FULL SEMESTER INTERNSHIP REPORT
On
"JAVA FULL STACK"

submitted in partial fulfillment of the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

in

ELECTRONICS AND COMMUNICATION ENGINEERING

By

SUKAMANCHI SIVA CHAITANYA

219X1A04J0

Department of Electronics and Communication Engineering

G. Pulla Reddy Engineering College (Autonomous): Kurnool-518007, Andhra Pradesh, India

(Affiliated to Jawaharlal Nehru Technological University-Anantapur, AnanthaPuram)

2024-2025

Department of Electronics and Communication Engineering

G. Pulla Reddy Engineering College (Autonomous)

Kurnool-518007

(Affiliated to Jawaharlal Nehru Technological University-Anantapur, AnanthaPuram)

Certificate

This is to certify that an internship entitled **"Java Full Stack"** is a bona-fide work done by **SUKAMANCHI SIVA CHAITANYA (219X1A04J0)** of G. Pulla Reddy Engineering College (Autonomous) Kurnool, Andhra Pradesh, India, for partial fulfillment of the requirements for the award of degree of **Bachelor of Technology** in **Electronics and Communication Engineering** during the academic year 2024-2025.

The results embodied in this internship have not been submitted to any other University or Institute for the award of any degree.

INTERNAL SUPERVISOR

Smt. D. Rohini, M. Tech., (Ph. D)
Assistant Professor,
Department of ECE,
G. Pulla Reddy Engineering College,
(Autonomous), Kurnool.

HEAD OF THE DEPARTMENT

Dr. K. Suresh Reddy, MTech., Ph.D
Professor and Head of the Department,
Department of ECE,
G. Pulla Reddy Engineering College,
(Autonomous), Kurnool.

An Internship Report

Submitted in accordance with the requirement for the degree of Bachelor of Technology (B.Tech)

Name of the College: G. Pulla Reddy Engineering College (Autonomous), Kurnool

Department: Electronics and Communication Engineering

Name of the Faculty Guide: Smt D. Rohini

Duration of the Internship: From 01/01/2025 To 06/04/2025

Name and address of the Organization: Make Skilled Innovation Park, Hyderabad.

Name of the Student: Sukamanchi Siva Chaitanya

Programme of Study: Java Full Stack

Year of Study: IV Year

Register Number: 219X1A04J0

Date of Submission:

Student's Declaration

I, SUKAMANCHI SIVA CHAITANYA, a student of Bachelor of Technology (B.Tech) Program, Reg.No 219X1A04J0 of the Department of Electronics and Communication Engineering, G. Pulla Reddy Engineering College (Autonomous) College do hereby declare that I have completed the mandatory internship from 01-01-2025 to 06-04-2025 in Make Skilled Innovation Park Pvt Ltd, Hyderabad under the faculty Guideship of Smt D.Rohini**,** Department of ECE in GPREC college.

(Signature and Date)

Certificate from Organization

This is to certify that SUKAMANCHI SIVA CHAITANYA, Reg.No 219X1A04J0 of G. Pulla Reddy Engineering College (Autonomous), Kurnool underwent internship in Make Skilled Innovation Park Pvt Ltd from 01/01/2025 to 06/04/2025 .

The overall performance of the intern during his/her internship is found to be Good.

Acknowledgements

I would like to express sincere thanks to **Madhu Parvathaneni** Garu, Founder & CEO of Make Skilled Innovation Park, Inc who gave opportunity for internship and mentor throughout the internship.

I would like to express sincere thanks to our principal **Dr. B. Sreenivasa Reddy** Garu for providing requisite facilities extended to work on the internship during the internship sessions.

I would like to express sincere thanks to **Dr. K. Suresh Reddy**, Garu, Head of the Electronics and Communication Engineering department, G. Pulla Reddy Engineering College for providing requisite facilities and providing such a good environment.

I would like to express sincere thanks to **Smt D. Rohini** Garu, Assistant professor in ECE department, G. Pulla Reddy Engineering College who gave guidance and mentor for this Internship report.

I also extend my sincere thanks to entire faculty and staff members of ECE Department, who have been a source of information throughout the course and for all extending all support to us in the form of technical literature and excellent guidance.

CHAPTER 1: EXECUTIVE SUMMARY

This report provides an overview of the full semester internship completed at Make Skilled Innovation Park, Hyderabad, a software development and IT services company, with a focus on Java Full Stack Development. The internship offered a comprehensive learning experience, enabling us to apply academic knowledge in a real-time work environment and develop industry-relevant technical skills.

Learning Objectives and Outcomes:

1. **To understand the fundamentals of Java and object-oriented programming.**

   ➤ Gained in-depth knowledge of Java, OOPs, exception handling, collections, and multi-threading.

2. **To learn backend development using Spring Boot framework.**

   ➤ Created RESTful APIs, integrated JPA for database interactions, and applied layered architecture.

3. **To develop interactive frontend user interfaces using web technologies.**

   ➤ Designed and implemented responsive UIs using HTML, CSS, JavaScript, and React.js.

4. **To integrate the frontend and backend with a relational database.**

   ➤ Built end-to-end web applications by connecting the backend with MySQL and performing CRUD operations.

5. **To understand the software development lifecycle and teamwork.**

   ➤ Participated in Agile-based sprints, version control using Git, and team collaboration via tools like GitHub and Trello.

Sector of Business and Intern Organization: The internship was conducted within the Information Technology sector, specifically focusing on Software Development. The intern organization is a leading tech company specializing in custom software solutions and digital transformation services. They provide a range of services including application development, system integration, and cloud computing solutions.

Summary of Activities: During the internship period, the intern engaged in a variety of tasks that provided hands-on experience in full stack development. Key activities included:

- **Front-End Development:** Created dynamic user interfaces using Angular, HTML, and CSS, ensuring responsive design and seamless user experiences.
- **Back-End Development:** Developed RESTful APIs and implemented server-side logic using Java and Spring Boot, integrating these with front-end applications to

support robust functionality.

- **Database Management:** Designed and managed databases, wrote complex SQL queries, and ensured data integrity through effective database schema design and optimization.
- **Testing and Debugging:** Conducted unit testing and debugging to ensure code quality and performance, employing tools like JUnit for testing Java code and various browser developer tools for front-end issues.

This internship provided valuable insights into full stack development practices, enhancing technical skills and preparing for future roles in software development.

CHAPTER 2: OVERVIEW OF THE ORGANIZATION

A. Introduction of the Organization

Make Skilled Innovation Park, headquartered in Hyderabad, is a fast-growing IT services company focused on delivering innovative software solutions to clients across various industries. The company specializes in full-stack application development, enterprise resource planning systems, and cloud-based business process automation. It has earned a reputation for providing high-quality and customized software development services tailored to meet specific client requirements.

B. Vision, Mission and Values of the Organization

- **Vision:**

To be a global leader in digital transformation and software solutions, enabling businesses to scale efficiently and sustainably.

- **Mission:**

To deliver secure, scalable, and user-centric software solutions by combining innovation with technical excellence.

- **Core Values:**
    - Innovation and Continuous Learning
    - Client Satisfaction and Service Quality
    - Integrity and Accountability
    - Teamwork and Collaboration

C. Policy of the Organization in Relation with the Intern Role

Make Skilled Innovation Park believes in nurturing young talent by providing a platform for hands-on learning. Interns are given opportunities to work on real-time projects under the mentorship of industry professionals. The organization ensures a balanced exposure to both frontend and backend development tasks, aligning with the current market needs in full stack development.

D. Organizational Structure

The organization follows a flat yet functional hierarchy with key departments such as:

- Software Development (Frontend & Backend)
- UI/UX Design
- Quality Assurance
- DevOps and Deployment
- Human Resources and Administration

Interns were placed under the Software Development department and worked in coordination with

other teams as per project requirements.

E. Roles and Responsibilities of the Employees in Which the Intern is Placed

Interns in the Full Stack Development team were responsible for:

- Designing and developing frontend web pages
- Creating RESTful APIs using Spring Boot
- Testing, debugging, and fixing code
- Integrating backend services with frontend interfaces
- Working with databases using MySQL
- Participating in daily stand-up meetings and code reviews

F. Performance of the Organization

Make Skilled Innovation Park has shown consistent growth in recent years with an expanding client base in sectors such as education, healthcare, logistics, and retail. The company has earned recognition for its agile development process and timely project delivery. It continues to gain traction in the competitive IT landscape due to its expertise in Java-based full-stack technologies.

G. Future Plans of the Organization

The company aims to expand its services into artificial intelligence, machine learning, and cloud-native application development. Make Skilled Innovation Park also plans to establish offshore development centers and enhance its training programs to bridge the industry-academia gap.

CHAPTER 3: INTERNSHIP PART

Description of Activities/Responsibilities

Working Conditions: The intern operated in a collaborative and dynamic environment typical of a technology-driven organization. The workspace was designed to foster teamwork and innovation, featuring open-plan offices with access to modern amenities and tools.

Weekly Work Schedule: The intern followed a structured weekly schedule:

- **Monday to Friday:** Standard work hours from 9:00 AM to 5:00 PM, with flexible start and end times. Daily stand-up meetings were held at 9:30 AM to discuss ongoing tasks and project updates.
- **Project Meetings:** Weekly sprint planning and review meetings took place every Wednesday afternoon, aligning tasks and objectives with project milestones.

Equipment Used:

- **Development Tools**: Integrated Development Environments (IDEs) such as IntelliJ IDEA and Visual Studio Code for coding and debugging.
- **Database Tools:** MySQL Workbench and MongoDB Compass for database management and query execution.

Tasks Performed:

- **Front-End Development:** Designed and implemented user interfaces using Angular, HTML, and CSS. This involved creating responsive layouts, integrating APIs, and ensuring cross-browser compatibility.
- **Back-End Development:** Developed and maintained server-side components using Java and Spring Boot. Tasks included building RESTful APIs, managing server-side logic, and integrating with front-end applications.
- **Database Management:** Created and optimized database schemas, wrote SQL queries for data retrieval, and implemented NoSQL databases for specific use cases.

Skills Acquired: The internship provided the intern with a robust set of skills in both front-end and back-end development, including proficiency in Java, Angular, and various database technologies. The intern gained experience in Agile methodologies, learned to use modern development tools, and developed strong problem-solving abilities through real-world projects.

ACTIVITY LOG FOR THE FIRST WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Orientation session and introduction to full stack technologies.	Understood the internship roadmap and key technologies
Day- 2	Basics of java and its applications, what industry is expecting the developers in java.	Java is widely used language in the world.
Day–3	Installed Java, Eclipse IDE, and Git; Java setup completed.	Set up Java development environment
Day–4	Learned Java syntax, variables, and data types	Practical implementation of datatypes
Day–5	Practiced arithmetic, relational, and logical operators in Java.	Operators in JAVA
Day–6	Practical implementation of the operators discussed before and new operators.	Practical implementation of Operators.

WEEKLY REPORT

WEEK – 1 (From Dt 01/01/2025 to Dt 07/01/2025)

Objective of the Activity Done: To understand and practice the fundamentals of Core Java, including syntax, data types, operators, and conditional statements, while setting up the development environment.

Detailed Report:

During the first week of the internship at Make Skilled Innovation Park, Hyderabad, we were introduced to the Java Full Stack Development internship plan and the technologies we would be using throughout the program. The week began with an orientation session where the development tools such as Java, Eclipse IDE, and Git were installed and configured.

We started with the basics of Java programming, covering important foundational concepts such as variables, data types, and Java syntax. This helped us understand how Java handles different types of data and how to use them efficiently in coding. We then moved on to Java operators, including arithmetic, relational, and logical operators, which form the backbone of logical operations in Java programs.

Towards the end of the week, we explored conditional statements like if, else if, else, and switch cases. These helped us develop logic-based programs that could make decisions based on user inputs or other conditions.

Overall, this week laid the essential groundwork for upcoming topics in Java programming. The hands-on exercises and problem-solving tasks reinforced our understanding of programming logic and structured code writing.

ACTIVITY LOG FOR THE SECOND WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Practiced loops: for, while, and do-while with real-time examples	Learned control flow using repetition
Day- 2	Solved logic-building problems using nested loops and conditions	Developed logical thinking and pattern design
Day–3	Learned about arrays and their memory allocation.	Understood single and multi-dimensional arrays
Day–4	Implemented basic array operations: insertion, search, traversal	Practiced structured data access
Day–5	Introduced string handling and basic string methods in Java	Learned string manipulation and formatting
Day–6	Explored advanced string methods and created mini string programs	Enhanced string processing and logic building

WEEKLY REPORT

WEEK – 2 (From Dt 08/01/2025 to Dt 17/01/2025)

Objective of the Activity Done: To implement control flow using loops, understand array structures and string operations, and solve logic-based problems using Java.

Detailed Report:

Week 2 started with practical exposure to looping constructs in Java, including for, while, and do-while loops. We practiced writing iterative programs such as pattern printing, sum calculators, and menu-driven logic using nested loops. This strengthened our logical flow and programming structure.

Midweek, we moved on to arrays, where we learned about single-dimensional and multi-dimensional arrays. We implemented basic operations like inserting elements, accessing elements via index, and traversing arrays using loops. Arrays were particularly useful in storing a sequence of related data like marks, employee records, or item prices.

In the latter half of the week, we were introduced to Java Strings, exploring common operations like .length(), .charAt(), .substring(), and string concatenation. These are critical when dealing with user inputs or formatted outputs.

By the end of the week, we had a solid understanding of using loops, arrays, and strings in Java applications. These skills are essential for writing clean, efficient, and interactive programs.

ACTIVITY LOG FOR THE THIRD WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Introduction to classes and objects in Java.	Understood object-oriented programming basics
Day- 2	Implemented constructors and constructor overloading	Learned object initialization techniques
Day–3	Practiced inheritance with real-world examples	Applied code reusability using inheritance
Day–4	Explored polymorphism: method overloading and overriding	Gained dynamic behavior in code
Day–5	Implemented encapsulation and abstraction	Improved security and code organization
Day–6	Overview of exception handling and try-catch blocks	Learned how to manage runtime errors safely

WEEKLY REPORT

WEEK-3 (From Dt: 18-01-25 to Dt: 24-01-25)

Objective of the Activity Done: To learn and apply core Object-Oriented Programming (OOP) concepts including classes, objects, constructors, inheritance, polymorphism, encapsulation, and abstraction in Java.

Detailed Report:

Week 3 marked the start of our object-oriented programming journey in Java. We began by creating classes and objects, which helped us understand how real-world entities are modelled in code. We then explored constructors, including both default and parameterized ones, as well as constructor overloading, which enhanced our object initialization skills.

The middle of the week was focused on inheritance, allowing us to reuse existing class properties in child classes. This improved our code organization and reduced redundancy. We also implemented polymorphism using method overloading and overriding to achieve dynamic method dispatching and flexibility in function behavior.

The week ended with practice on encapsulation (using private variables and getter/setter methods) and abstraction (using abstract classes and interfaces) to enforce data security and clear code structure.
This week helped build a strong foundation in designing modular, reusable, and secure Java programs, which are essential principles in software development.

ACTIVITY LOG FOR THE FOURTH WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Introduction to exception handling and common Java exceptions.	Learned how to handle runtime errors safely
Day- 2	Used try-catch-finally blocks with custom error messages	Gained practical experience in error handling
Day–3	Introduction to file handling in Java (FileReader, FileWriter)	Learned to read/write files using Java I/O
Day–4	Practiced file reading and writing with multiple file formats	Worked on file operations using streams
Day–5	Introduction to JDBC and MySQL installation	Understood basics of database connectivity
Day–6	Connected Java to MySQL and performed simple insert/select queries	Hands-on experience with JDBC CRUD operations

WEEKLY REPORT

WEEK–4 (From Dt: 25-01-25 to Dt: 31-01-25)

Objective of the Activity Done: To explore exception handling, file I/O operations, and establish basic database connectivity using JDBC in Java.

Detailed Report:

Week 4 focused on enhancing program stability through exception handling. We practiced identifying and handling runtime errors using try-catch-finally blocks. Custom exceptions were also introduced to handle user-defined error scenarios, improving the safety and reliability of code.

In the midweek sessions, we explored Java File I/O, where we worked with classes such as File, FileReader, and FileWriter. We performed reading and writing operations on text files, which are useful in many desktop-based applications for report generation or local storage.

Toward the end of the week, we were introduced to JDBC (Java Database Connectivity). After setting up MySQL and connecting it with Java, we successfully performed basic CRUD operations like inserting and retrieving records. This marked the beginning of data-driven application development.

By the end of the week, we had developed confidence in file-based and database-based data handling in Java, paving the way for more advanced backend development.

ACTIVITY LOG FOR THE FIFTH WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Introduction to HTML and webpage structure	Learned how to create static web pages
Day- 2	Practiced HTML tags, headings, tables, and forms	Gained hands-on experience in web content design
Day–3	Started learning CSS – styling, selectors, and properties	Understood how to style webpages
Day–4	Applied external and inline CSS to HTML content	Built well-formatted and styled layouts
Day–5	Explored CSS positioning and box model	Managed element placement and spacing
Day–6	Combined HTML and CSS to build a multi-section responsive webpage	Built static UI with basic responsive layout

WEEKLY REPORT

WEEK–5 (From Dt: 01-02-25 to Dt: 07-02-25)

Objective of the Activity Done: To learn the fundamentals of HTML and CSS, and build static web pages with basic styling and layout control.

Detailed Report:

In Week 5, we were introduced to frontend development through HTML and CSS. HTML taught us how to create the basic structure of web pages using elements like headers, paragraphs, tables, lists, and forms. We practiced these elements in building clean, semantic web content.

Midweek, we explored CSS to enhance the appearance and design of HTML pages. We used selectors, colors, margins, padding, and various font properties to style the text and layout of our web elements. We also applied both internal and external CSS, and understood the box model and positioning methods like relative, absolute, and fixed.

By the end of the week, we combined HTML and CSS to design static, responsive web pages. These skills form the building blocks for modern UI development and are essential for creating structured and user-friendly interfaces.

ACTIVITY LOG FOR THE SIXTH WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Introduction to JavaScript: variables, data types, and syntax	Understood the basics of client-side scripting
Day- 2	Practiced conditional statements and loops in JavaScript	Gained control over flow logic in web apps
Day–3	Functions and event handling in JavaScript	Built interactive web elements
Day–4	Introduction to DOM and basic DOM manipulation	Learned how to dynamically update content
Day–5	Applied JavaScript for form validation	Implemented client-side error checks
Day–6	Combined HTML, CSS, and JS to build a fully interactive webpage	Created a complete responsive and interactive UI

WEEKLY REPORT

WEEK–6 (From Dt: 08-02-25 to Dt: 14-02-25)

Objective of the Activity Done: To learn and apply JavaScript for developing interactive web pages, handle user inputs, and dynamically modify page content using DOM.

Detailed Report:

Week 6 introduced us to JavaScript, the scripting language used to make web pages interactive. We began by learning about variables, data types, and writing conditional statements and loops in JavaScript, similar to logic structures in Java.

Midweek, we focused on functions and event handling to respond to user actions like button clicks and form inputs. We then explored DOM (Document Object Model) manipulation to dynamically access and update HTML content using JavaScript methods like getElementById(),innerHTML, and querySelector().

By the end of the week, we implemented form validation using JavaScript to ensure users entered correct and complete data. We wrapped up by integrating HTML, CSS, and JavaScript to build a mini web interface that reacted in real-time to user interactions.

This week significantly improved our frontend skills, enabling us to build more dynamic and responsive user experiences. codebase and the importance of careful planning and coordination.

ACTIVITY LOG FOR THE SEVENTH WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Introduction to React.js and its component-based architecture	Understood the structure and benefits of React
Day- 2	Created basic functional components using JSX	Learned how to build reusable UI components
Day–3	Practiced working with props and state in React	Handled dynamic data within components
Day–4	Implemented event handling and conditional rendering in React	Made interactive components with dynamic output
Day–5	Built a form in React and captured user input	Learned form control in React
Day–6	Combined multiple components to create a simple responsive React interface	Developed a basic functional React application

WEEKLY REPORT

WEEK–7 (From Dt: 15-02-25 to Dt: 21-02-25)

Objective of the Activity Done: To understand the fundamentals of React.js, build reusable components, manage state and props, and create interactive frontend UIs.

Detailed Report:

This week marked the beginning of modern frontend development using React.js, a popular JavaScript library for building dynamic user interfaces. We started by understanding the component-based architecture of React and how it allows developers to break UIs into independent, reusable pieces.

We practiced creating functional components using JSX, a syntax extension that allows writing HTML-like structures within JavaScript. As we progressed, we explored props (for passing data between components) and state (for managing dynamic internal data).

In the second half of the week, we implemented event handling, including onClick, onChange, and form submission handlers. We also used conditional rendering to control what content is displayed based on application state.

The week concluded with building a mini React interface by combining multiple components, handling user inputs through forms, and rendering content dynamically. These skills are foundational for building scalable, modular, and responsive frontends in full stack applications.

ACTIVITY LOG FOR THE EIGHTH WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Introduction to Spring Boot and project structure	Understood backend framework setup
Day- 2	Created RESTful APIs using Spring Boot controllers	Built backend endpoints using annotations
Day–3	Developed service and repository layers using Spring Data JPA	Implemented business logic and DB operations
Day–4	Connected Spring Boot with MySQL and performed CRUD operations	Learned backend database integration
Day–5	Used Postman to test REST endpoints	Practiced API testing and request handling
Day–6	Refactored code using layered architecture and exception handling	Structured maintainable and secure backend

WEEKLY REPORT

WEEK–8 (From Dt: 22-02-25 to Dt: 01-03-25)

Objective of the Activity Done: To learn backend development using Spring Boot, build and test REST APIs, and connect the backend to a MySQL database.

Detailed Report:

This week focused on learning backend application development with Spring Boot, one of the most widely used Java frameworks in full stack development. We began by setting up a basic Spring Boot project using Maven and explored the default project structure including Controller, Service, and Repository layers.

We developed RESTful APIs using annotations like @RestController, @GetMapping, @PostMapping, etc., which allowed us to handle different HTTP requests. Midweek, we integrated the backend with MySQL using Spring Data JPA, enabling us to interact with the database through entity classes and repository interfaces.

We performed CRUD operations such as create, read, update, and delete, and tested all API endpoints using Postman, a popular tool for API testing. We also implemented exception handling and improved the code structure using a layered architecture for better organization and reusability.

By the end of the week, we successfully built a working backend application that could serve and manipulate data using clean, RESTful web services.

ACTIVITY LOG FOR THE NINTH WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Installed Axios and set up API configuration in React	Learned how to send HTTP requests from frontend
Day- 2	Fetched data from backend API and displayed it in React UI	Connected frontend with backend dynamically
Day–3	Posted form data from React to Spring Boot backend	Performed frontend-to-backend data submission
Day–4	Handled success and error responses in React	Improved user interaction with feedback
Day–5	Created loading indicators and error messages in UI	Enhanced user experience and state management
Day–6	Cleaned up code and structured data flow between components and API	Improved maintainability and data handling

WEEKLY REPORT

WEEK–9 (From Dt: 03-03-25 to Dt: 09-03-25)

Objective of the Activity Done: To integrate the React frontend with the Spring Boot backend using REST APIs, and implement dynamic data rendering and user interaction handling.

Detailed Report:

In Week 9, we focused on bridging the gap between frontend and backend by using Axios to perform HTTP operations from the React interface. We configured Axios to communicate with our Spring Boot APIs and used it to fetch data from the backend and render it dynamically on the webpage.

Midweek, we learned how to send form data from React to the backend using POST requests, and how to handle the responses — both successful and erroneous — using React's state and conditional rendering. This made our UI interactive and responsive to different outcomes such as successful submission, input validation failure, or server errors.

Later in the week, we implemented UI indicators like loading spinners, alerts, and messages to provide better feedback to users. We also focused on cleaning and organizing our component structure and centralized API logic to improve code readability and reusability.

By the end of the week, we successfully created a fully integrated frontend-backend flow, enabling users to interact with live data in real-time through a clean and responsive interface.

ACTIVITY LOG FOR THE TENTH WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Introduction to Spring Security and authentication flow	Understood security architecture in Spring Boot
Day- 2	Implemented login API with username and password authentication	Created secure login mechanism
Day–3	Integrated JWT (JSON Web Token) for session management	Learned token-based authentication
Day–4	Built login form in React and connected to Spring Boot login API	Created frontend authentication flow
Day–5	Protected frontend routes using conditional rendering	Restricted access to authenticated users only
Day–6	Handled invalid login cases and displayed error messages	Improved UX with clear feedback and validations

WEEKLY REPORT

WEEK–10 (From Dt: 10-03-25 to Dt: 15-03-25)

Objective of the Activity Done: To implement user authentication using Spring Security and JWT, and protect routes in the React frontend to build a secure full stack application.

Detailed Report:

Week 10 focused on introducing security mechanisms into the application. We started by learning about Spring Security, its built-in authentication flow, and how it can be used to secure RESTful APIs. We created a login endpoint in Spring Boot that accepted credentials and validated users.

Midweek, we implemented JWT (JSON Web Token) to manage user sessions in a stateless way. Once a user logged in successfully, the backend returned a token, which the frontend stored and used for all protected API calls. We also built a login form in React, connected it to the backend, and handled the login process end-to-end.

Later in the week, we implemented route protection in React by using conditional rendering and redirecting unauthorized users. We also handled login errors like incorrect passwords and unauthorized access, displaying clear feedback messages to the user.

By the end of the week, we had a secure, authenticated system that allowed users to log in, store session tokens, and access protected parts of the application. This setup closely mirrors the login flows found in professional web applications.

ACTIVITY LOG FOR THE ELEVENTH WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Learned how to host backend and frontend applications	Understood what deployment means
Day- 2	Uploaded backend (Spring Boot) to Heroku	Practiced backend deployment
Day–3	Uploaded frontend (React) to Netlify	Practiced frontend deployment
Day–4	Set API links and environment settings	Learned how to connect frontend and backend online
Day–5	Performed manual testing across devices and browsers	Tested how app works in different places
Day–6	Fixed small errors and made app faster	Improved the performance of the app

WEEKLY REPORT

WEEK–11 (From Dt: 17-03-25 to Dt: 22-03-25)

Objective of the Activity Done: To present the completed full stack application, receive feedback, complete technical documentation, and formally conclude the internship with self-assessment and professional reflection.

Detailed Report:

In Week 11, we focused on bringing our application from the local development environment to the cloud. We began with an overview of hosting platforms and deployment workflows for full stack apps. Our backend, built with Spring Boot, was deployed on Heroku, while the React frontend was hosted using Netlify — both of which support easy CI/CD pipelines for quick deployment.

We configured environment variables such as API URLs and secret keys to ensure a smooth and secure deployment, making sure the frontend could communicate with the live backend. We also resolved CORS issues and ensured that both services functioned properly in production.

Throughout the week, we performed manual testing on different devices and browsers to check responsiveness, API connectivity, and authentication flows. We also worked on code optimization, including cleaning up unused code, reducing console warnings, and optimizing image and file sizes for faster load times.

By the end of the week, the application was live, fully functional, and ready for demo or usage. We gained hands-on experience with deployment strategies, a skill critical in real-world full stack development.

ACTIVITY LOG FOR THE TWELTH WEEK

DAY	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME
Day–1	Prepared final summary and walkthrough of the full stack application	Learned how to organize and present project work
Day- 2	Gave a live demo of the application to the mentor/team	Improved communication and demo delivery skills
Day–3	Received feedback and noted areas of improvement	Gained insights for refining technica and soft skills
Day–4	Completed internship report and technical documentation	Learned proper technical writing and formatting
Day–5	Participated in internship conclusion	Understood the importance of professional conduct

WEEKLY REPORT

WEEK–12 (From Dt: 24-03-25 to Dt: 29-02-25)

Objective of the Activity Done: To present the completed full stack application, receive feedback, complete technical documentation, and formally conclude the internship with self-assessment and professional reflection.

Detailed Report:

In Week 12, we focused on presenting the complete work done throughout the internship and formally wrapping up the program. We began the week by preparing a project summary and step-by-step walkthrough, organizing our codebase, and setting up the demo environment.

A live demonstration of the application was given to mentors and fellow interns, showcasing its features, user flow, authentication, and real-time interaction between the frontend and backend. We received constructive feedback on our presentation, code structure, UI/UX, and deployment.

Later in the week, we updated our resume and LinkedIn profile with the skills and tools learned during the internship, and detailed our project experience to highlight real-world exposure. We also compiled and submitted the internship report, including code samples, architecture overview, and screenshots of output and deployment.

Finally, we participated in a closure session, shared feedback about the internship experience, and extended gratitude to our mentors and the organization for their support.

This week gave us a chance to reflect on our progress, document our learning, and leave with industry-relevant experience in full stack development.

CHAPTER 5: OUTCOMES DESCRIPTION

Describe the work environment you have experienced

My internship at Make Skilled Innovation Park, Hyderabad was a memorable and enriching experience. The work environment was very welcoming and gave me the feeling of being part of a real software team. From day one, the mentors and team members were approachable, friendly, and always ready to help. Even though we were interns, we were treated with respect and guided like professionals.

The tasks were given with proper instructions, and there was clarity about what we had to do each week. This made it easy to manage our time and complete our assignments on time. The working structure was well organized —daily attendance, timely feedback, and proper communication helped us stay on track. Everything followed a process, and there was a professional routine to how things were handled.

One of the best parts of the internship was the team bonding. Interns helped each other out, and even when someone was stuck, others were ready to support. We worked in coordination, shared knowledge, and built a strong sense of teamwork. Discussions were healthy and respectful, and we were free to share our ideas openly. The mentors constantly motivated us, corrected our mistakes, and appreciated our efforts. This encouragement helped us build confidence in both technical skills and communication. I personally felt more confident in handling tasks, writing better code, and even explaining my work during presentations.

Overall, the work environment was not only disciplined and professional but also positive and encouraging. It helped me grow as a learner, as a developer, and most importantly, as a team player. This internship has shaped my perspective about the software industry and prepared me for what's ahead.

Describe the real time technical skills you have acquired.

During my internship at Make Skilled Innovation Park, I had the opportunity to work on real-time tasks and apply what I had learned in theory to actual projects. This gave me a clear understanding of how software is developed in the industry. I not only practiced coding, but also learned how different technologies are used together to build a complete web application. Below are the main technical skills I gained during the internship:

- **Core Java Programming**
  Gained confidence in writing programs using loops, arrays, strings, and object-oriented concepts such as classes, objects, inheritance, and polymorphism.
- **Frontend Development (HTML, CSS, JavaScript)**
  Learned how to design clean and responsive web pages, style them using CSS, and add interactivity through JavaScript and event handling.
- **React.js (Frontend Framework)**
  Developed modern user interfaces using React. Created components, managed state and props, handled user input, and used conditional rendering to build dynamic UIs.
- **Spring Boot (Backend Framework)**
  Built RESTful APIs using Spring Boot and learned how to structure backend code into controller, service, and repository layers.
- **Database Integration with MySQL**
  Performed CRUD operations and used SQL queries to store and retrieve data. Also learned how to connect databases with backend code using Spring Data JPA.
- **API Integration (Frontend + Backend)**
  Used Axios in React to connect frontend forms with backend APIs and display real-time data from the database.
- **API Testing using Postman**
  Tested API endpoints for both GET and POST methods, validated response data, and debugged backend issues using Postman.
- **Deployment and Hosting**
  Deployed backend on Heroku and frontend on Netlify, gaining knowledge of how web applications are hosted and made accessible on the internet.
- **Version Control with Git & GitHub**
  Learned how to use Git commands, push/pull code, and maintain project versions using GitHub repositories.

Describe the managerial skills you have acquired

During my internship at Make Skilled Innovation Park, I developed several managerial skills that were integral to my role. I effectively planned and managed tasks by breaking them into smaller, achievable goals and adhering to realistic deadlines. I honed my leadership abilities by taking initiative in team projects, guiding colleagues, and ensuring alignment with the overall project objectives. Collaboration was key, and I learned to work effectively within a team, managing conflicts, sharing ideas, and supporting peers to achieve a common goal.

In terms of behavior, I focused on maintaining a professional attitude, providing constructive feedback, and fostering a positive working environment. I also prioritized producing high-quality work while making productive use of my time by balancing project tasks and personal activities efficiently. Through weekly self-assessments, I tracked my progress and set improvement goals, which allowed me to continuously refine my technical skills in Java Full Stack development.

Additionally, I developed strong decision-making abilities by evaluating different solutions, considering their potential outcomes, and selecting the most effective approach. Regular performance analysis through feedback from mentors and colleagues helped me reflect on my strengths and areas for improvement, ensuring steady progress throughout the internship. These managerial skills have significantly contributed to my personal and professional development during my time at Make Skilled Innovation Park.

Describe how you could improve your communication skills

During my Java Full Stack internship at Make Skilled Innovation Park, I enhanced my communication skills through active involvement in team meetings, project discussions, and client reviews. I practiced verbal communication by clearly explaining complex technical topics, such as Java frameworks, database integration, and RESTful API design, during group sessions and presentations.

I refined my oral communication by actively seeking mentor feedback and preparing thoroughly for project demonstrations and weekly reviews, which strengthened my public speaking and presentation skills. To ensure clarity, I used code examples, system architecture diagrams, and real-time project walkthroughs to explain backend logic, UI/UX design, and system architecture.

In addition, I improved my written communication by drafting project documentation, technical reports, and professional emails with a focus on clarity, conciseness, and formality. I adhered to professional etiquette, practiced active listening, and maintained a collaborative and positive attitude within the team.

By prioritizing clarity, visual support, and feedback-driven improvement, I became more effective in cross-functional communication, leading to enhanced team collaboration and successful project completion.

Describe how could you could enhance your abilities in group discussions, participation in teams, contribution as a team member, leading a team/activity.

During my Java Full Stack internship at Make Skilled Innovation Park, I focused on enhancing my abilities in group discussions, team participation, and leadership, despite working independently. I actively engaged in meetings and discussions with my mentors, where I contributed ideas, asked questions, and sought feedback to improve my work. This helped me clarify technical concepts and provided an opportunity to refine my approach based on constructive feedback.

I took responsibility for various tasks, such as implementing Java features, integrating databases, and debugging issues. I ensured my work was well-organized, stayed aligned with the project goals, and communicated my progress regularly to maintain transparency. By taking ownership of my assignments, I was able to ensure timely delivery and quality results.

As I progressed, I had the chance to lead certain activities, including presenting updates and demonstrating the features I developed. I focused on improving my presentation skills by preparing clear, structured explanations and ensuring that I could communicate technical information effectively to both technical and non-technical audiences. This experience helped me build confidence in my ability to manage tasks and communicate my work with clarity.

Overall, through active engagement, ownership of tasks, and improving my communication and presentation skills, I developed a strong foundation in team participation and leadership, equipping me for future roles that require collaboration and independent responsibility.

Describe the technological developments you have observed and relevant to the subject area of training.

During my Java Full Stack internship at Make Skilled Innovation Park, I observed several important technological developments that are highly relevant to my area of training and future job roles. This internship provided exposure to current trends in digital technologies, particularly in the context of web application development.

One of the major developments I observed was the increasing use of modern Java frameworks like Spring Boot, which simplifies backend development by offering built-in support for creating robust APIs, handling database connectivity, and implementing security. I learned how this framework promotes faster development and improves application performance, making it highly efficient for real-time web applications.

On the frontend, I worked with HTML, CSS, JavaScript, and modern libraries like React, which are widely used in building responsive and user-friendly interfaces. These technologies represent a shift towards dynamic and interactive web experiences, replacing traditional static pages. I understood how component-based development in React improves maintainability and scalability of large applications.

Another important technological trend I explored was the use of RESTful APIs to connect the frontend and backend, enabling smooth communication and data exchange. This architecture is a standard in full stack development and essential for building scalable and modular applications.

I also observed the growing emphasis on version control systems like Git, which are essential for collaborative development, even in academic or individual projects. Learning how to manage code versions, track changes, and collaborate using platforms like GitHub added practical value to my skillset.

Additionally, I gained awareness of automated build tools, code testing frameworks, and deployment practices, which are becoming increasingly important as part of DevOps integration in modern development environments.Overall, these technological developments deepened my understanding of the digital tools and practices that are shaping the future of software development. The internship helped me connect theoretical knowledge with real-world applications and prepared me to adapt to the fast-evolving demands of the tech industry.