# Midterm Report

**Student Name:** Sagar Kokku

**Job Role:** Java Developer

1. **Project Overview**:

SUPPLY CHAIN MANAGEMENT PROJECT

* I am currently working on a software Development Project that involves building a web application for a customer. The project is divided into three phases, and I am part of a team of 15 members. We are responsible for building the entire system from scratch.
* As a team member on the supply chain management project, I have been responsible for various tasks including coding, testing, debugging, implementing, and documenting moderately complex programs using Java/J2EE, JSP, Spring, and Hibernate technologies. I have collaborated with other team members to design and develop software modules that facilitate supply chain management processes such as inventory tracking, order fulfillment, and logistics management. I have also contributed to the testing and quality assurance efforts by developing and executing test plans, identifying and resolving defects, and documenting test results. Additionally, I have participated in code reviews and provided feedback to other team members to ensure that our code is efficient, scalable, and maintainable..
  + Expertise in developing client-side and server-side/middle-tier components using Java/J2EE design patterns and frameworks like Spring Boot, Micro Services, AOP, Webservices, Hibernate, JDBC, JPA, JSP, POJO’s, JSON, and Multithreading.
  + Proficient in AGILE and SCRUM methodologies, and Test-Driven Development.
* • Incorporating Spry and Scrum approaches in the insurance business processes can enhance collaboration and communication between teams, increase flexibility in responding to changing market conditions and customer needs, and streamline the development process to deliver software applications more rapidly and efficiently. For instance, an insurance company can utilize Coordinated and Scrum methodologies to develop a customized insurance quoting software application that can be tailored to the specific needs of the company and its customers, while allowing for quick changes and improvements based on feedback and market conditions.
* Proficient in implementing various frameworks such as Spring, Spring Boot, and utilizing ORM frameworks like Hibernate. Skilled in producing and consuming various web services, including SOAP and RESTful, using tools like SOAP UI. Additionally, experienced in developing microservices using Eureka Server and the Spring Boot framework. Worked extensively with Java/J2EE 1.7/1.8, including utilizing Collections.

**About the Project:**

The project aims to improve the supply chain management process by establishing a set of rules and regulations to ensure that customers and supply chain partners comply with industry standards and regulations, with a focus on the insurance sector. The Supply Chain Management and Legal Solution program consists of two groups of users: internal and external. Internal users include legal teams, franchises, licensing departments, transaction services, and customer delivery teams. External users consist of customers such as issuers, acquirers, processors, merchants, and third-party service providers. By utilizing this program, the internal users can efficiently manage and monitor the supply chain while the external users can adhere to the industry standards and regulations for a smooth and compliant operation.

The steps involved in developing the Module are:

* The supply chain management module involves the following steps:
* Developing a home page that displays relevant information and notifications to customers.
* Implementing access control to ensure that only authorized customers can access the web pages.
* Setting up a fraud detection system that can detect any suspicious transactions in a customer's account. If a fraud is detected, a PDF questionnaire will be sent to the customer.
* Notifying the customer about the sent document and prompting them to fill and submit it. Once the customer submits the document, the application will validate the answers provided by the customer.

**Possible Methodologies**

The supply chain management project is being developed using the agile methodology which focuses on customer satisfaction by rapidly delivering useful software and welcoming changing requirements, even late in development. Working software is delivered frequently for each sprint, with close daily cooperation between business people and developers. The project is built around motivated modules that are trusted, and face-to-face conversation is considered the best form of communication. The team is self-organized and adapts regularly to changing circumstances, with continuous attention to technical challenges and good design. The agile techniques being used in this project are focused on continuously delivering value-added services to the client and maintaining a continuous connection with the client with an emphasis on communication among team members.

In addition, the project is being developed using various methodologies such as Agile, Scrum, SDLC, and Waterfall. JUnit is being used as the testing tool, while database servers such as Oracle 8i/9i/10g/11g, DB2, SQL Server 2000/2005/2008, MySQL, IBM Cloudant, and MongoDB are being used to store data. The project also uses CI/CD tools like Jenkins and SonarQube for continuous integration and deployment, and version control tools such as SVN, GitHub, and GitLab. Finally, Maven is being used as the build tool for this project.

1. The project is built on the following technology stack: Spring Core, JSP, Oracle, SQL, TestNG, Clearcase, CSS, Oracle Database, SOAP, RUP, and Maven.

Agile methodology was followed in the project, which involves continuous interaction and collaboration among team members and stakeholders to deliver value-added services. Weekly sprints and stand-up meetings were conducted to ensure iterative development and timely delivery of the project.

1. Angular was used in the project, and module-wide routing was implemented using the router module. Different forms were created using both data-driven and template-driven approaches in Angular.
2. Collaborated in developing Angular Components, Services, and Filters while also contributing to the creation of unit test and integration test cases using Jasmine and Karma testing frameworks. In line with the Agile methodology, emphasis was placed on maintaining clear visibility into project progress and objectives both in the short-term and long-term.
3. Famous agile methodologies areAgile, Scrum, SDLC, Waterfall