Flipkart

FLIPFIT

TOGETHER,
WE DARE
TO MAXIMISE.

Where did we start?

We began our journey as a team and we individually had only limited knowledge on smaller scope projects which we have done in our colleges.

On the first day, we only knew some fundamentals of Git, followed by the workings and syntax of Java.

Framework for the week

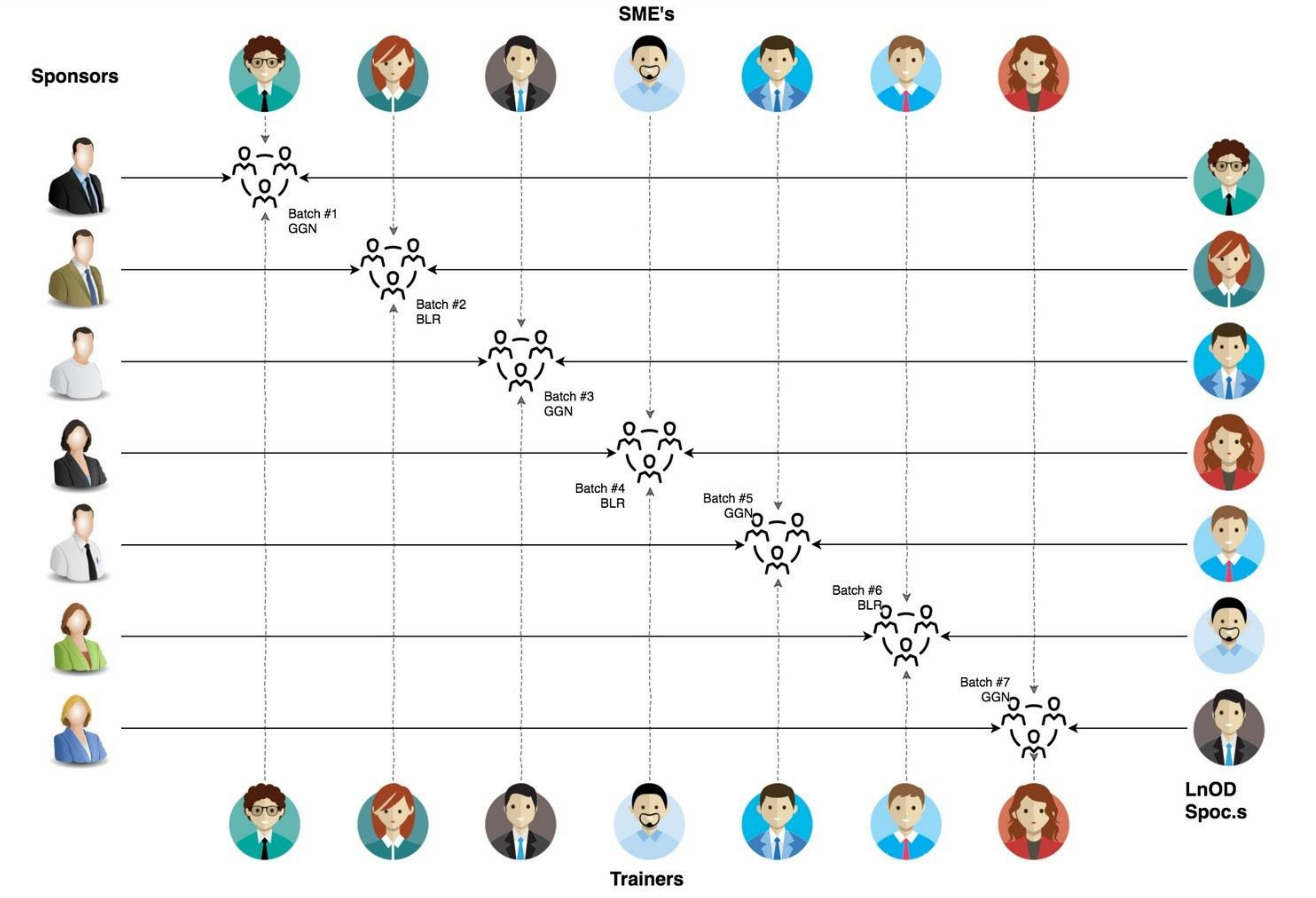
- 6 days plan
- Every Day Discussion about topics/technologies
- Every day with SME/Trainer discussion of Project progress and transformation based on UML and technologies

Stakeholders

1. Sponsors
   1. Flipkart

2. SME’s
   1. Mr. Amit Kr. Balyan

3. Trainers
   1. Ms Anushka Khanna



Our next starts

NOW

1 Week of Training + Project demo

6 DAYS

144 HOURS

8640 MINUTES

518400 SECONDS

Limitless knowledge

Agenda

01 Our Journey

02 Our Team

03 Team Structure

04 Project Goals

05 Engineering Practices

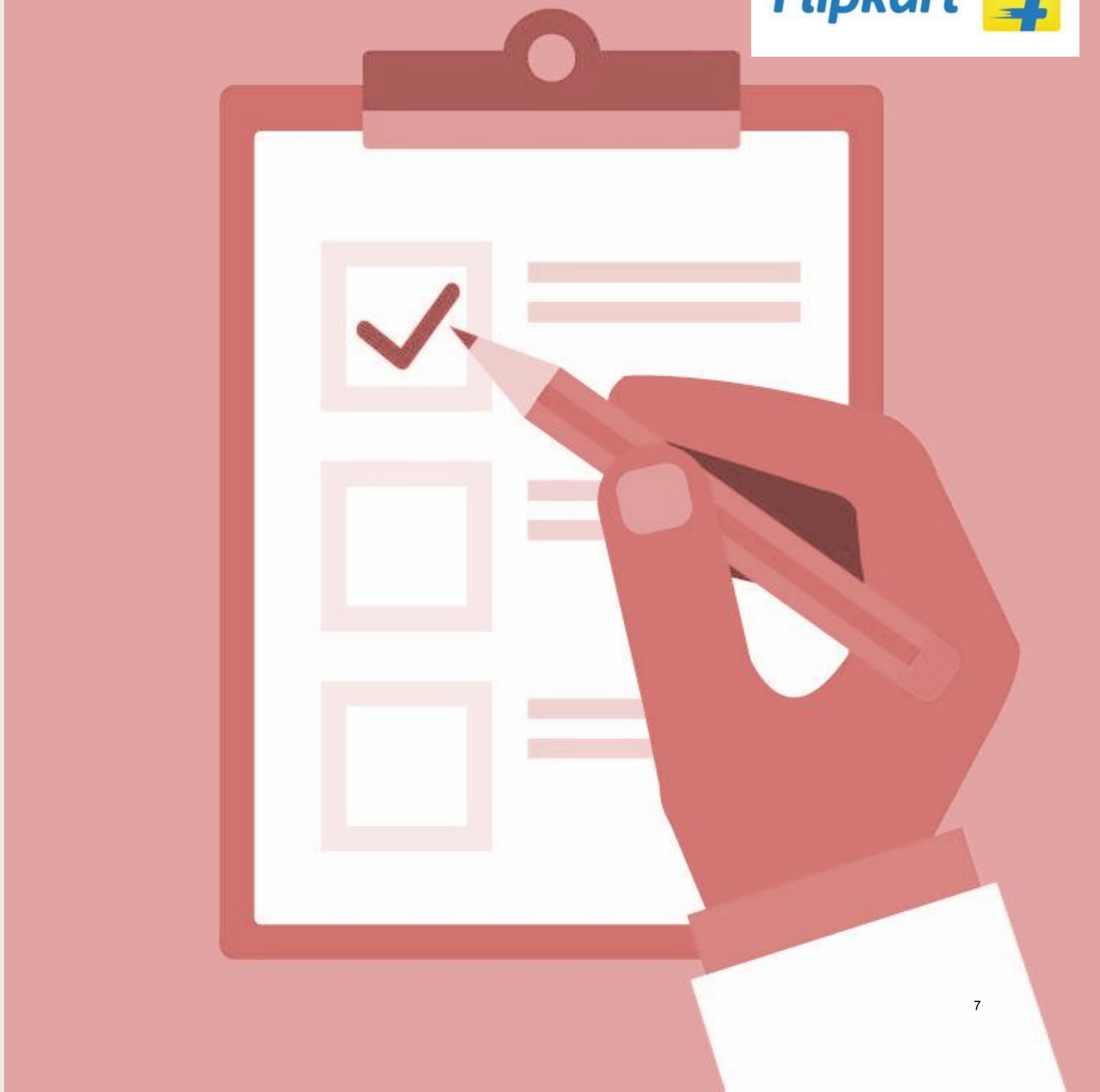
06 Tech Stack

07 Development

08 Challenges & Learnings

09 Demo

10 Questions



Our Journey

- Project Demo
- Adapting to a developer Mindset
- Design Thinking
- Decide the Technologies JAVA, MySQL, DropWizard
- Understanding Project Goals

Our Team: Group F

Abhinav Chauhan - Team Leader

Mukul Asija

Nadeem Raza

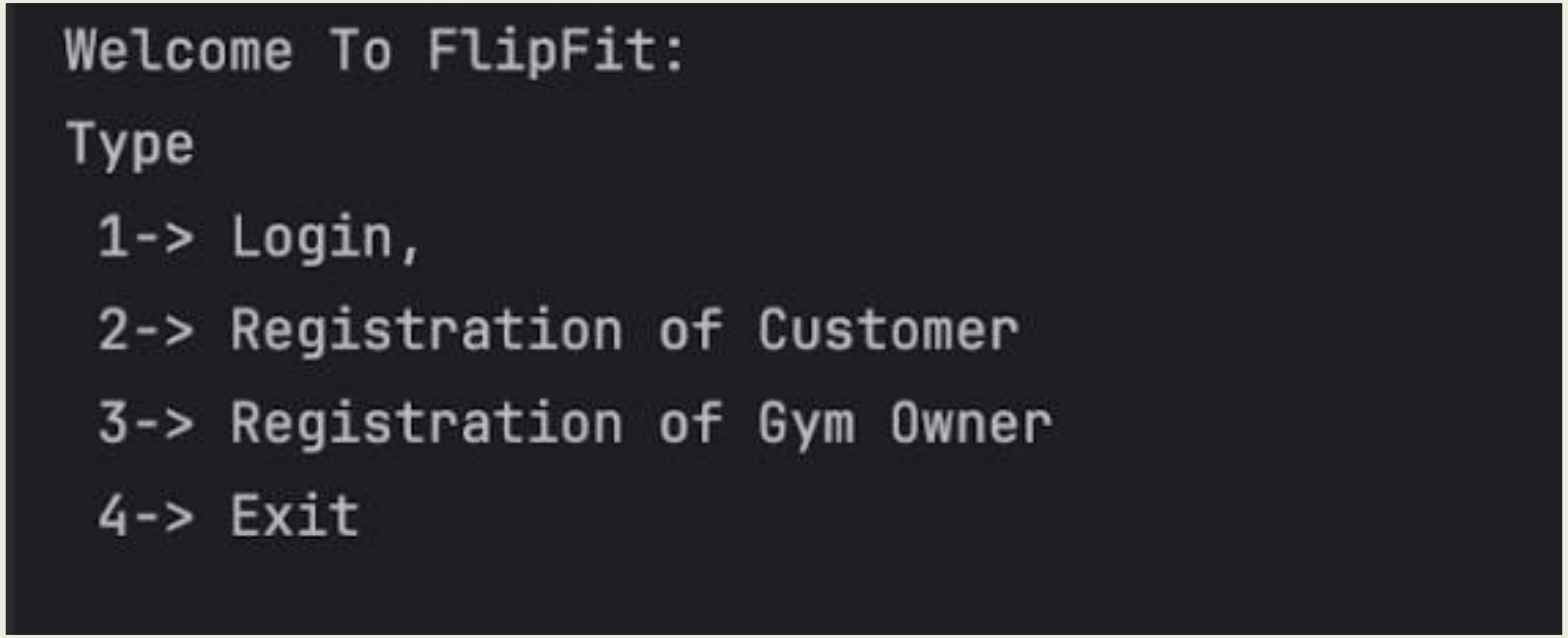
Mohit Prajapat

Shiva Shankar

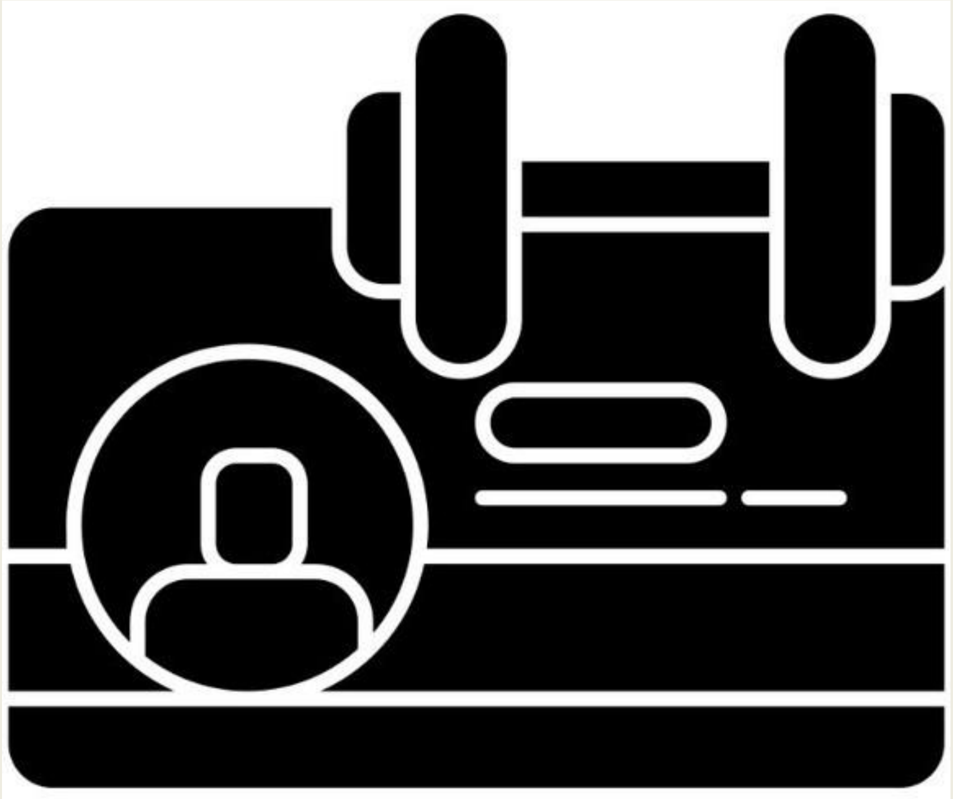
Satya Prakash

Saurav Balaji

Project Goals



```
Welcome To FlipFit:
Type
 1-> Login,
 2-> Registration of Customer
 3-> Registration of Gym Owner
 4-> Exit
```



Problem Statement

Design FlipFit, an enterprise app for Flipkart's fitness venture in Bengaluru. Features include multiple gym centers with fixed-hour slots per center, managed by gym owners. Users can register, view center availability, and book slots, ensuring no double bookings and capacity constraints. Simplified admin slot setup ensures accurate booking management.

Our Vision

- FlipFit is dedicated towards reshaping Bengaluru’s fitness industry by addressing common customer concerns.
- Provides a seamless, all-in-one platform for discovering, booking, and managing gym sessions.
- Offers access to multiple fitness centers, making fitness more accessible and convenient.

Timeline for 1 Week

Day 1

- Install necessary tools.
- Formation of teams
- Discuss problem statement with team, define goals, and worked on solutions.

Day 2

- Introduction to Git: Setup repository, branching, merging.
- Low-Level Design (LLD): Use Case, Class, Activity diagrams.

Day 3

- Started working on application POS.
- Divide application into packages: Bean, Business, Client, DOA.
- Started coding functional components

Day 4

- Connect MySQL database to FlipFit App.
- Implement DAO for database interaction.
- Develop business logic and login functionality.

Day 5

- Explore Java17 new features: DateandTime API, Stream API, forEach loop.
- Improved the business logics.

Day 6

- Explored and implemented DropWizard.
- Prepared presentation.

Engineering Practices

1. Version Control (Git/GitHub): Used Git for version control, feature branching, and regular commits.

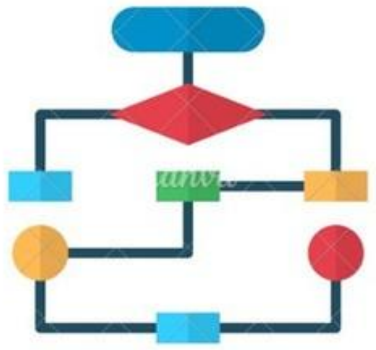
- Benefits: Facilitates collaboration, tracks changes, and enables easy rollback.

2. UML Diagrams: Standardized on UML for system design, ensure clarity in diagrams, and use tools for consistency.

- Benefits: Aligns team understanding, supports documentation, and aids in communicating design.

3. Design Principles (SOLID): Applied SOLID principles (Single Responsibility, Open/Closed, Liskov Substitution, Interface Segregation, Dependency Inversion) for robust, maintainable code.

- Benefits: Improves code quality, scalability, and facilitates easier maintenance and extension.



Engineering Practices

4. Business Modules and Packaging: Organized code into cohesive modules aligned with business domains, use appropriate packaging structures.
- Benefits: Enhances modularity, reduces dependencies, and improves code organization and reusability.

5. Documentation and Knowledge Sharing: Maintained comprehensive documentation and Conducted internal team meetings before working on any feature
- Benefits: promotes knowledge sharing, and serves as a reference for future development and maintenance.

TechStack

Backend

Java

Data

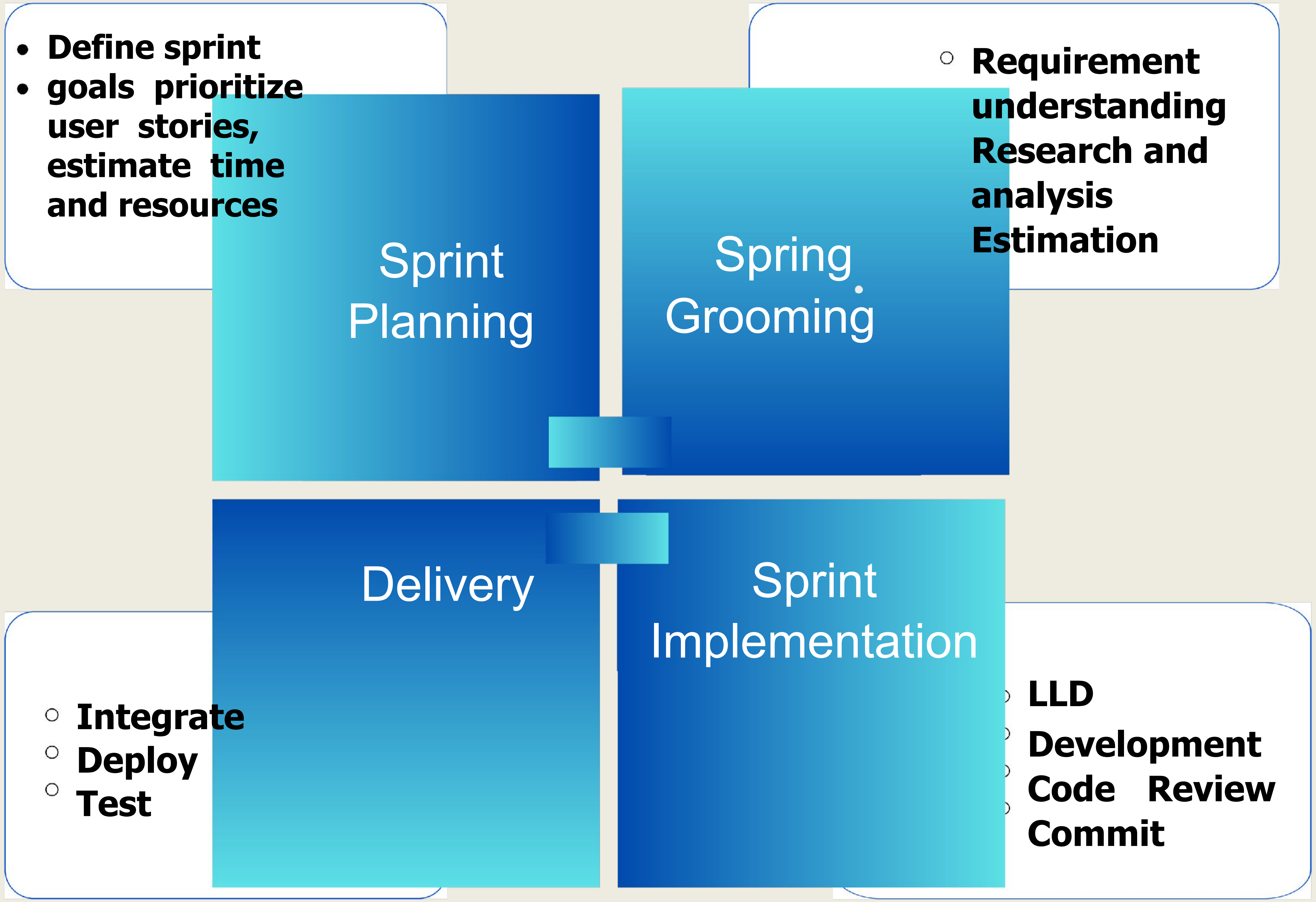
MySQL

Tools

GitHub

IJ

Development



Sprint Planning

- Define sprint
- goals prioritize user stories, estimate time and resources

Spring Grooming

- Requirement understanding Research and analysis Estimation

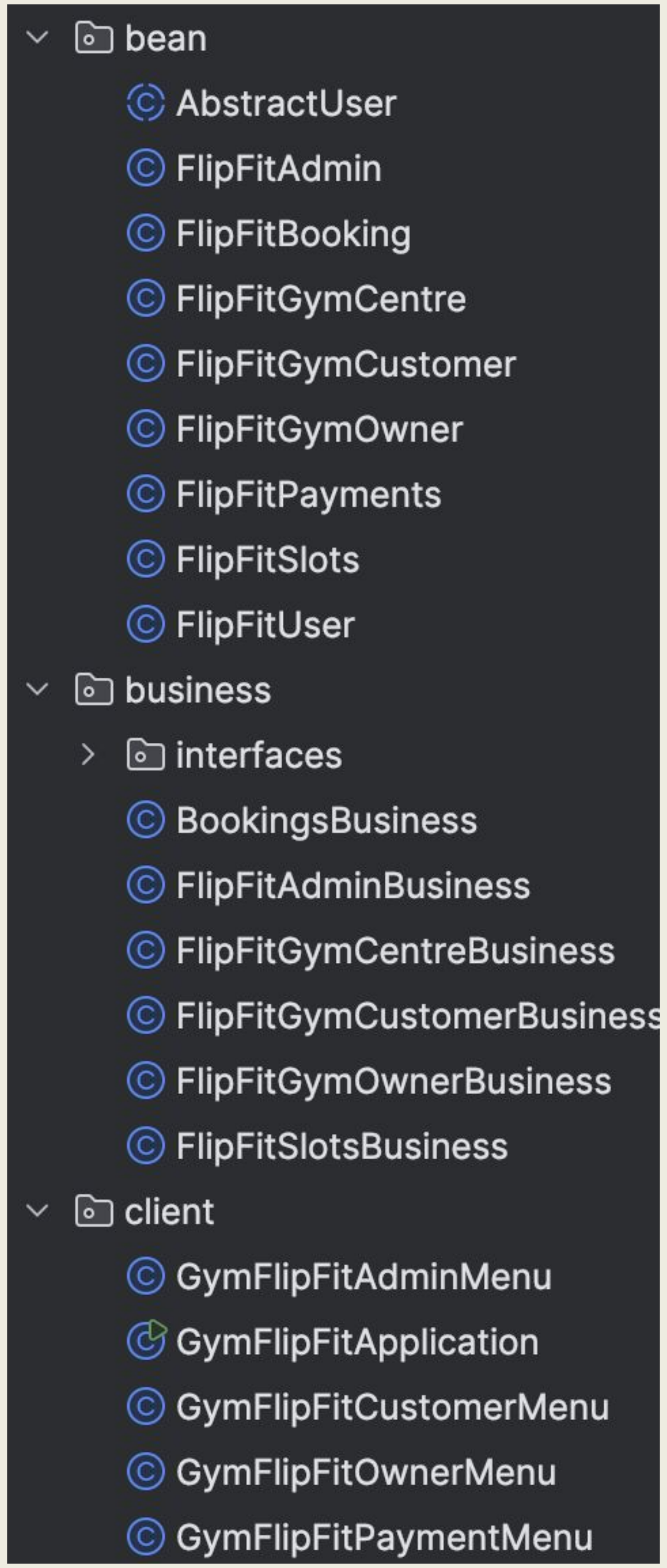
Sprint Implementation

- LLD
- Development
- Code Review
- Commit

Delivery

- Integrate
- Deploy
- Test

Project Structure



```
bean
    AbstractUser
    FlipFitAdmin
    FlipFitBooking
    FlipFitGymCentre
    FlipFitGymCustomer
    FlipFitGymOwner
    FlipFitPayments
    FlipFitSlots
    FlipFitUser
business
    interfaces
    BookingsBusiness
    FlipFitAdminBusiness
    FlipFitGymCentreBusiness
    FlipFitGymCustomerBusiness
    FlipFitGymOwnerBusiness
    FlipFitSlotsBusiness
client
    GymFlipFitAdminMenu
    GymFlipFitApplication
    GymFlipFitCustomerMenu
    GymFlipFitOwnerMenu
    GymFlipFitPaymentMenu
```

How did we write code?

- Bottom-up code
- Vertical responsibilities

What we did well

1. Read and create functionality in User, GymOwner, GymCustomer, Bookings, Slots and GymCentre DAO’s
2. Backend functionality for multiple payment types for the customer
3. Well tested and functional backend
4. Minimal merge conflicts, proper branching of project
5. Extensively used git

Challenges & Learnings

UML Diagram - LLD Structure

Challenges: Collaborating in a diverse team of six with varying educational backgrounds, aligning on a single process flow and holistic system view.

Learning: Enhanced understanding of software design principles, standard notation usage, and aligning diagrams with business module requirements for clearer communication and design documentation.

Demo

Questions

WHY?
WHAT?
WHERE?
WHEN?
WHO?
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WHAT? HOW? WHY?
HOW?

Thank you!