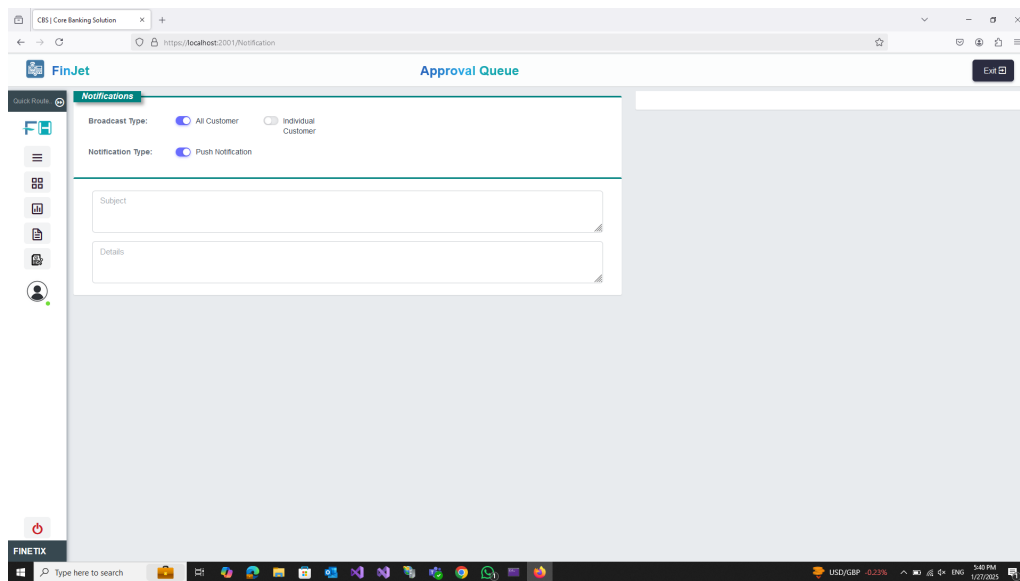


Figure 5.13: notification 2

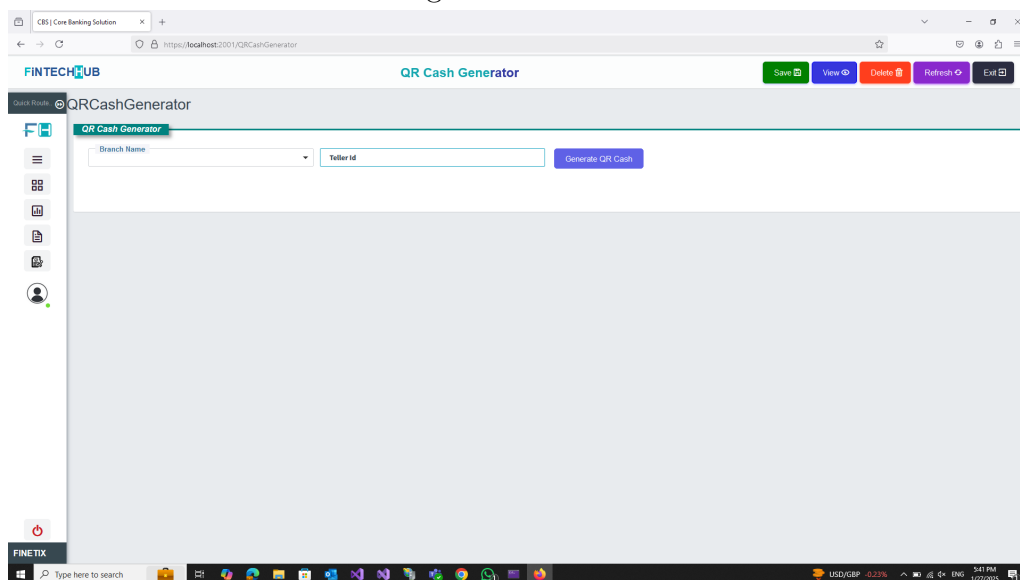


Figure 5.14: QR cash gen

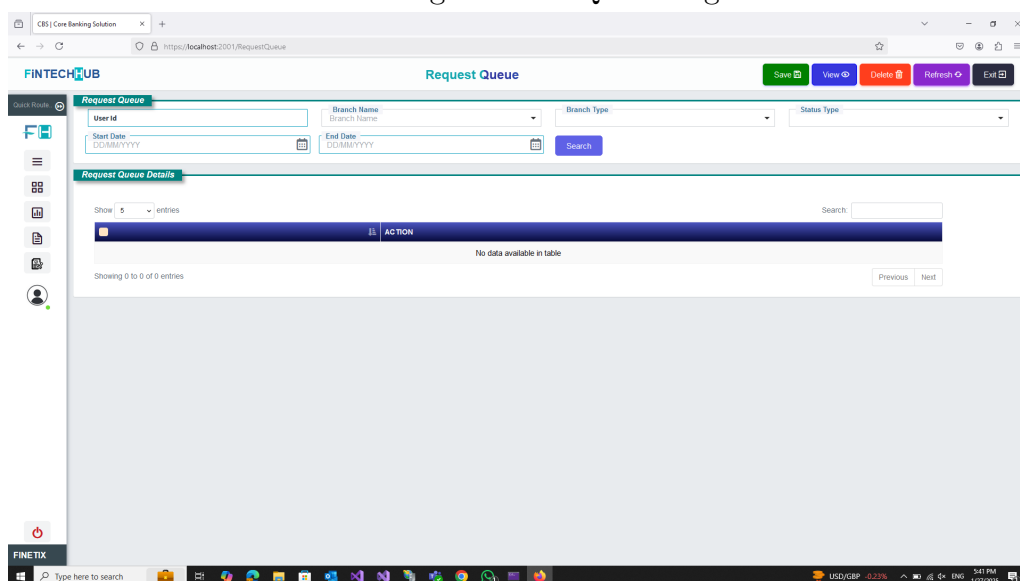


Figure 5.15: request queue

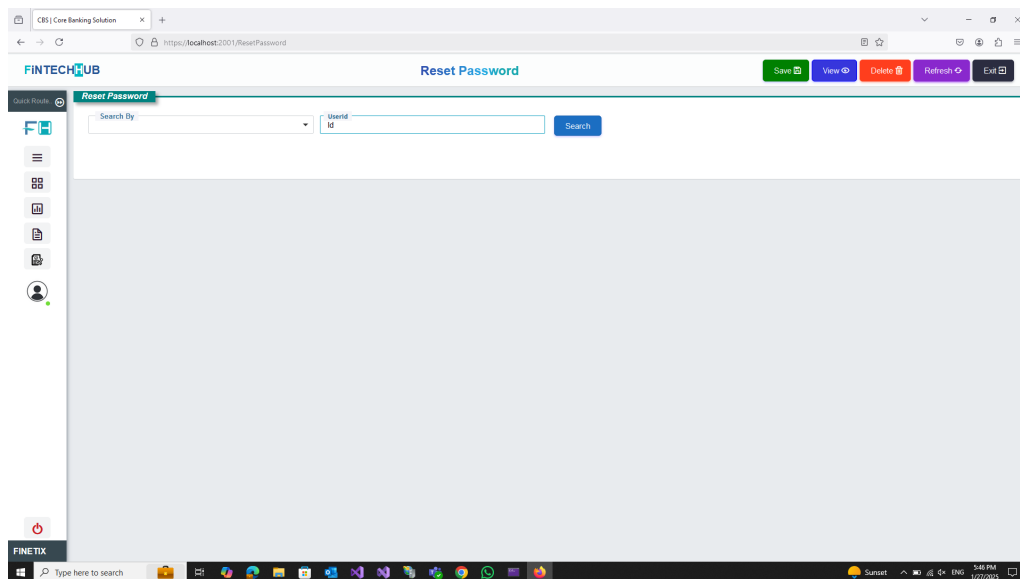


Figure 5.16: reset pass

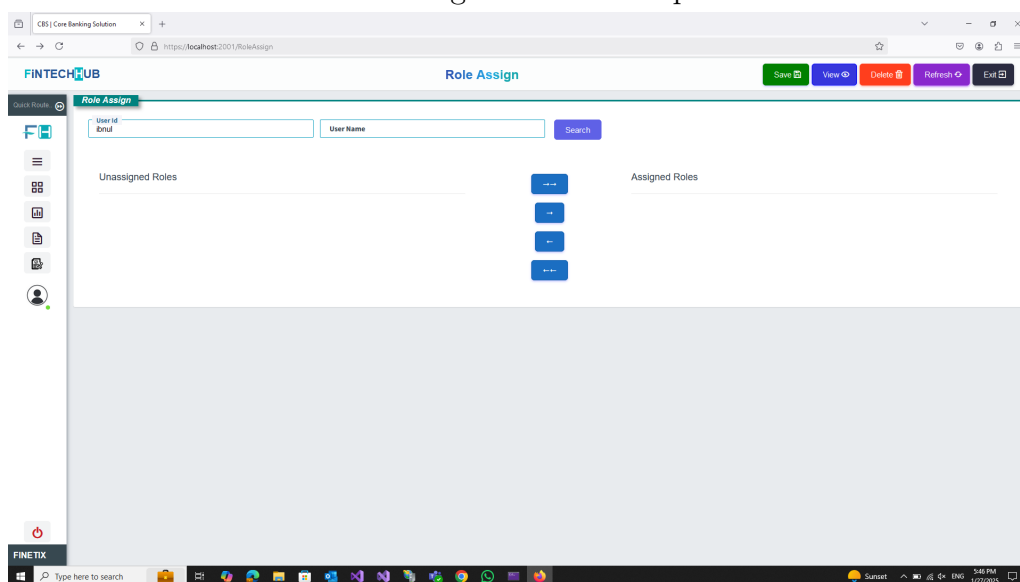


Figure 5.17: role assign

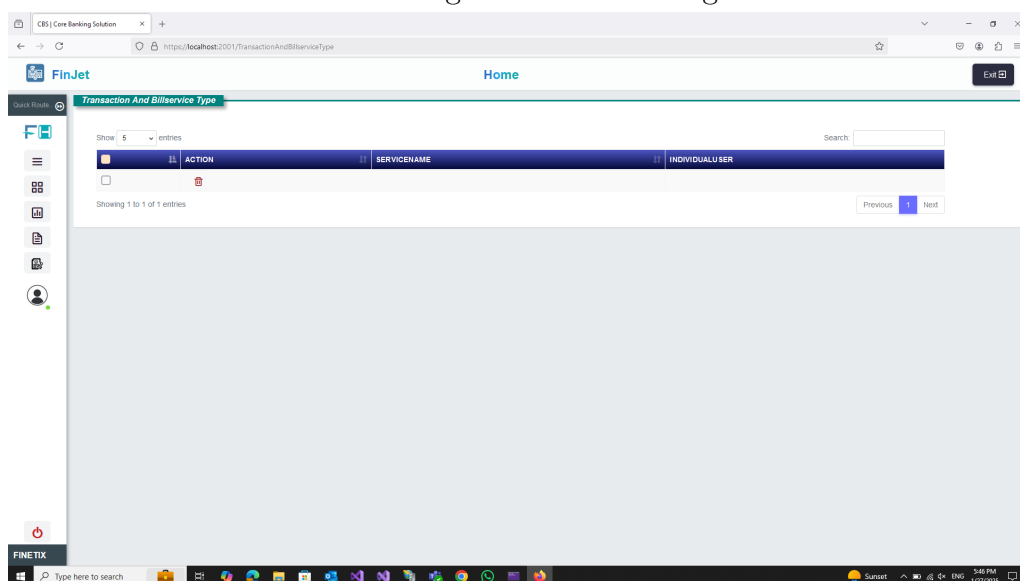


Figure 5.18: transaction and bill type

FINETECHUB User Creation

Branch Information

*Branch Name:

*Account No:

*Customer:

*Select Address Type:

*Select Auth Type:

*Select OTP Send Type:

User Information

*Branch Name:

*Account No:

*Customer:

Figure 5.19: user Creation (2)

FINETECHUB User Info Update

User Info Update

Search By:

Account Holder Information

Basic Information

User Id:

Home Branch Id:

Customer Id:

No. of Users:

Type:

Extended Information

User Name:

Email:

Mob Number:

D.O.B:

Failed Attempts:

Auth Type:

Contact Information

Father Name:

Mother Name:

Address:

Description:

User Status:

Force Password Change:

Update Criteria

Update Type: ☐ Contact Info ☒ Customer ID

Update Customer Id:

Present Customer Id:

New Customer Id:

Figure 5.20: user info update

FINETECHUB User Info Update

User Info Update

Search By:

Update Criteria

Update Type: ☐ Contact Info ☒ Customer ID

Update Customer Id:

Present Customer Id:

New Customer Id:

Figure 5.21: user info update 2

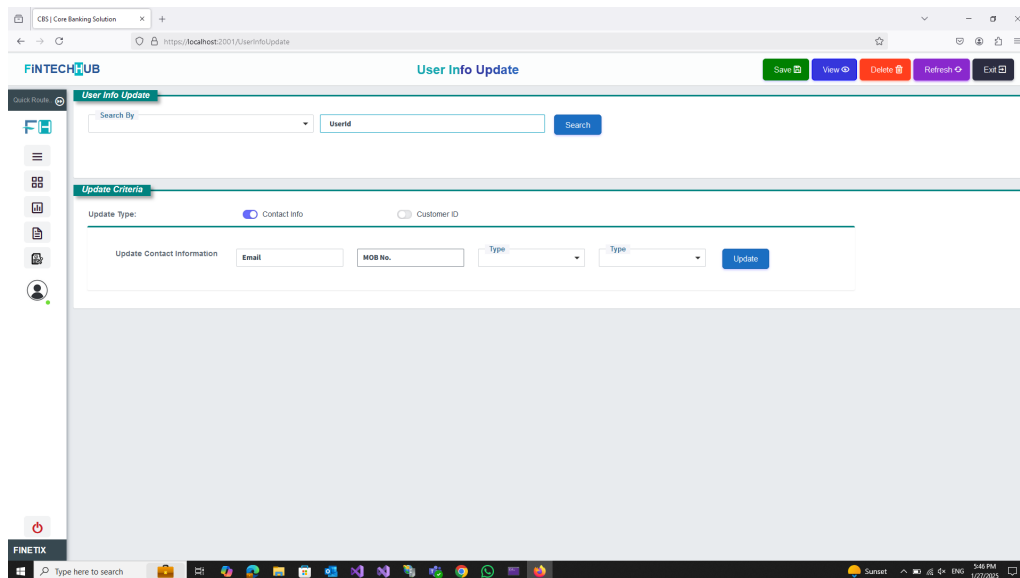


Figure 5.22: user info update 3

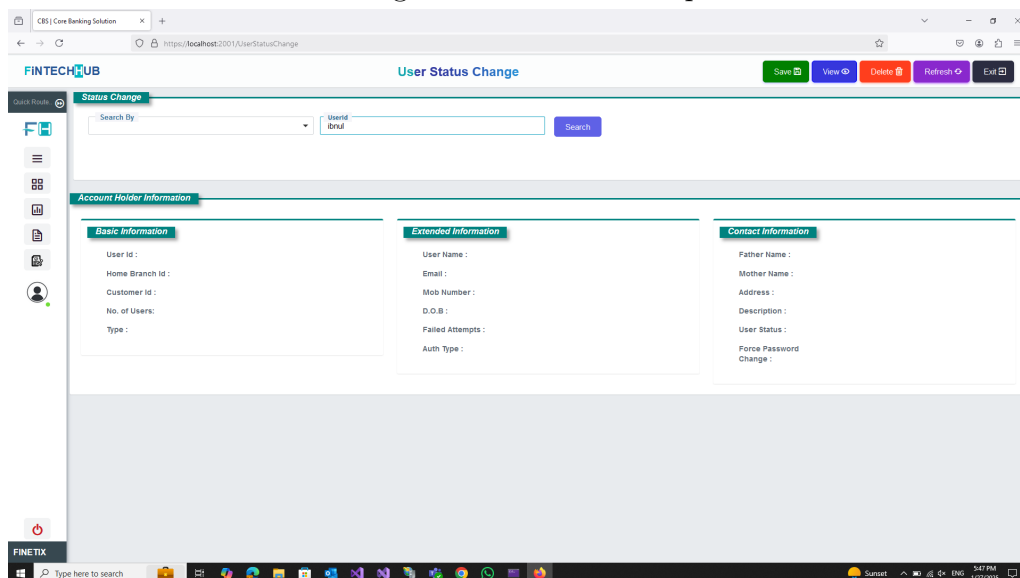


Figure 5.23: user status change

Chapter 6

Growth

6.1 Real-World Experience and Development of Professional Skills

This internship played a pivotal role in bridging the gap between the class and the industry. I was given hands-on experience in the form of an enterprise banking system, which helped me gain a deeper insight into software architecture, collaboration and client-centric development workflows.

Some of the most important personal and professional growths are:

6.1.1 Technical Development:

Strengthened my skill to develop on Blazor, C sharp, .NET, API integration and changes in database queries in SQL Server and Oracle SQL.

6.1.2 Tool Proficiency:

Had hands-on exposure while working with typical industry tools like Git, TFS, Postman and Visual Studio under actual development.

6.1.3 Team Collaboration:

Emphasized the necessity of version control, agile communication and process-driven development techniques in a team.

6.1.4 Problem-Solving Mindset:

Acquired the ability to debug, optimize and implement user-friendly solutions under observation and deadline pressures.

This experience made me feel strong about my ability to contribute valuable results on real projects and was a proper foundation for my future software development.

Chapter 7

Future Plans

7.1 Look Ahead

This 6 months in internship has been a real and tangible foundation within my academic and professional journey for the skill and insight I have accrued within this period. I am very confident now in my contribution toward the software development project and collaboration with teams effectively. It just raises my eagerness for web application development, for which I want to continue, taking all knowledge and skills learned at Fintech Hub ahead.

Chapter 8

Conclusion

8.1 Summary of Findings

Rather enriching and transformative journey from an internship to Fintech Hub, which has grown massively in offering exposure to Enterprise Software Development. It actually connected a bridge between the understanding of academics and their applications, providing the insider's look into the actual project of development. Intense work over Blazor, .NET and API integrations really whipping my technical skills into shape and deeply inculcated best practices in software engineering. From developing dynamic UIs to the back-end API communications for state persisting, each activity was a further opportunity for me to learn and grow. Particularly, debugging complex problems and optimizing the interaction of components are the things that taught me persistence and thorough problem-solving skills on how to write clean, scalable code. Beyond the technical perspective, working within a team with highly qualified professionals and participating in high-level discussions of solution design added to my perspective on both teamwork and strategic thinking. I learned more about the place of effective communication, structured problem-solving and proactive learning in successful software solution delivery. It is giving me an extremely good head start towards future academic and professional pursuits. I can say now that I feel much better prepared for the ever-changing landscape that software development always faces and I look forward to applying the skills and experiences learned during this formative period in projects and challenges yet to be taken.