

Department of Computer Science and Engineering Islamic University of Technology (IUT) A subsidiary organ of OIC

Internship Report

Internship Period

22 May 2022 - 22 September 2022

Performed At

DreamOnline Limited

Azmayen Fayek Sabil, 190042122

BSc in Software Engineering Program
Department of Computer Science and Engineering

Contents

Letter	of Transmittal	3
Ackno	wledgement	4
Introd	uction	5
1.1	Introduction	5
1.2	Background	5
1.3	Motivation	6
1.4	Objective	6
1.5	Scope	6
Compa	any Overview	7
2.1	About	7
2.2	History	8
2.3	Mission	8
2.4	Vision	8
2.5	Location	9
2.6	Organogram	9
2.7	Tools and Technologies	10
2.8	Products & Clients	10
Compa	any Culture	13
3.1	Company Working Environment & Protocols	13
3.2	Events	14
3.3	Performance Rewards	15
3.4	Internee Policy	15
Compa		16
4.1	Services provided by the Company	16
Learni	8	18
5.1	8	18
5.2	Soft skills learning	19
5.3	Additional Learning	20
		22
6.1	Overview of the team	22
6.2	My Influence as an Intern	22
6.3	My contributions in Employee Management Project	23
	6.3.1 Used Technologies	24
6.4	Achievements	25
6.5	Potential Work Opportunity	25

Activity Log (Backlog)	26			
7.6 Backlog Issue Tracking	26			
Activity Log (Notion)				
7.7 Notion Issue Tracking	28			
Conclusion				
References	35			

Letter of Transmittal

October 18, 2023

Sabbir Ahmed Assistant Professor, Islamic University of Technology (IUT)

Subject: Submission of Internship Report

Dear Sir,

With due respect, I am happy to submit my internship report at DreamOnline Limited under the BSc program of the Islamic University of Technology. I have learned about the field of Software development from a business perspective, as well as the methods involved in integrating technology solutions into real-world problems, during my 4 months internship period. I am grateful for the supervision our Islamic University of Technology internship supervisors have given us.

I sincerely hope that you will accept this report and that it meets the goals and requirements of my internship.

Sincerely yours,

Azmayen Fayek Sabil Student ID: 190042122

Program: Software Engineering

Department: Computer Science and Technology

Acknowledgement

First and foremost I like to thank and appreciate Sabbir Ahmed, Assistant Professor, Department of Computer Science and Engineering, Islamic University of Technology (IUT) for his guidance and support throughout my internship journey. To work as an intern in a reputed software company, would not be possible without his assistance and help. I am grateful for the opportunity.

I also want to thank our Managing Director of DreamOnline Limited, Mr. Md. Zulfiqar Ali, and other colleagues for providing a friendly and helpful work environment. I want to express my gratitude to Mr. Tarun Kumar Biswas, Senior Manager at DreamOnline Limited for his great advice, time, and encouragement.

I also want to thank my Team Leader, Mr. Fojle Rabbi, Senior Software Engineer at DreamOnline Limited for guiding me throughout the whole project work and my team members for their constant support and making the project work easier and more enjoyable.

Introduction

1.1 Introduction

This document provides a detailed report of my internship experience at DreamOnline Limited. From the 22nd of May to the 22nd of October, I worked as a full-stack development intern at DreamOnline Limited. Because of this internship, I get to know how a production-level application with hundreds of users is built. Throughout our academic life, we only get theoretical knowledge. But to sustain in a competitive world and become a good engineer, having practical knowledge is a must. This internship expose me to various tools and technologies of software development and makes me a better software engineer than I was before.

During my stay in the company, I worked on a production-level in-house application. My main goal was to develop software applications following all the stages of the software development life cycle through agile scrum methodologies. In this project, I implemented a good number of features and functionalities and solved a lot of bugs. I also regularly attended all my scrum meetings as well as other official meetings. Throughout my internship, I had to deal with many hurdles, but I was able to successfully solve all of those. In the company, I worked with many trending tools and technologies. I learn the best practices and many clean code methodologies from working on real-life projects. Working on these projects not only helped me to increase my skills but also makes me more confident as a software engineer.

This internship has taught me the various aspects and practices of software engineering in the real world, professional development in scrum methodology and helped me enhanced my technical abilities. I had a chance to put all concepts and knowledge acquired at the university into good professional practice. The experience of working in a team makes me more considerate of others' opinions and helps me to become a good team player. I also get a perspective of working in the business world. This gives me the chance to broaden my knowledge and identify my strengths and weaknesses, both of which will be useful for my future profession.

1.2 Background

The internship program is designed to prepare students for the ever-evolving software industry. It offers real-world problem-solving experiences and a deep understanding of the software development lifecycle. Students also gain exposure to corporate culture, cross-functional teamwork, and project management, enhancing both technical and interpersonal skills.

Supervisor evaluations play a crucial role in student development by providing constructive feedback and fostering accountability. Beyond academics, the program facilitates networking, allowing students to build relationships with industry

professionals and work on real projects, benefiting both the businesses they intern with and their future career prospects.

The internship course focuses on equipping students with professional insights, industry knowledge, and practical skills for a successful career in software development, emphasizing employability over mere credit accumulation. This aligns with the university's commitment to producing well-rounded, impactful graduates in the software sector.

1.3 Motivation

The internship program gives me the chance to broaden my skill set, gain experience working in the industrial sector, and achieve my aim of becoming accustomed to the corporate environment. This internship gives me an opportunity to collaborate with a company and helps me establish a connection with them. I can hone my skills and broaden my experience through this involvement. I have the opportunity to learn a variety of new and trending tools and technologies. I've always wanted to contribute significantly to a production-level application and solve real-life business problems. And I'm committed to doing my absolute best to accomplish these. I was able to gain the necessary information about the software industry through this internship program.

1.4 Objective

The goal of this report is to illustrate my internship-related experiences. I have used my academic knowledge for solving real-world problems, learnt about the corporate work culture and other best practices to cope with the corporate world. The key objectives that were focused on during my internship are

- Getting used to the office environment.
- The concepts, tools, and technologies I have learned will be helpful to me in the future.
- In the future, I will benefit from knowing the working environment and culture.
- Key characteristics that I need to improve in order to adapt to the job market.
- Take into account the needs of the current and upcoming industries.

1.5 Scope

The scope of this report is to focus on the learnings and benefits that I got from my four months of internship.

- It highlights the strong communication with my team leader, my teammates, and other colleagues.
- The work environment and overview of my company.
- My contributions to their project.
- Technical and soft learning that I earned by working there.

Company Overview

2.1 About

DreamOnline Limited is a software & mobile app development company specializing in AR/VR, IoT, AI/ML, Web and Windows systems, and Android iOS development. The company follows an agile project management methodology which reduces development costs and helps to meet deadlines. A dedicated QA team is available to ensure excellent product quality.

The company is still growing but it already creates a place in Bangladesh's software industry space because of :

• Highly Creative & Motivated Team:

Teams of highly talented individuals make the most creative solution to clients' problems and resolve it in the most timely manner.

• Understanding Business Needs:

Always keep on researching on the trending global technological needs which prepares

• Quality & Secure Adherence:

Quality and security are the two most crucial factors during all phases of development which the company maintain with Japanese standard.

• Result-Driven Approach:

All of the company's work are result driven and very less experimental. Always focus to reach the client's goal through fine-tuning of development phases.

• Co-Development Teams:

Wide variety of technology experts always helps the company to create multi-talented teams helping the clients to achieve their business goals

• Guaranteed Innovation:

DreamOnline always strives to achieve something new in all of its projects which helps to provide the most innovative solutions.

• DevOps Enablement:

DreamOnline always focuses on shortening the systems development life cycle and providing continuous delivery with high software quality.

• Integrity & Transparency:

The company is continuously working with reputed brands because of their standards for integrity & transparency.

• In-Depth Domain Knowledge:

In Every single technology or platform DreamOnline work with, they have specialist members contributing to the depth of their knowledge to create perfection. the company to understand business needs.

DreamOnline Limited consistently strives for success through exemplary work and significant contributions. Teams of highly skilled engineers give their best to create an impactful and impressive product. As one of the advanced IT outsourcing companies, DreamOnline Limited always stays on schedule, scales the teams, and ensures product quality.

2.2 History

The company was founded in 2019 and currently, there are more than 60 employees in the company. DreamOnline Limited is located in Baridhara, Dhaka, Bangladesh. The mother company of DreamOnline Limited is DreamOnline Incorporation which is located in Japan. DreamOnline Incorporation mainly handles all the company's business and sales parts, and DreamOnline Limited handles the product development parts.

2.3 Mission

DreamOnline Limited is a software mobile app development company that focuses on AR/VR, IoT, AI/ML, Web Windows Systems, Android iOS, and other emerging technologies. The company uses an agile project management methodology, which lowers development costs and aids in deadline compliance. Excellent product quality is ensured by a committed QA staff. The majority of the business and sales operations are managed by DreamOnline Incorporation, while the product development operations are managed by DreamOnline Limited.

2.4 Vision

The core problem business people usually face is creating a system in the form of an application that can help them to automate the process of handling data and create a sustainable business operation process. From the very beginning, DreamOnline Limited focuses on solving business problems by providing quality service to its clients. To main mission of DreamOnline Limited is to

- Reduce customer effort to the absolute minimum while increasing service value.
- Provide the best possible service to clients
- Quality over quantity.
- Provide a great experience to its users

The goal of DreamOnline Limited is to deliver superior services with minimal credit, which entails maximizing the service while minimizing the credit. It aspires to lead the field in terms of software companies. To provide great service, the company has a team of highly experienced and skilled professionals.

2.5 Location

Currently, the company has the following branches:

Tokyo Office

Taiyo Seimei Shinagawa Building 28F, 2-16-2 Konan, Minato-ku, Tokyo 108-0075, Japan.

Hiroshima Office

Miura Building 5-6F 2-22 Nakajima City, Naka-ku, Hiroshima, Japan

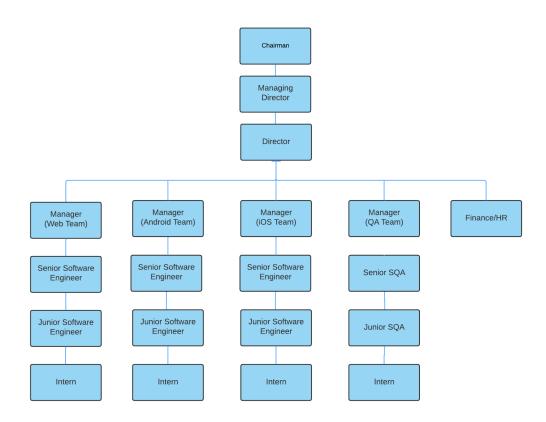
Dhaka Office

House #1, Road #2/E, Block - J,

Baridhara, Dhaka 1212 Contact: +8802-48810931

Email: sales-bd@dreamonline.co.jp

2.6 Organogram



The company's top executives, the Chairman and Director, are both from Japan. To oversee all of DreamOnline Limited's activity in Bangladesh, a Managing Director has been designated. DreamOnline Limited consists of primarily four teams. One each for the web, Android, iOS, and quality assurance (QA). A manager oversees each of the squads. Senior engineers, young engineers, and interns all work under them.

2.7 Tools and Technologies

The company works with a wide range of tools and technologies. It enables them to serve a variety of clients. So the tools and technologies that are used by the company are

• Programming Languages:

Java, C, Python, C++, C, Visual Basic, Javascript, PHP, SQL, Ruby, Objective-C, Swift, Kotlin, HTML, VBA, Dart, Go, TypeScript

• Cross Platform:

Flutter, React Native, Unity, Xamarin, Node.js, PhoneGap, Ionic

• Database:

Oracle, MySQL, Microsoft SQL Server, PostgreSQL, MongoDB, SQLite, Microsoft Access, MariaDB, Amazon, DynamoDB, FileMaker

• Cloud Service:

AWS, Microsoft Azure, Google Cloud

Although the organization is relatively new, its excellent work has already demonstrated its value. They work in many different industries.

- Manufacturing
- Banking
- Healthcare
- Information Technology
- Retail
- Telecommunication
- Logistics & Transportation
- Insurance
- Public Service
- And Many More

2.8 Products & Clients

Several well-known brands can be found in DreamOnline's client list. Because DreamOnline Limited is committed to giving its customers the greatest technological solutions for their issues, customers have confidence in the company. Some of the clients of DreamOnline Limited are

- CocaCola
- Canon
- Sony

- SoftBank
- NTT Docomo
- Rakuten Communications

As the company works with a variety of tools and technologies, they have products that cover a wide range of industries and technologies. Some of their works are mentioned below

• Construction Site App

Reduce on-site mistakes and the number of workers. Reads the QR code attached to the pile with a Bluetooth scanner and You can check if the pile is correct in the app.

• Fracora

Live a healthy and smart life with the healing alpaca. This is the official shopping app for health foods, diets, and cosmetics online shopping site: fracora.com. You can collect Hula coins that can be used on online shopping sites just by using them. You can enjoy popular columns and videos about beauty and health in the app.

• Kirin Nama-Cha AR

Take pictures with cute Sanrio characters. It will be an AR campaign site for Kirin Beverage's Nama-cha. After entering the serial code and getting the character, With Sanrio characters with an AR decoration camera, you can take a picture.

• Signadia

For the first time as an STB for digital signage Supports Michibiki's disaster/crisis management reporting service. You can connect to the display just by connecting the HDMI cable. By using a smartphone-type operation terminal, You can easily replace the content without asking a specialist.

• Museum Application

Baseball Hall of Fame Museum Official Application. You can see not only information but also photos and videos that can only be seen here. The camera function, which can only be used inside the museum, allows you to watch videos and photos of people who have entered the Baseball Hall of Fame by holding it over the exhibit.

• Diet Management Application

A diet menu that suits you. This is a dedicated app for purchasers of the Tokyu Sports Oasis diet program Shape Navi Plus. You can manage your eating habits just by taking a picture of the meal of the day and posting it. The change in weight is also recorded firmly, and the trainer gives feedback on the record.

• Wearable Application

It is a wellness-creating app. When exercising, JISSBAND uses a wrist-worn gadget to measure physical data like heart rate and track sleep information. It supports healthy bodybuilding and can be compared to historical information.

• NFC Enabled Application

Secures your device against harmful outsiders. It is equipped with an NFC security feature (Near Field Communication). By placing the registered IC card on top of it, you can unlock it. A mode exists where you can capture the picture of the person who is trying to unlock the device.

• An AI based Music Application

It is a music application that can play high-definition audio files. Additionally, you can download and play the music that you've bought from online music stores using NePLAYER. It is equipped with a high-resolution visualizer that gives you a unique opportunity to see how high-resolution audio sources are playing back.

• eBiddaloy

Ebiddaloy is an innovative digital learning platform that connects teachers and students, creating a vibrant online ecosystem for education. It features paid courses at various academic levels, an extensive course catalog, and secure payment options, revolutionizing the way we learn.

The company works on both in-house products as well as outsourced products. They have successfully developed many products with hundreds of daily active users. DreamOnline Limited possesses the experience and expertise to help businesses to reach their customers in all digital spaces.

Company Culture

The company believes in the fundamental idea that creative work requires a special kind of work culture. The company takes great initiative to create a work culture that attracts talented people and supports them in giving their best work. This culture is evident in everything from workplace structure to the development teams' guiding principles.

3.1 Company Working Environment & Protocols

Having a great culture in the workplace increases a person's productivity and helps him/her to achieve personal and professional goals. Some noteworthy workplace cultures I encountered in DreamOnline Limited are

• Helpful & Considerate

The company has an environment where employees can easily get help from their colleagues. Coworkers push each other to bring out the best in each. If you get stuck in some problems there will be someone who is ready to help you. Having such a positive workplace culture improves teamwork, raises morale, increases productivity and efficiency, and enhances retention of the workforce. At the same time, the company is very considerate of an employee's time and effort. They never push an employee to work overtime or extra hour. Being in a healthy mindset is the most important thing for being productive in the workplace.

• Comfortable Workplace

Comfortable workspaces with amenities and perks that people care about contribute significantly to morale levels. People have the flexibility to join the office from home or join the office physically. The on-site office has all the facilities that an employee needs to do his/her day-to-day tasks. Even in the online office, everything is very organized. We can communicate with anyone without any problems. Gossip or office politics have no place in a productive workplace. Even if this occasionally occurs in group settings, it ought to be the exception rather than the rule.

• Effective communication

Communication is the most important thing when it comes to working in a team. A culture of fear and uncertainty is cultivated by secrecy or a lack of communication from the top to down. By having effective communication we can avoid information overload and cut down on unnecessary things that are not relevant to work. DreamOnline Limited put a strong emphasis on creating an effective communicative environment in the workplace. Co-workers can easily communicate with each other whether they are working in a physical office or in a home office. In the company, regular audits are conducted to assess how individuals are interacting with one another, input is accepted and considered, and possibilities for social connection are made possible by open and honest communication.

• Supportive Environment

The most important thing I like about working in this company is they really appreciate your hard work, efforts, and time. In my opinion, a good work environment is one where all employees—regardless of their gender, sexual orientation, or skin color—are valued, encouraged, and fostered. All employees ought to enjoy equal access to all benefits and rewards offered, as well as equal opportunities to advance.

• Enjoyable Work Culture

As an appreciation for the employee's hard work, the company regularly arranges events and parties for them. All wins like launching a mobile app or releasing a product are celebrated. These types of things motivate employees to work even harder and deliver amazing results. By doing these, employees get to know each other more and as a result, it creates a healthy and friendly environment in the workplace

• Constructive Feedback

The success of a team depends on feedback. DreamOnline Limited does not hide the truth when providing feedback out of concern for a disagreement. Regularly giving honest comments will help the team improve. The best strategy is to start frequent feedback sessions. All team members can provide genuine feedback on the performance of the team during these meetings.

3.2 Events

• Meetings

Every morning I had to join the morning scrum meeting where I have to tell the team what I did the previous day and what I am going to do today. Additionally, I joined the afternoon feedback sessions to discuss the progress of our daily work. Usually, we have our team meeting 2 to 3 times every week where we discussed the progress of the project as well as the things we need to do to meet the deadlines. I also had to join a security meeting that generally happened in the 1st week of every month where my senior manager briefed all the employees about the security policies and rules and regulations of the company.

• Parties

During my stay in the company, there were three dinner parties, one lunch party, and one summer fruit festival. I joined most of them. By attending the party, I get to know a lot of amazing and talented people. It was such a great experience for me. People from different teams share their experiences of working with different tools and technologies and that really motivates me to learn even more.

• Tours

Sometimes a team or sometimes the whole office goes on a trip together so that they can get rid of stressful work and enjoy life. This helps in team bonding as well as makes people more motivated to do their work.

3.3 Performance Rewards

The company values the people who have a great impact on the company. As an appreciation for their hard work, the company rewards those employees and promotes them. Every year some employees get the Employee of the Year award for their amazing work. This type of culture not only motivates those employees who got rewards but also others to push their limits and become more skilled. Even when a person works overtime or on weekends, they get extra benefits from the company.

3.4 Internee Policy

As an intern, I was also treated as a regular employee. They always valued my opinions and gave feedback about my work. I had to attend all the official meetings. Generally, the company assigns a mentor to the intern and gives them enough time to learn about the codebase and necessary technologies.

Usually, when an intern joined the company, they give priority to what technologies the intern want's to work with. The company's policy about interns is they don't hire fresh graduates directly. They first offer internships to potential candidates and if they perform well during the internship, they get the offer to join the company as full-time employees.

The company follows a guideline for new interns. The interns have to follow this guideline and abide by the rules and regulations of the company.

- All interns will be assigned to a team first
- Interns going to report to his/her immediate supervisor
- The company allocated a learning phase for new interns before assigning them new tasks. They can take help from their respective team members.
- The company can assign the intern to a different team if required. Interns also get the choice to choose their preferable technologies.
- Interns will get a full-time employment offer if they do well during the internship

Company Workflow

One of the leading providers of IT outsourcing services is DreamOnline Limited. They have clients from all over the world. The company also has some in-house products which serve a huge number of users. They follow agile methodologies while developing the products. A team of highly skilled engineers who have expertise in their respective fields continuously works to meet the client's requirements and deliver an impressive product.

4.1 Services provided by the Company

The company's offshore software development services are geared to deliver results that are expected from a Japanese IT outsourcing company. DreamOnline Limited offers clients a final product that will aid in the expansion of their company in addition to software development and maintenance services. The services that the company provides are

• Mobile Application Development

DreamOnline has extensive experience in creating mobile apps and has developed over 800 apps to date. They have developed apps across multiple industries and technologies, including AR/VR/AI/ML.

• Web Application Development

Dedicated web application development team of experts brings in over 10 years of domain experience. They have developed a wide range of products for various industries. They have already established their name as a leading software company for developing great web services.

• Windows/Linux/Mac Application Development

DreamOnline has developed a variety of platforms using Win / Mac / Linux based on different clients' business needs and providing innovative solutions to their problems.

• AR/VR Applications

The company already developed a good number of applications using AR/VR technologies. They support a wide range of systems from on-site systems to game systems used at events.

• IoT Applications

DreamOnline developed desktop apps and smartphone apps that work with hardware devices. They have some impressive IoT applications that solve a lot of common problems.

• ML/AI Applications

The company also has expertise in developing $\rm ML/AR$ applications. The company mainly develops its apps using Apple's Core ML and Google's ML Kit.

Multiple products using different tools and technologies are developing simultaneously. The company follows both teams oriented as well as project-oriented approaches while developing its products depending on the requirements.

Learning & Achievements

5.1 Technical Learning

As I mainly worked as a full-stack engineer, the tools and languages I learned and used are primarily both frontend & backend focused.

• JavaScript:

JavaScript is a lightweight, interpreted, and promise-based language. It is also called the language of the web. Project that I have worked on use JavaScript.

• React JS:

React is a JavaScript library that is used to build user interfaces. It is kept up-to-date by Meta (previously Facebook) and a group of independent programmers and businesses.

• Ant Design:

Ant Design (AntD) is a popular and widely-used open-source design and development framework for building modern web applications and user interfaces. It is known for its comprehensive set of high-quality React UI components and design guidelines. I heavily used AntD Components while working on the in-house project.

• Tailwind CSS:

Tailwind CSS is a highly popular and utility-first CSS framework that simplifies web development by providing a set of pre-defined utility classes.

• Bootstrap:

It's a open-source front-end framework for web development. It provides a comprehensive set of pre-designed, responsive, and mobile-first CSS and JavaScript components, making it easier for developers to create attractive, consistent.

• Material UI:

Material-UI is a popular and highly customizable React component library that enables developers to create visually appealing, responsive, and user-friendly web applications.

• Express.js:

Express, is a flexible web application framework for Node.js, which is a server-side JavaScript runtime environment. It provides a set of features and tools that simplifies the creation of web applications and APIs.

• MySQL:

MySQL is an open-source relational database management system (RDBMS) that is widely used in web development, data storage. It is known for its speed, reliability, and ease of use, making it one of the most popular database systems in the world.

• Sequelize:

Sequelize is a Node.js Object-Relational Mapping (ORM) library that simplifies database interactions by allowing developers to work with relational databases using JavaScript. It provides model definitions, data validation, query building, and support for database migrations enhancing code readability and maintainability.

• Postman:

Postman is a popular collaboration platform for API development that simplifies the process of designing, testing, and documenting APIs.Before using the APIs on the client side, I had to test the APIs and if something goes wrong or if I find any issues, I reported those to the supervisor.

• Swagger:

Swagger is used to test the APIs that were provided by the backend team. I have documented the APIs used on the both client and admin site using Swagger.

• Backlog:

The company uses backlog for project management, bug, and issue tracking as well as for version control management. During my stay at the company, I thoroughly used this tool in my day-to-day work.

5.2 Soft skills learning

Working in the company not only made me a better developer but also helps me to grow as a better person.

• Collaborative/ Teamwork:

The most important thing I learned from this internship would be working in a team. Although in university I also worked in a team to develop many projects but working in the industry as a team is completely different from working on a university project. Like I worked as a full-stack developer in the team need to communicate with my team members while solving critical problems or implementing any new functionalities. All these things make me a better team player as a whole.

• Time Management:

The company is pretty strict about time management. The management encourages the employees to maintain time carefully. Like during our morning scrum meeting, we need to join the meeting at a specific time otherwise we are marked as absent. During the product release period, we sometimes had to work overtime and even had to work on weekends to meet the deadline.

• Critical Thinking:

I worked on a production-level application during my internship, so when I try to solve a particular problem in the project I need to solve it in the most efficient and

optimized way possible so that when a huge number of people come to the website, the website shouldn't face any kind of latency or performance issues. At the same time, my implementation should be reusable and easily understandable so that if I or my team members need to use the same implementation or functionality in any other place, they can easily use it without any issues. I believe solving a lot of real-life business problems makes me a better developer than I was before.

• Problem Solving:

As a result of my internship experience working on a production-level program, I need to handle each problem I have in the project in the most effective and efficient way I can to improve the user experience. Likewise, my implementation should be reusable and simple to comprehend so that if I or my team members need to use the same implementation or feature somewhere else, they can do so without any problems. I consider myself a better developer now than I ever was before because I've dealt with many actual business logics

• Accountability:

If I implement a functionality or develop a UI and if it breaks or something goes wrong in production, then it's my responsibility to come forward, accept my mistake, and solve that mistake. I just can't push the mistake to my superiors or other team members to solve this for me. I think it makes me more accountable for my work at the same time makes me diligent in my work.

• Patience:

Throughout my internship journey, I have had to spend a huge amount of time for solving business problems in the most optimal way possible as well as solving lots of bugs and issues. And of course, the process wasn't easy. In order to find a solution, I had to cope with a lot of challenges and impediments. This process taught me that the most important person you'll ever have to be patient with is you.

5.3 Additional Learning

During my time working on various projects, I was fortunate to have a mentor who encouraged me to expand my knowledge beyond the specific technologies used in those projects. This additional learning broadened my skills as a software developer and allowed me to contribute more effectively to the team. Below are some of the key areas I delved into:

• Database Maintenance:

Efficient database maintenance is a crucial practice before deploying new features. I undertook the task of creating a procedure to check whether a specific SQL query had already been executed in the project. This not only improved the stability of our applications but also enhanced my understanding of database management.

• Nginx:

Nginx, as an open-source web server software, plays a vital role as a reverse proxy and HTTP load balancer. In the eBiddaloy project, Nginx was used as a web server. While I didn't have hands-on experience with Nginx, I took the time to study how it functions and its significance in our project's architecture.

• Deploying React App:

I conducted research on deploying React applications on the AWS platform. Deploying a React app on AWS is a substantial task, requiring meticulous planning and execution to ensure accessibility, security, and optimal performance for end-users.

• Issue Resolution Process:

Beyond technical skills, I learned how to handle bugs and issues effectively by maintaining a structured chain of order. This included proper communication and collaboration with colleagues and supervisors to prioritize and address problems promptly.

Team Involvement

Role: Full-Stack Developer

In the internship my role was full-stack developer. So I worked with the web development team. The web development team consisted of 10 engineers. 3 engineers from the frontend team, 3 engineers from the backend team, 2 engineers from the design team and 2 team leader. I worked as a full-stack developer on the following project.

• Employee Management project

I spent most of my time working on this project. This is a in-house application and you can access the website from this link: *Portal*. This project is available on web platforms. This application have two user bases, one is employee and the other is admin. I worked in the web team of two member as a full stack developer for implementing the features of both employee and admin site.

The company usually asked the interns about tools and technologies they preferred to work with. Because I already had experience working with Javascript, they told me to build the application with Javascript-based frameworks.

6.1 Overview of the team

Our team consists of two people. And we both worked as full stack developer and we were assigned to supervisor, Mr. Fojle Rabbi.

6.2 My Influence as an Intern

Although I was an intern at DreamOnline Limited, the company always treated me like a full-time employee. They always respected my opinions, wanted to hear what I want to say, and provide me with constructive criticism about my work. As a member of the team, I always had to fulfill several responsibilities -

- Solve my assigned tasks.
- Give feedbacks to my team members' work
- Review UI and Ux
- Report any issue and bug that I can find in the project
- Join all team meetings and discussions on time

6.3 My contributions in Employee Management Project

• Implement Features and Functionalities

So basically the project has two modules. One for employees of the office and one for admin. During my stay in the company, I and my team member fully developed all the UIs and implemented all functionalities of both employee and admin module including authentication and authorization.

• Example of My Work

Some of the functionalities I developed include:

- Developing a responsive user interface (UI) tailored for employees, ensuring a seamless user experience.
- Implementing CRUD (Create, Read, Update, Delete) operations for administrative tasks, such as adding and deactivating employee accounts, as well as sending notification messages to employees.
- Creating a feature for uploading holiday data in CSV format and efficiently storing this information within the database.
- Enhancing the meal ordering process through the implementation of CRUD operations, improving the overall experience for employees.
- Enabling the upload of confidential files and images for managing employee profiles, ensuring data security and accessibility.
- Implementing push notifications, providing real-time updates and communication within the system.
- Developing robust authentication and authorization mechanisms, ensuring secure access for both employees and administrators.
- Enabling a browser notification feature, allowing the system to send web push notifications to employees for important updates.
- Implementing a search API for streamlined data retrieval, enhancing the user experience by making data easily accessible.
- Implementing pagination to balance fetch load and optimize the retrieval of large datasets.
- Incorporating admin controls to manage and oversee system operations effectively.
- Setting up email notifications to keep users informed and engaged with the platform.
- And many more enhancements and features that contributed to the overall success of the projects.

• Bug and Issue Fixing

I solved a lot of bugs and issues that were encountered by my team leader, and supervisor. During this, I faced a lot of hurdles. But solving these bugs and issues makes me more confident as a developer.

• Review UI/UX

I need to constantly review UIs and functionalities that my other team member developed. If issues were found, I need to inform them about those issues as well as give them feedback about their work.

• Support Team Members

I also help my team to solve some of the issues and bugs they were facing. At the same time provide feedback on their work.

• Research and Development

For implementing some of the functionalities, I had to go through a research and development process. For example, at a point, I need to implement a browser notification feature in the project. But I had no idea how to implement it. For this reason, I had to learn about web push notification system and search some third party libraries for implementing it.

The majority of my time has been spent on building this project. I learned a lot of things working on a production-level application. Solving a lot of real-life business problems helps me to expand my knowledge and strengthen my front-end skills.

6.3.1 Used Technologies

For the frontend development I have used :

- React JS
- Ant Design
- Tailwind CSS
- Bootstrap
- Material UI

For the backend development I have used:

- Express JS
- Node JS
- MySQL
- Sequelize

and For API testing and documentation, I have used:

- Swagger
- Postman

Lastly, for version control I have used:

• Backlog

Project Link: Portal

6.4 Achievements

During my tenure at the company, I dedicated myself to a pivotal project, consistently delivering high-quality work. Through my hard work, dedication, and skills, I have earned the privilege of an open invitation from the company to rejoin its ranks after my graduation. This gesture underscores the recognition of my contributions and the trust the company places in my abilities. I am deeply honored by this offer and look forward to the possibility of rejoining the organization in the future, contributing to its ongoing success.

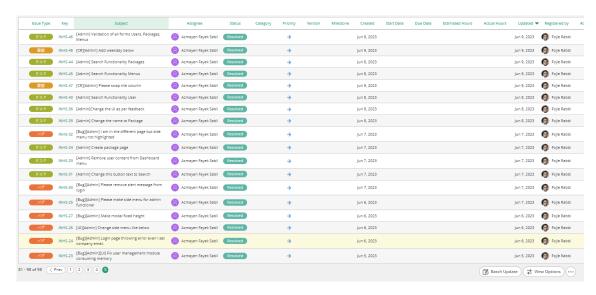
6.5 Potential Work Opportunity

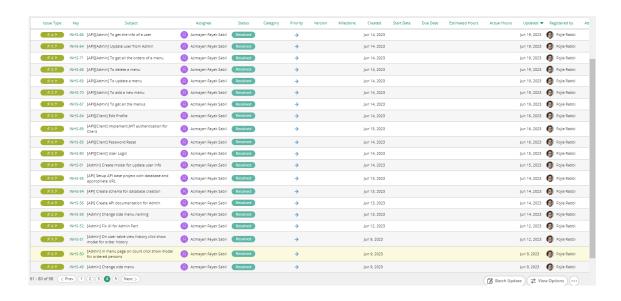
Owing to my relentless commitment and unwavering dedication, the company has expressed a genuine interest in maintaining an open opportunity for my potential association with them after my graduation. This gesture signifies the recognition of my contributions during my internship at DreamOnline Limited and I strongly believe that this potential opportunity would be a great addition in the next phase of my career.

Activity Log (Backlog)

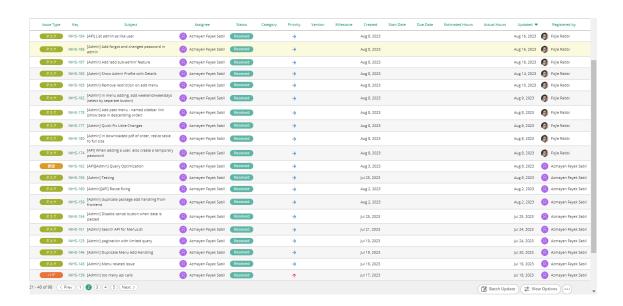
7.6 Backlog Issue Tracking

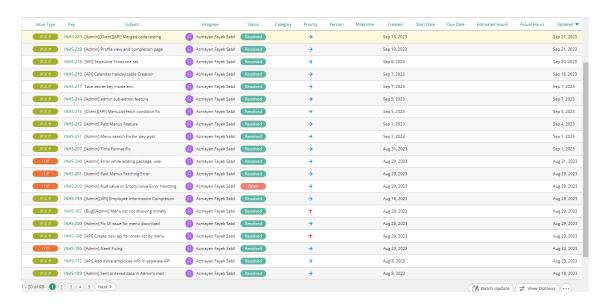
In the following section, I have given the list of assigned tasks during the four-month internship:





Issue Type	Key	Subject	Assignee	Status	Category	Priority	Version	Milestone	Created	Start Date	Due Date	Estimated Hours	Actual Hours	Updated ▼		Registered b
タスク	INHS-131	[Admin] Can set lunch breakfast ending time (Admin side)	Azmayen Fayek Sabil	Resolved		→			Jul 11, 2023		Jul 12, 2023 🤚			Jul 14, 2023	⊕ Fo	ojie Rabbi
タスク	INHS-130	[Admin] Time/Date validation fix on Admin side While creating menu	Azmayen Fayek Sabil	Resolved		→			Jul 11, 2023		Jul 12, 2023 👌			Jul 12, 2023	6 Fo	ojle Rabbi
タスク	INHS-125	[Admin] Soft deletion on order table	Azmayen Fayek Sabii	Resolved		→			Jul 10, 2023					Jul 10, 2023	Mc Mc	d Muktadir I
ダスク	INHS-122	! [Admin] Disable the menu edit option	Azmayen Fayek Sabil	Resolved		→			Jul 10, 2023					Jul 10, 2023	Az-	zmayen Faye
タスク	INHS-121	[Admin] implement the download functionality for PDF.	Azmayen Fayek Sabil	Resolved		→			Jul 6, 2023		Jul 7, 2023 🤚			Jul 6, 2023	6 Fo	ojle Rabbi
要望	INHS-120	[Admin] Please add the following things in menu list orders	Azmayen Fayek Sabil	Resolved		\rightarrow			Jul 6, 2023		Jul 6, 2023 🤚			Jul 6, 2023	⊚ Fo	ojle Rabbi
要望	INHS-119	[Admin] Make menu listing order by date desc	Azmayen Fayek Sabil	Resolved		→			Jul 6, 2023		Jul 6, 2023 🤚			Jul 6, 2023	⊚ Fo	ojle Rabbi
タスク	INHS-118	[Admin] Change password shouldn't work for Inactive user	Azmayen Fayek Sabil	Resolved		→			Jul 5, 2023		Jul 5, 2023 🤚			Jul 6, 2023	6 Fo	ojie Rabbi
パゲ	INHS-113	[Admin] In menu, add new menu modal should be cleared and calendar shouldn't be selected when edit	Azmayen Fayek Sabil	Resolved		→			Jul 5, 2023					Jul 5, 2023	⊝ Fo	ojle Rabbi
RH	INHS-112	[Admin] Package menu delete/edit not working for newly created item	Azmayen Fayek Sabil	Resolved		→			Jul 5, 2023					Jul 5, 2023	€ Fo	ojle Rabbi
タスク	INHS-108	[Admin] When count is 0 in menu, modal shouldn't show	Azmayen Fayek Sabil	Resolved		→			Jul 4, 2023		Jul 4, 2023 🤚			Jul 4, 2023	() Fe	ojle Rabbi
パグ	INHS-107	, [Admin] When editing menu, count field should be disabled	Azmayen Fayek Sabii	Resolved		→			Jul 4, 2023		Jul 4, 2023 🖔			Jul 4, 2023	6 Fo	ojie Rabbi
タスク	INHS-101	[Admin][Func] Implement functionality for users	Azmayen Fayek Sabil	Resolved		→			Jun 21, 2023		Jun 21, 2023 🤚			Jun 23, 2023	⊚ Fe	ojle Rabbi
タスク	INHS-102	[Admin][Func] Implement functionality for packages	Azmayen Fayek Sabil	Resolved		→			Jun 21, 2023		Jun 22, 2023 🤚			Jun 23, 2023	⊚ Fo	ojle Rabbi
タスク	INHS-103	[Admin][Func] Implement functionality for menus	Azmayen Fayek Sabil	Resolved		→			Jun 21, 2023		Jun 23, 2023 🤚			Jun 23, 2023	⊚ Foj	ijle Rabbi
タスク	INHS-93	[Admin][Func] Implement login api and functionality	Azmayen Fayek Sabil	Resolved		→			Jun 20, 2023					Jun 21, 2023	⊚ Foj	ijle Rabbi
タスク	INHS-96	[Admin][Func] Implement the functionality for login	Azmayen Fayek Sabil	Resolved		→			Jun 21, 2023		Jun 21, 2023 🤚			Jun 21, 2023	⊚ Foj	ijle Rabbi
タスク	INHS-91	[Admin][API] Change auth criteria for Admin	Azmayen Fayek Sabil	Resolved		→			Jun 20, 2023		Jun 20, 2023 🤚			Jun 20, 2023	€ Fo	ojle Rabbi
タスク	INHS-72	[API][Admin] To delete a order from a menu	Azmayen Fayek Sabil	Resolved		→			Jun 14, 2023					Jun 20, 2023	⊕ Foj	ijle Rabbi
タスク	INHS-65	[API][Admin] To get the order history of a user	Azmayen Fayek Sabil	Resolved		→			Jun 14, 2023					Jun 19, 2023	€ Foj	oile Rabbi





Activity Log (Notion)

7.7 Notion Issue Tracking

In the following section, I have given my version of task tracking during the four-month internship:

Week-1

Day-1

- Initiated a Vue.js project.
- Set up the MySQL workbench and the development environment.
- Integrated a basic login and signup form into the Vue.js project.
- Progressed through the first and second tutorials of VueJS by net-ninja.
- Participated in a meeting with MD Zulfikar Ali.

Day-2

- Engaged in discussions with Kiran San, the team lead, as well as team supervisor, Masud San, and team members, Rabbi San and Mamun San.
- Focused on learning JavaScript ES6 basics, completing videos up to number 18.
- Continued Vue.js development, advancing to the third video.
- Familiarized myself with essential Visual Studio Code keyboard shortcuts.
- Provided updates during a team meeting.

Day-3

- \bullet Completed Sumit's JavaScript ES6 crash course, with the exception of videos 23 and 24
- Began a project involving HTML, CSS, and JavaScript, which remains in progress.
- Established initial connections with fellow developers.
- Enjoyed a communal lunch.

Day-4

- Attended a team meeting to report progress.
- Finished the project initiated on the previous day.
- Decided to shift focus from learning MySQL Workbench to learning XAMPP.

- Successfully implemented CRUD operations using PHP and MySQL.
- Enrolled in a Udemy project assigned by Mamun San.

Day-5

- Embarked on a project to replicate the frontend of Facebook using HTML, CSS, and Bootstrap.
- Engaged in a productive conversation with my supervisor, Rabbi San, and Tarun San
- \bullet Initiated learning responsive design from FreeCodeCamp on YouTube, pausing at the 48:12 mark.
- Transitioned from CSS to SCSS/Sass.
- Listened to senior colleagues share their insights on technology through the years.
- Launched my learning journey into SCSS/Sass.

Week-2

Day-1

- Progressed in converting CSS to SCSS.
- Focused on responsive design (FreeCodeCamp, 1:02).
- Successfully achieved responsive design for the Facebook login page, covering various device sizes.
- Acquired a project involving the Breakfast Lunch Management System for DreamOnline Limited.
- Engaged in learning React state management through FreeCodeCamp (21:42).

Day-2

- Established the server-side using Node, Express, and Sequelize.
- Alternated between backend setup and frontend mockup development.
- Commenced the design of the admin dashboard and identified a sidebar library.
- Received valuable advice during the meeting with Masud San, emphasizing frontend tasks, particularly login and sign-in.

Day-3

- Under the guidance of Rabbi San, I was introduced to the backlog system at DreamOnline Limited.
- Initiated work on the admin section of the Breakfast Lunch Management System.
- Received a ticket/issue assignment and promptly made my first pull request.
- Utilized MUI and Ant Design to design the sidebar, which was successfully completed.

Day-4

- Addressed other tickets, focusing on features like filtering and user list management.
- Successfully closed several tickets, leaving only two remaining for the next day.

Day-5

- Experienced a challenging day with frontend design.
- Dealt with numerous requirements and challenges in the ongoing project.

Week-3

Day-1 (Home Office)

- Completed remaining tickets.
- Resolved bugs.
- Participated in a team meeting.

Day-2 (Home Office)

- Wrapped up any pending tickets.
- Fine-tuned the user interface.
- Joined the team meeting.

Day-3

- Finished the remaining tickets.
- Improved the user interface.
- Continued the JavaScript Udemy course.

Day-4

- Made further progress on ticket completion.
- The project advanced smoothly.
- Continued with the JavaScript Udemy course.

Day-5

- Approaching the end of frontend development.
- Completed the remaining tickets.

Week-4

Day-1

- Participated in the fruit festival.
- Enjoyed lunch at Sultans Dine.
- Continued frontend design work.
- Began the process of designing the database.

Day-2 (Home Office)

• Documented the API.

• Focused on frontend refinements.

Day-3 (Home Office)

- Addressed frontend bugs.
- Set up the API codebase.
- Fixed a specific bug.

Day-4

• Started working with the API and the database.

Day-5

- Celebrated one month at DreamOnline.
- Continued to work on API tickets.
- Successfully completed tasks thus far.

Week-5

Day-1

• Progressed with API coding for the admin and client.

Day-2 (Home Office)

• Completed my API tickets.

Day-3 (Home Office)

- Completed my API tickets.
- Started the integration process.

Day-4

• Continued with the integration.

Day-5

• Completed the integration and conducted testing.

Day-1 (26-06-23)

- Conducted admin, client, and API testing.
- Fixed discovered bugs.

Eid Vacation

Week-7

Day-1 (03-07-23)

• Worked on resolving a significant number of bugs.

Day-2

• Continued to address and fix bugs.

Day-3

• Focused on resolving bugs and issues.

Day-4

• Continued to tackle bugs and issues.

Day-5

• Mainly worked on resolving bugs and issues on the Meal Management Project.

Week-9

- Worked on an assigned task.
- Resolved assigned bugs.
- Attended morning and evening meetings.

Week-10

- Worked on a designated task.
- Successfully addressed and resolved assigned issues.
- Participated in morning and evening meetings.

Week-11

- Engaged with a fresh assignment for the day.
- Expertly resolved the assigned issues.
- Attended morning and evening meetings.

Week-12

- Dived into a new task assigned for the day.
- Efficiently resolved the day's designated issues.
- Participated in morning and evening meetings.

Week-13

- Concentrated on another task for the day.
- Skillfully tackled and resolved the assigned bugs.
- Attended morning and evening meetings.

Week-14

- Started work on a task scheduled for the day.
- Addressed and resolved the day's designated issues.
- Participated in morning and evening meetings.

Week-15

- Embarked on a different task allocated for the day.
- Efficiently resolved the designated issues.

• Attended morning and evening meetings.

Week-16

- Commenced work on another task assigned for the day.
- \bullet Skillfully resolved the designated bugs.
- Participated in morning and evening meetings.

This concludes the documentation of my activities for the first 16 weeks of my internship.

Conclusion

The internship at DreamOnline Limited was my first experience working in a software company. It gave me everything an engineering graduate student could ask for. I collaborated extensively with management, field engineers, scrum team members, and software developers. This gave me the opportunity to develop not only my teamwork abilities but also my interpersonal and collaborative skills.

Amongst other tasks, I was totally responsible for the development of the software throughout the cycle. As a result, I was highly particular and detail-oriented about everything. By doing this internship I get to know how a product is built, the allocation of work as well as the time and budget concerns of a project. Before my internship, I always believed that software engineering is all about coding, but now this belief of mine is broken. There is a lot of thinking going on before building software and solving a problem in software engineering.

From a technical point of view, I worked with various tools and technologies in this internship. This internship was incredibly beneficial for me because it has given me the opportunity to learn about new working cultures and advance my technical skills. I solved a lot of real-life business problems during my internship. Definitely, the road wasn't easy. I faced plenty of challenges and limitations but I was able to overcome all the hurdles.

As an intern, it was a great experience working at DreamOnline Limited. I am grateful to the Department of Computer Science and Engineering of Islamic University Technology (IUT) for this experience. Because of this experience, I am able to link my academic and professional development and gain an understanding of the significance of the university courses we all took. I also came to understand my weaknesses and the areas I'll be focusing on to improve as a person and a software developer.

I am satisfied with the work accomplished and the impact made at DreamOnline Limited. I'm confident that this internship is a crucial milestone in the development of my career in the profession.

References

- [1] DreamOnline Bangladesh. https://dreamonline.com.bd/
- $[2] \ Dream Online \ Japan. \ \texttt{https://www.dreamonline.co.jp/en/index.html}$