Chapter– 6

SUPPLYMINT PROJECT

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[1]FAIZAN AHMED SIDDIQUI
[1]Apeejay Stya University, Sohna, Gurugram

[2]Mr. NITIN ANAND
[2]Industry Mentor

[3]Dr. GARIMA SHARMA
[3]Apeejay Stya University, Sohna, Gurugram

Turning Cloud is a niche boutique consulting company with the firm belief that technology is future for all enterprises.

What Company Says?

We are a team of architects, solution design professionals, and programmers that help global customers in the entire journey to starting from defining the design of the project to the adoption and deployment of the new technology.

Company Mission

To strive the customer expectation by providing high-quality services and products that provide calculated values to our clients.

Company Vision

To improve the efficiency of the delivered solution by providing high-quality software mechanism. Their expert team addresses client challenges with professional consultations that offer optimized decisions and cost-effective reliable solutions. They have a social motto to make the life of people easier, better and safer with an aim to be known as a symbol of reliability, innovation, and hard work.\

Company Products

Through their access to sophisticated technology and a backbone of deep-rooted subject knowledge, they have developed products to considering the specific industrial challenges which will provide a smooth and hassle-free workflow.

Internship Overview

COMPANY:	TURNING CLOUD SOLUTIONS PVT LTD
DEPARTMENT:	SOFTWARE DEVELOPMENT
ROLE:	REACT JS/NATIVE DEVELOPER
COMPANY TYPE:	PRODUCT BASED
START DATE:	1st APRIL 2022
COMPLETION DATE:	1st OCTOBER 2022
COMPANY PRODUCT	SUPPLYMINT (A Supply Chain Management System)

The company has 2 ongoing products:

1. ASSETMINT
2. SUPPLYMINT

Assetmint brings to you the easiest solution to optimize the use and keeping a track on the fixed assets of any company. Having a well-organized system of assets enhances the efficiency and productivity of the company. AssetMint overcomes the challenge of maintaining data transparency and strives to lead towards reducing costs with potent strategies.

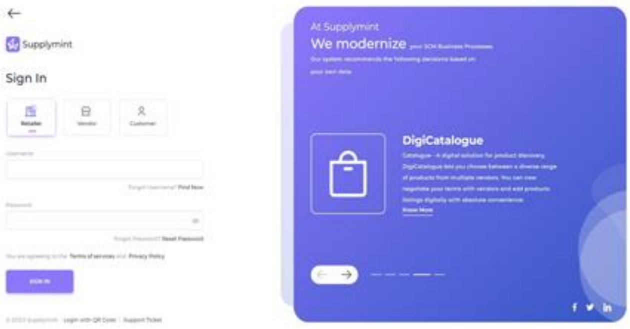
SUPPLYMINT

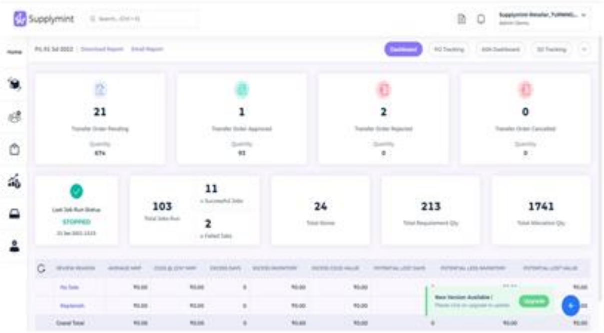
Mission: To simplify supply chain operations of the retail industry by digitizing its processes in order to bring collaboration and transparency among key players.

Vision: To be a leading automation solution provider for everyone involved in the supply chain ecosystem globally. This is the current project in which I am working on. This product is completely based on Supply Chain Management System. The product has a deep functionalities and features of supply chain management inside it, so I do not have complete knowledge about their product, but what's written in the code and how the website and app is running, I have complete idea about it.

TECHNOLOGIES THAT ARE BEING FOLLOWED IN THE PRODUCT

HTML/CSS for how the website and application is going to look:-





React JS and React Native for both website and mobile functionalities of frontend:

React Native (also known as RN) is a popular **JavaScript-based mobile app framework** that allows you to build natively-rendered mobile apps for iOS and Android. The framework lets you create an application for various platforms by using the same codebase.

React Native was first released by Facebook as an open-source project in 2015. In just a couple of years, it became one of the top solutions used for mobile development. React Native development is used to power some of the **world's leading mobile apps**, including Instagram, Facebook, and Skype. We discuss these and other examples of React Native-powered apps further in this post. There are several reasons behind React Native's global success.

Firstly, by using React Native, companies can create code just once and use it to power both their iOS and Android apps. This translates to huge time and resource savings.

Secondly, React Native was built based on **React – a JavaScript library**, which was already hugely popular when the mobile framework was released. We discuss the differences between React and React Native in detail further in this section. Thirdly, the framework **empowered frontend developers**, who could previously only work with web-based technologies, to create robust, production-ready apps for mobile platforms.

Interestingly, as with many revolutionary inventions, React Native was developed as a response to a big technological mistake.

Major Thing Followed In the Product- Redux Js

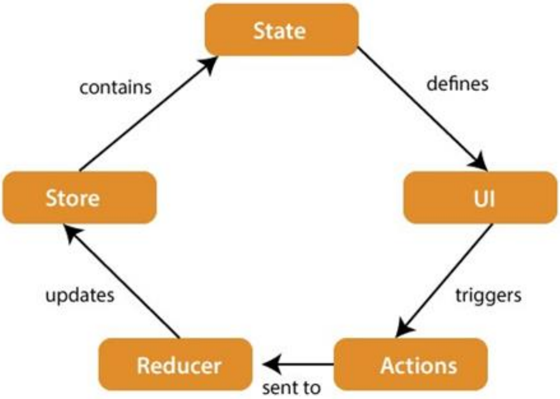
React Redux

Redux is an open-source JavaScript library used to manage application state. React uses Redux for building the user interface. It was first introduced by Dan Abramov and Andrew Clark in 2015.

Why use React Redux?

React Redux is the official **UI bindings** for react Application. It is kept up-to-date with any API changes to ensure that your React components behave as expected. It encourages good 'React' architecture. It implements many performance optimizations internally, which allows to components re-render only when it actually needs.

Redux Architecture



How We Have Set Up API Integration Through Redux:

Now as I already explained about how react redux is making a big impact on larger projects which contains uncountable line of codes, I will explain with one scenario, that how we are making our code efficient by using redux. So, let me explain what's happening in this complete function of Redux. As it is a huge product with lot of line of codes, there are also so many API calls (Application Programming Interface) calls which are required to be hit on almost every single click on the website or on the moble, Whether it is data getting from backend, (example – fetching the list of users) Whether it is posting some data to the backend, (example – logging into the website) Whether it is updating the data to the backend (example – updating profile details)

Whether it is deleting the data (example deleting the purchase order, as per our product, let's say it's not approved by the vendor, so he will be unapproving that order from the frontend, and an api call will take place and it will delete the data present from the backend) So, the case here is, on every page, we have to call an api on almost every click, and our lines of code would become unnecessarily large and our website will get slower, so, let me show the usual way of calling an API.

Post Request:

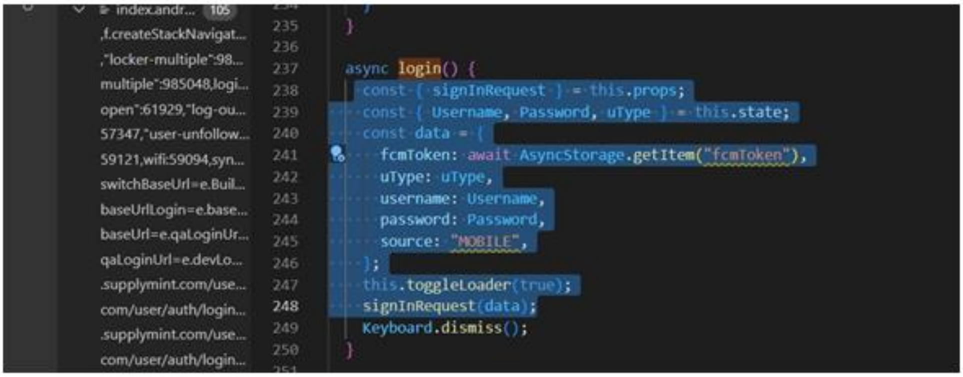
axios.post('/anyApi, { firstName: 'Someone, lastName: 'Someone'}) .then((response) => { console.log(response); }, (error) => { console.log(error);});

Similarly the GET request, PUT request and PATCH request will take place, so now imagine how longer the code would become. So with redux, what we have done is:- For every API, the whole API call would be automatically generated in one line:-

For example:-

Let's say there is a request of Login, it will be directly converted as

LoginRequest, and it will be used anywhere in the code and directly call the API.



```
}

async login() {
  const { signInRequest } = this.props;
  const { Username, Password, uType } = this.state;
  const data = {
    fcmToken: await AsyncStorage.getItem("fcmToken"),
    uType: uType,
    username: Username,
    password: Password,
    source: "MOBILE",
  };
  this.toggleLoader(true);
  signInRequest(data);
  Keyboard.dismiss();
}
```

This is how, we are directly calling a API by just directly writing like – SIGNINREQUEST(requestPayload).

So this is something which is preventing us to write a lot more code and making the website and the application more efficient.

Also it enables Error Handling in a more efficient way:

As through Redux, it automatically generate 4 requests along with the API call.

API Success Request

If we want to do something after success, we can use this function which is auto generated through redux.

API Error Request

If we want to show what exactly the error behind the API fail, we can use this function.

API Clear Request

To clear the previous trash data if present

API Loader

This will also be automatically generated, what it does is, when an api gets hit, it takes some time to load the data, during that time, we can use this function to show some loader while we get the response from the backend.

So this was a great example of managing the code efficiently, like this, many things are happening in our code in the same manner.

CODE MANAGEMENT TOOL- BITBUCKET

So, we follow the Bitbucket to manage our complete code.

Introduction to BitBucket:

BitBucket is a cloud-based service that helps developers store and manage their code, as well as track and control the changes to their code. BitBucket provides a cloud-based Git repository hosting service.

Its interface is user-friendly enough so even novice coders can take advantage of Git. We generally require a bit more technical knowledge and use of the command line to use Git alone. Additionally, BitBuckets provides a variety of services like it gives teams to collaborate and create projects, test and deploy the code.

BitBucket, we need to have first-hand knowledge of:

- Version Control
- GIT

Version Control: It allows us to manage changes to files over time. It is also known as revision times. It's one of the important software configuration management. For ex: Atom Code Editor. Atom is one of the big open source project. If a developer wanted to make some changes to one specific part of the Atom codebase, it wouldn't be a good practice to have them directly merged to the official source code. Version Control lets developers safely and more efficiently work through **Branching** and **Merging**.

A developer can copy/duplicate part of the source code(repository) with branching and can safely make changes to that part of the code without affecting the rest of the project. After making changes in the code, the developers can merge that code back into the main source code to make it official. All the changes can be tracked and can be reverted if required.

GIT: It is an open-source vision control system created by Linus Torvalds in the year 2005. Git is also known as a distributed version control system i.e all the codebase and history are available on every developer's computer, which allows for easy branching and merging.

PROJECT MANAGEMENT TOOL- ATLASSIAN (JIRA)

JIRA is a project management tool. A bug tracking and agile project management is allowed in JIRA and is developed by Atlassian. Fedora Commons, Hibernate, and the Apache Software Foundation are organizations that have used Jira for bug-tracking and project management. A Japanese word "Gojira" is a word from which JIRA is inherited which means "Godzilla".

CODE MANAGEMENT

PRODUCT – CODE MANAGEMENT – In Different Servers:-

As a product based company, it's a challanging task to manage the code along with the proper testing and deployment of the code to production.

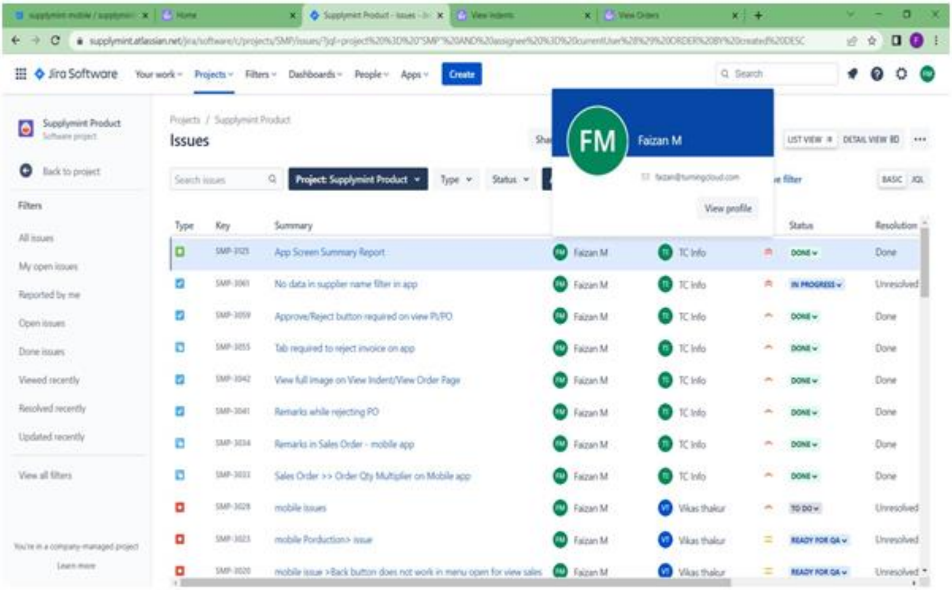
Now as I am using some key words here like – **Production, deployment. What does it actually means?**

This means that we do not work within a same server, it's never a good practice to work on the same server which is also been used by the client or any other user at the same time, And also how difficult it would be for the testers to check the quality of the code or not. So we follow the Environment management system:- anaged and tested properly before going to production.

MY ROLE IN THE COMPANY

WHAT I DO AS A REACT DEVELOPER?

My major work right now is working on their application in fixing existing bugs and also implementing new features for the product, let's say there is some issue a client is facing, or some feature is required by the client, so the company works according to that, and accordingly, the tasks are assigned to the technical team of the company. I work on both – the product's website and application. Majorly I am working on React Native, managing both android and Ios compatibility of the application.



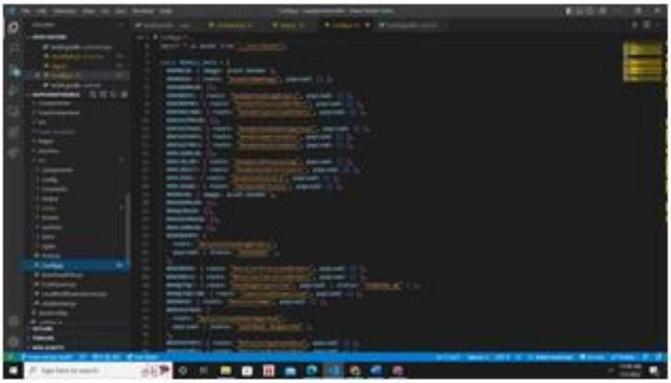
Type	Key	Summary				Status	Resolution
🟩	SMP-3125	App Screen Summary Report	Faizan M	TC Info		DONE	Done
☑	SMP-3061	No data in supplier name filter in app	Faizan M	TC Info		IN PROGRESS	Unresolved
☑	SMP-3059	Approve/Reject button required on view PI/PO	Faizan M	TC Info		DONE	Done
☑	SMP-3055	Tab required to reject invoice on app	Faizan M	TC Info		DONE	Done
☑	SMP-3042	View full image on View Indent/View Order Page	Faizan M	TC Info		DONE	Done
☑	SMP-3041	Remarks while rejecting PO	Faizan M	TC Info		DONE	Done
☑	SMP-3034	Remarks in Sales Order - mobile app	Faizan M	TC Info		DONE	Done
☑	SMP-3031	Sales Order >> Order Qty Multiplier on Mobile app	Faizan M	TC Info		DONE	Done
🟥	SMP-3028	mobile issues	Faizan M	Vikas thakur		TO DO	Unresolved
🟥	SMP-3023	mobile Porduction> issue	Faizan M	Vikas thakur	=	READY FOR QA	Unresolved
🟥	SMP-3020	mobile issue >Back button does not work in menu open for view sales	Faizan M	Vikas thakur	=	READY FOR QA	Unresolved

This is how the tasks are assigned to us on JIRA and we (developers) move the ticket status accordingly.

Month wise division of work:-

1st Month (April 2022)

Got a brief about the company and product, work culture, also started going through the code structure, as it is a very vast structure of code.



2nd Month (May 2022)

Started fixing existing bugs on the product (worked on react native - mobile), let's say some page is crashing, so I as a developer will need to check the reason of that crash, go through the code, made sure that existing code doesn't get affected by what I am coding, give it to the testers to test everything, every use case of it, and then get the task done by deploying it on the production environment.

3rd Month (June 2022)

Worked on new features of the product according to the client's and company's requirements, integrated API's, created new functionalities like Image slider, login token authentication enhancement, summary report of particular brand and customer (as per our product), JWT and still working on new upcoming functionalities that needs to be completed before the deadline.

USING THE PROJECT MANAGEMENT TOOL IN OUR PROJECT

How are we managing the phases of JIRA – Project management tool:-

When some issue is assigned to us, then it comes in the form of ticket, that ticket has different phases along with development and testing.

Those phases are:-

1. Todo – Ticket (issue to be started to resolve by developer)
2. In progress – Started solving that ticket
3. Ready for QA - (It means, ticket is solved by the developer, the testing is now pending, so it will be moved to Quality Analyst to be tested)
4. QA in Progress – The tester has started the testing of whether the things are working fine or 0not. Now if he/she finds that the issue is still there, he will move the ticket to TODO status again, and the developer will start solving the issue again, but if everything goes fine, the tester will move the ticket to UAT.
5. UAT – Under Alpha testing, this means that, this issue is now ready to be deployed into production.
6. Done – Finally the issue sorted out is moved to the production

This is how; the whole lifecycle of our tasks goes on.

LEARNING DURING THE INTERNSHIP

WHAT I HAVE LEARNT DURING THE INTERNSHIP:

An internship is an opportunity to test drives a career without making any serious commitments. It provides us with experiences, lessons, and the tools we will need to get a full-time gig in the future. It is often a great choice because it gives us a feel for work without being thrown into the deep end straight away. This provides us with the opportunity to grow and learn before fully entering the working world. Firstly, I learnt a lot of new things along with my senior web developers about how one thing can be done in many other ways (in technical aspects), like how to code in a better way. Secondly the Professional Communication during the dev calls, daily meetings, having discussions with the backend team about understanding some issue, or want to integrate some API and need to get idea about what the backend is expecting from the frontend in the context of code.

Time Management – Doing tasks on deadline was the topmost priority in product based companies, so working weekly sprint wise to ensure that the given tasks must be completed within time.

Deployments:- Now this was the new thing that I learnt as a developer, as I was working on mobile as a React native developer, the challenge for me was how to deploy the application to the Google Play Store and also how to give the application to the testers for Testing. So I learnt about it.

CONCLUSION

In conclusion, the internship was a useful experience. I have find out what my strengths and weaknesses are; I gained new knowledge and skills and met many new people. I achieved many of my learning goals, however for some the conditions did not permit to achieve them as I wanted.