

# Shahjalal University of Science & Technology, Sylhet

# Report on Internship

COURSE CODE: SWE420

# At Brain Station 23 Limited

# Submitted by

Dipankar Bala Reg.no : 2017831047 Dept. of Software Engineering, IICT,SUST

# Submitted To

Prof M. Jahirul Islam, PhD., PEng Director Dept. of Software Engineering, IICT,SUST.

## Letter of Transmittal

Date: 16 July, 2022

Prof M. Jahirul Islam, PhD., PEng

Director.

Institute of Information and Communication Technology

Shahjalal University of Science and Technology, Sylhet

Subject: Letter of Transmittal

Dear Sir,

I am pleased to submit the Internship Report that you had asked. I have been working as an Intern at 'Brain Station 23 Limited.' on 4/1 semester as a part of our course, SWE 420.

This report contains my experience in the company. It is my immense pleasure in presenting you this report based on my observation and experience during my internship period, starting from September 01, 2021, to February 28, 2021. During this period, I worked under the supervision of Md. Rezve Hasan ,Project Manager, Development, and Md. Anjarul Islam, Software Engineer, at Brain Station 23 Limited.

I hope that the report will reflect my learning during the internship program and you will find it in order.

Sincerely yours,

Dipankar Bala

 $Reg\ No:\ 2017831047$ 

Batch: 2017-2018

Institute of Information and Communication Technology

Shahjalal University of Science and Technology, Sylhet

## Letter of Endorsement

To Whom It May Concern

Subject: Approval of the Report

This letter is to certify that, all the information mentioned in this document is true and not confidential to the company. The projects mentioned here have had successful involvement of Dipankar Bala, Institute of Information and Communication Technology, Shahjalal University of Science and Technology, Sylhet.

I wish 'Brain Station 23 Limited' all the best and hope that it will lead a successful career.

Internship Supervisors,

Shaishab Roy SBU Head Brain Station 23 Limited

Rezve Horav Md. Rezve Hasan Project Manager Brain Station 23 Limited

Md. Anjarul Islam, Software Engineer Brain Station 23 Limited

Anjarul

# Acknowledgment

First of all, I would like to thank my Institute, Institute of Information and Communication Technology, for arranging the internship program for me. I am also grateful to Brain Station 23 Limited for recruiting me as an intern.

I take this opportunity to express my profound gratitude and deep regard to my Md. Rezve Hasan, Project Manager and Md. Anjarul Islam, Software Engineer for their exemplary guidance, monitoring, and constant encouragement throughout this internship program. The blessing, help, and guidance given by them from time to time shall carry me a long way in the journey of life on which I am about to embark.

I would like to express my heartfelt gratitude to Prof M. Jahirul Islam, PhD., PEng, Director, Institute of Information and Communication Technology, Shahjalal University of Science and Technology for his kind support and inspiration which has immensely strengthened my confidence during my internship program.

I am extremely grateful and remain indebted to CTO of Brain Station 23 Limited Mohammad Mizanur Rahman for being a source of inspiration and for his constant support in the internship.

I am obliged to all my Team members, for the valuable information provided by them in their respective fields. I am grateful for their cooperation during the period of my internship.

I'm thankful to them for their continual constructive criticism and invaluable suggestions and help, which benefited me a lot at my internship.

# **Executive Summary**

The internship report highlights the major works carried out by the author in terms of academic and non-academic perspectives. The scope of this document is to identify and describe the analysis carried out, projects completed, experience gained, and focuses on the achievements as an intern.

The author was sent to Brain Station 23 Limited to complete his internship. The author found himself rather lucky by getting the chance to work in such an environment that Brain Station 23 provided and got introduced to some of the new terms, new Technologies, and new Languages. But the most amazing experience was to work in a multicultural work environment.

The projects that the author worked in certainly helped him by increasing his practical knowledge depth. The research and development projects were particularly helpful in widening his views regarding different web application development frameworks.

Keeping the coding apart, there were also a few more challenges. Some of them were technical and some were non-technical. Coming almost at the end of his internship, the author discovered that some of his communicative and management skills have been improved to a great extent. Besides, there were some vital lessons which will help him in his future jobs.

After the internship, the author is more confident, more skilled, and more professional than he was before.

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## 1 Introduction

#### 1.1 Preface

Internship is the process of on-the-job training, which particularly beneficial for students with major in technical courses.

Institute of Information and Communication Technology (IICT) provides that glorious opportunity to their students of having an internship within their bachelor program. The main goal of this institute is to provide more skillful people in our emerging software industry. It also emphasize on industry orientation in academic study. For these purpose industry people are invited to take sessions about their experiences and often conduct the technical courses. Moreover, various competitions is arranged for show-casing the student's projects with good potentials and make a industry-academia collaboration.

The six month internship program is another, possibly most effective, way of achieving industry orientation. Internship helps the students to link-up their academic experience with industry practices. I have tried my best to combine the both together and confident enough to get prepared for my future carrier.

The company I was sent for internship is **Brain Station 23 Limited**.It is one of the most successful and leading technological Software Company in Bangladesh.

#### 1.2 Objective

This report has been prepared as a requirement of the internship program according to the curriculum of department of **Software Engineering**, **IICT**. The report is intended to reflect my achievements, project involvements and professional growth during the internship period.

## 1.3 Scope of the report

In general, the scope of an entity refers to the extent to which the areas or subject matters will be covered by that entity. The main points of the scope of this report are the followings:

- ➤ Discussing company profile based on my personal observation and the company website and other sources provided to me by Brain Station 23.
- The confidential information of the company and the projects are left out
- ➤ My interview and training process
- ➤ Description of the technical tools I was involved in
- ➤ Being involved in a real-world project

## 1.4 Methodology

I have presented different kinds of information in this report which I gathered during internship period. All the information has been collected from different kinds of written document from Internet or another person.

The technical and theoretical information provided in this report is of two types of sources. The primary source is my firsthand experience in interacting with the company culture and work jargon. I have tried my level best to put an unbiased and objective opinion about Brain Station 23. The secondary data sources include the official Brain Station 23 website, official Facebook page and another related website, Brain Station 23 introductory powerpoint presentation, the terms and conditions letter.

The external information that is included in this report is linked with the reference section for proof of its authenticity. Also, the last access time is provided for alleviating any probable confusion. All these are maintained keeping in mind the company privacy policy.

#### 1.5 Limitations

Because of the **non disclosure agreement** or **NDA** between the author and the company, some information, such as, project details, business logic and motivations is restricted to be published.

# 2 Company Profile

This chapter will introduce the company I completed my internship program in, Brain station 23.It will discuss its history, vision-mission, its provided services, policies, and other fundamental aspects. Throughout, I have tugged in my own personal experience whenever it's relevant.

#### 2.1 Introduction

Brain Station 23 pride on being one of the top IT giants in the industry. By implementing the latest and the most innovative technologies, they work on challenging projects to offer comprehensive solutions meeting every last need of their clients. Their motto is "Talent @ your service-Technologies could transform your business and the world. Let's work together to make sure it happens." Brain Station 23 provide unique and customized solutions covering both web and mobile based arena with MNCs and SMEs located in the Netherlands, Denmark, Switzerland, Canada, UK, USA, Israel, and the Middle East countries all along started operating for the local clients from 2012. Their twelve-years track record includes working with startups as well as with large corporations both locally and globally.

## 2.2 Mission

To Create Success Happiness for Customers Employees by Increasing Efficiency Profitability for the Company.

## 2.3 Vision

Brain Station 23 started with a vision to "Serve our Country by Creating Employment for Talented Citizens while Contributing to Foreign Remittance throughout the Course".

## 2.4 The Naming

On a note on the naming, rain Station 23 says that they are the "top Brains in Asia located in Dhaka" (Latitude of Dhaka is 23).

#### 2.5 Location

The main office in Bangladesh is at Plot2, Amtoli, Bir Uttam AK Khandakar Road Mohakhali Commercial Area, Dhaka-1212. The main office is presided over the 5th, 6th, 7th and 8th floor of the building. Where 5th floor holds a huge conference space. They also have a branch office on the 4th floor of the building located beside the main office building. They also have their office on an international level.

#### 2.6 Values

Transparency — Excellence — Passion — Ownership

## 2.7 History

Along with three partners who backed their individual successful startups, Brain Station 23 started its journey in 2006 under the leadership of the CEO, Raisul Kabir with a team of 4 people only. The dream was daunting as it was to make the largest software and IT company in Bangladesh. The company was initiated with outsourcing in the global market by 2010. It started working in the local software market as well. Since then, the company is only getting bigger. Over time the company has not only become a pride for the nation but also have achieved tremendous global responses from serving global organizations through outsourcing.

#### 2.8 Recruitment Process

Their hiring moto is: "We believe in talent nourishing rather than frequent hiring." After circulating a job post to meet the demand for a specific need of the company, BS 23 first shortlists from all the CVs. The selected candidates go through a standardized test and then an interview. For my case, we were entitled to a 2-hour text of 50% coding test without any IDE and 50% theory with multiple choice. There was an interview afterwards. We were given our email account, Skype account and a BS 23's own MS SharePoint system called "bs-portal" account access. Our project placement and supervisor assigning were done by the HR team.

## 2.9 Services

## Banking and Financial Solution

Customized software solutions tailored for the client's unique banking and financial business needs.

- ➤ Retail Internet Banking
- ➤ Corporate Internet Banking
- ➤ Mobile Internet Banking
- ➤ Card Services
- ➤ Extensive Customization
- ➤ FDI Automation
- ➤ Internet Banking System
- ➤ Cyber Security and Audit

- ➤ Banking Process Automation
- ➤ Banking CRM
- ➤ Cloud Services for Banking

## Mobile app development

Team Brain Station 23 provides the cutting-edge mobile app development service to diverse industries and clients including large scale organizations and startups.

- ➤ High-quality applications for a wide array of niche
- ➤ Attracting a larger user base increasing business impact
- ➤ High standard functionality features
- ➤ Enhancing visual appeal—rich user interface
- ➤ Cross-platform development for mobile apps
- ➤ Variety of app choices from native, web hybrid
- ➤ Complete operating system support
- ➤ Game Development (2D Game, 3D Game, AR/VR Game)

#### Adobe Experience Manager

AEM brings your content management system (CMS) digital asset management (DAM) in one place.

## Machine Learning (ML) Artificial Intelligence (AI)

BS 23 also provides Machine Learning and Artificial Intelligence solutions for their clients

- ➤ Customer/Human Behavior Analysis
- ➤ Process Automation
- ➤ Pattern Analysis
- ➤ Intelligent Chatbot
- ➤ Face Identification
- ➤ Fraudulent Identification (Bank)
- ➤ Data Analysis for Biological

- ➤ Macromolecular Structures,
- ➤ Predictive Analytics Modeling (Targeted Marketing, Churn Analysis, Trend Analysis, Time Series Analysis)

#### **Cloud Solutions**

BS 23 help large companies with enterprise-oriented certified cloud and cyber security solutions.

- ➤ Complete Cloud Support (AWS, Azure, Google)
- ➤ Billing in Local Currency
- ➤ Managed Services
- ➤ Operation, Optimization DevOps Support
- ➤ E-commerce Cloud Hosting Migration
- ➤ Enterprise IT Business Solutions for Cloud
- ➤ Mobile Cloud Services
- ➤ Cyber Monitoring and Consultancy
- ➤ Cyber Security Audit

#### Business Intelligence (BI) Solutions

Business Intelligence is a technology-driven process for analyzing data and presenting actionable information to help to make savvy business decisions. BS 23 helps to identify market trends and spot business problems that need to be addressed by implementing specific BI solutions their client's business needs to adopt.

- ➤ BI Dashboard
- ➤ Data collection, analysis—lineage tracking
- ➤ Data visualization through an interactive dashboard
- ➤ Predictive analysis (AI ML Integration)
- ➤ Data Consolidation
- ➤ Real-Time Reporting Tools
- ➤ Cloud Integration
- ➤ API Integration

#### Government

BS 23 hasbeen a reliable government partner for quality service and trustworthiness. They address IT and budgetary challenges government agencies face, as well as the need for digital transformation, optimized operations and upgraded infrastructure to support a more connected community.

- ➤ Integrated Solutions
- ➤ Enterprise Solution
- ➤ Accounts Budgeting
- ➤ Store and Inventory Solution
- ➤ Integrated Record Management System
- ➤ Document Management
- ➤ Dynamic Web portal
- ➤ Procurement Management
- ➤ On-demand Services
- ➤ Training Management
- ➤ Game Development

#### AR VR Solutions

BS 23 develops platform-independent AR (Augmented Reality) VR (Virtual Reality) applications cut for your own operating industry. Their solutions are based on realistic business analysis to reinvent your company showcase and enhance the customer experience. To meet their client's business challenges, they build native end-to-end solutions for your market requirements. They design leading-edge mobile applications for real-estate business, furniture, and automobile industries and so on.

- ➤ Virtual Reality
- ➤ Mixed Reality
- ➤ Microsoft Kinect
- ➤ Meta

## Sharepoint

Brain Station 23's strategic business management magnifies the growth prospects with SharePoint services. Their strategic systemintegration, administration, upgradation, and development enhances proactive decisiveness of overall business productivity and agility while maintaining a simplified technology landscape. They offer guarantee for availability in performance, along with a steady service response time and expert technical support.

- ➤ Enterprise Portal Development
- ➤ SharePoint Application Development
- ➤ Business Application
- ➤ Workflow Collaboration
- ➤ Customization Enhancement in Branding
- ➤ Consultation Training
- ➤ 24/7 Advisory Support
- ➤ Performance Tuning
- ➤ Migration and Upgrades
- ➤ SharePoint BI Integration Reporting

## Enterprise Resource Planning (ERP)

As a flagship product for enterprise business, BS 23 has ERP 23is the all-in-one management software to streamline every process in an organization's business.

- ➤ Application Design and Development E-commerce Internet Solutions
- ➤ Implementation, Maintenance, and Support
- ➤ Migration and Update
- ➤ Mobile ERP Application
- ➤ SharePoint Integration and Update

#### E-commerce

BS 23 provides theultimate e-commerce solution as well as customizations for an e-commerce business. They have a dedicated e-commerce (nop Commerce) team providing e-commerce solutions (both web and mobile) to the e-commerce store owners. The company has been helping local and global e-commerce businesses for more than 6 years.

#### 2.10 Dress Code

BS 23 expects employees to dress appropriately in business attire of a casual nature. The work environment for employees encourages employees to dress comfortably for work. They only explicitly state not to wear anything that other employees might find offensive or that might make coworkers uncomfortable.

#### 2.11 Prayer

Brain Station 23 has a group on Skype called "Prayer Alarm" where you can get an update about the Jamaat before each waqt. The prayers are held in the 7th floor at the main office and 4th floor at the branch office.

#### 2.12 Food

The launch is free for all employees at BS 23. There's a canteen at both the main office and the branch office for dine-in. On Tuesday 'khichuri' is served, "polar" and chicken roast on Thursday and plain rice on the other days. Different curry is served on a different day. There is a free afternoon snack provided each day. There is also a coffee machine and an all-time supply of drinking water.

## 2.13 Policies

## Open-door policy

- BS 23 has an open-door policy, that one can contact with anybody in the organization if s/he finds any difficulties or wants to discuss an official matter that s/he is confused about. It will never be perceived as a negative remark.
- Any employee can contact even CEO if you find any problem with His/her work/ want to work on any other interesting project.
  - \* Project manager
  - \* Anything everything that is bothering him/her
- Initially employees are encouraged to communicate with their line manager, project manager, HR or even CEO if any situation comes up that s/he feels to quit his/her job for any organizationalor personal issues. They are always open for discussion.

#### Leave Year

Leave year will be considered from 1st July of a year to 31st June of next year. Types of Leave for the full-time employees:

- ➤ Annual Leave
- ➤ Casual Leave
- ➤ aternity Leave
- ➤ Maternity Leave
- ➤ Sick Leave

As an intern, I was entitled to an earned leave policy. This policy explicitly states, I am granted any two working day leave in a month at my convenience upon informing my supervisor or anyone from HR.(i. e. after completing month of January I get two working days to leave, if I do not take any those two left in the month of February I have a total of 4 days of working day leave at my disposal.)

#### **Probation Period**

- ➤ Normally the first 6 months is a probationary period
- ➤ Formal review after 3 and 6 months
- ➤ There will be no paid leave during the probation period. Any leave in this period will be considered as "Leave Without Pay." But an employee recruited as an intern is considered to have no probation period.

## Leave Management Procedure

Leave notification (Before Leave):

For unplanned/emergency leave, one needs to notify his/her reporting person through SMS, call or mail.

For both planned and unplanned leave, employees have to apply for a leave through BS 23's own ERP system.

## 2.14 Working Hours

The policy for working hour is,

- ➤ 9 hours per day including a lunch break.
- ➤ 45 hours per week including a lunch break. Start Time basically depends on clients and projects, and End Time as well.

There are two off days in a week. They are Saturday and either Friday or Sunday depending on which project the employee is assigned to.

Our weekly off days were dependent on our supervisor. Over my internship period, my weekly holiday was Sunday as all my supervisors had Sunday off.

#### 2.15 Communication Management

- ➤ Mail (Internal and External): We have our own mail account under BS 23's own email handle "@brainstation23"
- ➤ Skype (Internal and External): All the communication that was related to any project we were involved in was through Skype.
- ➤ Group Skype (Mainly Internal): Special groups could be formed for specific purposes. (i.e. for a separate project, a separate interest group of specific technology)

- ➤ Microsoft Teams: Brain Station 23 also use Microsoft Teams to communicate each other and do team meeting in various purpose.Our Interview also took with Microsoft Teams.
- ➤ Go to the meeting (for external): There were 10 different meeting rooms of different sizes; 5 on each floor.

#### 2.16 Attendance Management

Attendance is maintained through a fingerprint based automated system where employees use their fingerprints or proximity card for in or out. For us as interns, our finger prints were scanned and integrated into the system. We can see our attendance report by logging into the ERP system "Odoo".In Odoo we gave entry of our daily attendance in PM Clock.

## 2.17 Performance Management Process

- ➤ Monthly Evaluation
- ➤ Trimonthly Report
- ➤ Half Yearly Salary Revision
- ➤ Real-time task monitoring with the third-party software, Desktime (Deprecated since May 1, 2019, now they use their own custom system 'Intellifriend' which was one of the projects I was ininvolved in)

## 2.18 Training and Development

- ➤ External Training
- ➤ Internal Training
- ➤ Reference (Book, article, video)
- ➤ Partnering in Certification

My training and development processes are briefed below:

In my first team, I worked on Website development. There, JavaScript and Nodejs frame-work were needed, we had a training session on these technologies before starting our project.

Then for my second phase, HTML, CSS, Typescript, Bootstrap, Express.js were involved. For my work in the project, I needed only HTML, SCSS, Bootstrap, Typescript, so I had a training on these before starting working. We had access to the online education platform Pluralsight Electron JS course and another online based education platform Udemy Javascript course.

In my third phase, I worked with a real life project which is a famous food delivery application.

## 2.19 Recreation

## ➤ Official tour

We attended BS 23's official annual tour after joining. It was held at Heritage Resort, Madhabdi 1604. It was a marvelous experience for us. We enjoyed snacks on our way of bus journey, the place, several kinds of games organized by BS 23 and a buffet meal at lunch.



Brain Station 23 Annual Tour 2022

## ➤ New Year Feast

## ➤ Game and Sports

Brain Station 23 is a very sports-friendly company. Every Year, They attend many inter-software Company tournaments and events. Such as football, cricket, badminton, table tennis, etc.



BS 23 Football team, ISCF Tournament 2022

- ➤ Non-Official Events
  - Our team celebrates various program on various occasions.
- ➤ Special Day Celebration

## 2.20 Awards and Recognition

- ➤ The Daily Star ICT Award 2018: Best ICT Solution Provider –International Market Focus for 2018
- ➤ BASIS Award 2018 Winner in 3 categories (Fin-tech, real-estate, Transport)
- ➤ Best Outsourcing Organization: BASIS awarded BS 23as one of the top software company for 2013, 2014 2015
- ➤ Code Warrior challenge 2014: champion in web application development

- $\blacktriangleright$  2013 Exporter of the year: HSBC awarded us as top SME exporter
- $\blacktriangleright$  2018 inter-software company cricket champion
- $\triangleright$  ISO 27001 certified company in 2014
- ➤ ISO 9001certified company in 2015
- ➤ CMMI Level 5 Certified

## 2.21 Code of Conduct

## 1. Non-Competition

During the period of time that the Employee is employed by the Brain Station-23, the employee shall not directly or indirectly: Develop, design, produce, market, sell or render (or assist any other person in developing, designing, producing, marketing, selling or rendering) products or services competitive with those developed, designed, produced, marketed, sold or rendered by the Brain Station-23 at any time during the Restricted Period.

#### 2. Non-Solicitation

During the period of time that the Employee is employed by the Brain Station-23 and for a period of one (1) year after the termination or cessation of such employment for any reason, the Employee shall not, directly or indirectly:

Solicit business from or perform services for any client, customer, supplier, licensee or business relation of Brain Station-23, induce or attempt to induce, any such entity to cease doing business with Brain Station-23, or in any way interfere with the relationship between any such entity and Brain Station-23.

#### 3. Nondisclosure

Employee shall not, at any time during or after the term of this Agreement, in any manner, either directly or indirectly:

Divulge, disclose, or communicate to any person, firm, corporation or other entity, or use for his own benefit or for the benefit of any other person, firm, corporation or other entity, and not for the benefit of the Brain Station-23, any information acquired from the Brain Station-23 or its affiliates, without the express prior written consent of an authorized executive / officer of the Brain Station-23.

# 3 Project Work

## Technology and Tools I Learned

As Brain Station develops their tools in various technologies. As an intern, I saw them very closely and I gradually started to desire to learn them. And I have to learn them.

#### 3.1 Tools

Programming tools make development easier. In my Intern at Brain Station 23 I have to use the following tools in my daily works:

- ➤ Code-Open Source Software
- ➤ Postman
- ➤ MongoDB Compass
- ➤ Altair GraphQL Client
- ➤ Github
- ➤ Docker

## 3.2 Languages

#### 3.2.1 JavaScript

I worked with JavaScript Back-end team, where they use nodejs frame-work. So, as the pre-requisition, I have to learn JavaScript from scratch.So, firstly, I finished part-1 tutorial from <a href="https://javascript.info/">https://javascript.info/</a>. From this site, My learnt topics are given below:

- ➤ JavaScript Fundamentals
- ➤ Code quality
- ➤ Objects: the basics
- ➤ Data types
- ➤ Advanced working with functions
- ➤ Object properties configuration
- ➤ Prototypes, inheritance
- ➤ Classes
- ➤ Error handling

- ➤ Promises, async/await
- ➤ Generators, advanced iteration
- ➤ Modules
- ➤ Miscellaneous

After this learning phase, I build a practice project with Vanilla JavaScript under my two senior mentor. The github link is here.

#### 3.2.2 Typescript

TypeScript is an open-source language which builds on JavaScript, one of the world's most used tools, by adding static type definitions.

Types provide a way to describe the shape of an object, providing better documentation, and allowing TypeScript to validate that your code is working correctly.

## 3.2.3 HTML (Hyper Text Markup Language) HTML5

I had the opportunity to use HTML in my personal portfolio application project (frontend side). Which has hosted in github. The link is here.

I got to learn many attributes of HTML tags and also HTML 5 semantics elements that I was previously unaware of.

#### 3.2.4 CSS (Cascade style sheet) 3

I got familiarized with different types of CSS property. Some topics that I used in my personal portfolio project are given below:

- ➤ Page Layout with floats
- ➤ Overlapping Content And Transparent Backgrounds
- ➤ Z-Index
- ➤ Styling in Tables and Forms
- > Sprites
- ➤ Grids:

- ➤ Responsive Web Design
- ➤ Carousel
- ➤ Box Shadow
- ➤ transform(rotate, scale, skewX, translateY, translate), ransition.

#### 3.2.5 Bash

Learned basic syntax for the purpose git management, docker setup in linux platform.

## 3.3 Libraries and Frameworks

#### 3.3.1 Bootstrap

The most popular HTML, CSS, and JS library in the world for making responsive websites, got to use it in my personal portfolio.

#### 3.3.2 SCSS (Sassy CSS)

A superset of CSS. Used in My personal Portfolio page.

#### 3.3.3 Node.js

As an asynchronous event-driven JavaScript runtime, Node.js is designed to build scalable network applications. The javascript framework to run in a non-browser platform(known as commonjs platform), created to use JavaScript in the backend for the first time. This framework was used in my practice project named Library Management. The project github link is given here. All my created api for Library Management list are given below:

#### ➤ User

#### Admin

- \* Update User
- \* Get user
- \* Delete User
- \* Get AllUsers

## user User

- \* Update Me
- \* Get Me
- \* Delete Me

## ➤ Authentication

- Sign In
- Sign Up
- Update Password
- Reset Password
- Forget Password
- Logout

## ➤ Book

- Create Book
- Get Book
- Update Book
- Delete Book
- Get All Books

## ➤ Order

## Admin

- \* Update Status
- \* Update Return Date
- \* Return Book
- \* Mayment Fine

## **™** User

\* Create Order

- \* Delete Order
- \* Renew Request
- \* Get User Order

## 3.3.4 Express JS

The most common, unopinionated framework of node js to create a server.It was used in Library Management app's server site.

## 3.4 Development Technique(pair programming)

In the Internship period, I paired with my teammate Md. Ismail Hosen. As I was new to the Brain Station 23 ecosystem, I always had a lot of questions. Therefore, I could clear my confusion while talking with the seniors and gain knowledge about the platform.

Actually in varsity, we always worked as a team. But never did actual teamwork. In Brain Station 23, I learned about actual teamwork. Where some developer works in different part of the same applications.

While working as a pair, we used to work in a way, when my partner was typing I was assisting him, giving him ideas and checking for mistakes; when I was typing my partner was giving me instructions and suggestions.

## 3.5 Professional Learning

Although technical learning is important, professional learning is the sole purpose of an intern-ship. Brain Station 23 is an excellent Software Company to learn professionalism.

#### 3.5.1 No blaming

Software development is always teamwork. And in a team all members don't have similar skill or knowledge. This is true for Brain Station 23 too. During my time of internship I have made many mistakes like did not maintain code structure, clean code and reusable function. And sometimes stuck in a problem for many hours. But my team leader and my mentors had never been harsh with me. They always encouraged me to ask for help when I was stuck for some hours. But they did not solve the problem unless it was necessary. They always suggests an approach for how to solve that problem.

This practice is really effective to keep the work environment healthy. Blaming others for their mistakes does not solve problems. It only makes the situation and the relationship between coworkers worse.

#### 3.5.2 Always Complete your own work

At Brain Station 23, Everyone is assigned to a particular work and he does his work in his way. At time of scrum everyone shares their progress to the group meeting. All the projects are done in this way.

#### 3.5.3 Quality of work

Brain Station 23 follows a great standard of pure software engineering and their product quality is very high. Time to time code is reviewed so that better quality software is developed. I tried to maintain the standard of work from my side.

#### 3.5.4 Planning before doing

Before starting to implement a product, the assigned developer creates a plan under direct su- pervision of Team Leader.

This planning contains almost every detail for the implementation of the product.

This generally includes:

- ➤ Understanding high level view of the product
- ➤ Architecture to follow
- ➤ Create low level details for the product
- ➤ Task breakdown
- ➤ Implementing base for the product
- ➤ What tools to be used

#### 3.6 Conclusion

The six months of Internship start from September 1 to February 28 was a time of experimentation. Internship in an intermediate period of academic calendar is exceptional from the perspective of our education system in our country. From that point of view this is a matter of glory that during internship I have passed the best academic period in my life by experiencing the real-world technology in Brain Station 23 Limited. It is a matter of grandeur that what I read yesterday at book is now available to me. Moreover, gathering a vast knowledge about how the real-world works can help me to prepare myself for upcoming working life for me.

My overall feedback during worked at Brain Station 23 has both positives and negatives. Starting with the negatives, I had to travel a lengthy way to the office and come back home. There were many unusual problem such as traffic jam, lake of bus at my root, etc. More noticeable negative aspect in my opinion was the lack of documentation in a project at least in the project I have been involved in. Although I work in a real world application like "Library Management", no formal software requirement specification was not prepared which caused confusion about what a feature meant. On the Other hand, this being said, the most positive side I would say is the working environment and the friendly people of the company was awesome. Everybody is approachable, and nobody would try to dominate over others or force something to another person. Another positive aspect was getting our own pc to use over the internship period if we need one. We also got an extra monitor keyboard, mouse to work more comfortably. The food supplied is appreciable and proper hygiene is maintained in the office. BS 23's HR team is so competent to adapt to any situation. BS 23 allowed us to bring a part of the PC or the whole PC from the office to home to start working from home.

In a word, this internship was a great experience to me. And I hope that this experience will give me inspiration and instruction to build up me better future.

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