

Welcome Session

Backend Team Orientation

Agenda

1. Introduction

- Welcome and Purpose of the Student activity.

2. Roles & Responsibilities

- Overview of Backend Developer Role

3. What must any good backend developer have

4. System Overview

- How Task Submission Works
- Tools for Idea Sharing and Problem-Solving

5. Rules

Introduction

- Welcome to the Backend Team!
- Who I am?
- Brief overview of our goals
- The importance of teamwork and communication "OSC"

Role of Backend Developer

- **Design, Develop, and Maintain APIs**
 - Provide endpoints for frontend interaction
 - Ensure security and scalability
- **Database Management**
 - Create and maintain databases
 - Data integrity and optimization
- **Error Handling and Debugging**
 - Identify, resolve, and log errors
 - Continuous improvement and reliability

Task Submission System

- **How it Works**

- Task submission and tracking workflow
- How to receive, complete, and submit tasks

- **Idea Sharing**

- Documenting ideas for system improvements
- Using [your chosen tool] to collaborate on ideas

- **Problem-Solving**

- Where to log issues and propose solutions
- Issue tracking process and follow-ups

Communication & Documentation

- **Documentation Tools**

- Record all ideas, improvements, and problems
- Where to find templates and guidelines

- **Channels of Communication**

- Preferred channels (Slack, Email, etc.)
- Frequency and style of check-ins

What Must Any Good Backend Developer Have

1. Strong Technical Skills

- **Proficiency in Backend Languages:** Mastery of languages like JavaScript (Node.js), Python, Java, etc.
- **Database Knowledge:** Experience with both SQL and NoSQL databases.
- **API Design and Integration:** Ability to design efficient, RESTful APIs and integrate with external services.

2. System Architecture Knowledge

- **Understanding of Microservices and Monolithic Architectures:** Knowing when and how to use each approach.
- **Scalability and Load Balancing:** Ensure systems can handle increased loads and traffic.
- **Cloud Infrastructure:** Familiarity with cloud platforms (AWS, Azure, etc.) and containerization (Docker, Kubernetes).

3. Familiarity with Design Patterns

- **Common Backend Design Patterns:** Knowledge of patterns like Singleton, Factory, Repository, and Dependency Injection.
- **Applying Patterns to Solve Problems:** Use patterns to write clean, reusable, and scalable code.
- **Event-Driven and Asynchronous Programming:** Effective use of asynchronous methods and event-driven architecture for efficiency.

4. Problem-Solving Abilities

- **Analytical Thinking:** Break down complex issues and solve them effectively.
- **Debugging Skills:** Quickly identify and resolve errors.
- **Adaptability:** Ability to adjust to new challenges, tools, or methodologies.

5. Understanding of Best Practices

- **Security Awareness:** Knowledge of data security, authentication, and authorization principles.
- **Code Quality and Documentation:** Write clean, maintainable, and well-documented code.
- **Scalability and Performance:** Ensure the backend can handle growth and high traffic.

6. Collaboration & Communication

- **Effective Communication:** Clear and proactive communication with other teams (e.g., frontend, design).
- **Teamwork:** Open to feedback, pair programming, and code reviews.
- **Continuous Learning:** Stay updated with new technologies, frameworks, and best practices.

Rules

- ! الأختلاط
- الاعتذارات
- تأكد انك دائما مرتاح
- لا تتردد في السؤال

Q&A

- Any questions or suggestions?
- Feedback [form](#)

