

## **Project Ekalavya**

Project Ekalavya aimed to enhance understanding of Git and GitHub, frontend development, database management, and the product lifecycle. Each session focused on these topics provided practical knowledge and included tasks customized for each college.

### **1. Agile Methodologies:**

We started our sessions with Agile Methodologies, focusing on building software in small, iterative steps. Learning about the Agile Manifesto highlighted the importance of collaboration over documentation and adaptability over rigid planning, offering a more flexible and efficient approach than traditional methods.

### **2. Git and Github:**

The session concentrated on version control systems like Git and GitHub. We explored Git's basic commands for managing code versions, including merging and handling conflicts. GitHub was introduced as a central platform for hosting repositories and facilitating collaboration through features like pull requests. Basic Git commands for branching, merging, and resolving conflicts were also highlighted.

### **3. Database:**

The session focused on the fundamentals of databases, covering key concepts such as queries, keys, and the basics of PostgreSQL. We delved into ER diagrams, learning how to convert them into database schemas to effectively design and structure databases. This hands-on approach provided us with essential knowledge and skills to manage data efficiently, understand database architecture, and implement structured solutions in real-world scenarios.

### **4. Front-end (HTML/CSS, JS, React)**

During this session, we covered a broad introduction to web development essentials. We began with HTML for structuring web content, followed by CSS for styling, and JavaScript basics for interactive elements. We then focused on using JavaScript for form validation, enhancing user input handling. Introducing React, we explored its fundamentals for building dynamic user interfaces and specifically used React for creating interactive forms, demonstrating its power in simplifying front-end development and enhancing user experience.

### **Practical Assignments:**

The bootcamp involved real-world projects that reinforced our learning. One project involved creating a portfolio website to showcase our skills, while another tasked us with developing an employee management system using PostgreSQL. These projects provided valuable opportunities to test our abilities and apply our knowledge in practical scenarios.

## **5. Product Management:**

In our Product Management session, we explored the full lifecycle of a product, from brainstorming ideas to retiring it. We learned how to understand customer needs, develop and launch products, and iteratively improve them based on user feedback. This holistic approach ensures that products are not only well-received upon launch but also evolve to meet changing market demands and user expectations over time.