

# GRADEBOOK

# INTRODUCTION: WHAT WE BUILD

A grade management software  
for teachers



# AI'S ROLE IN OUR PROJECT

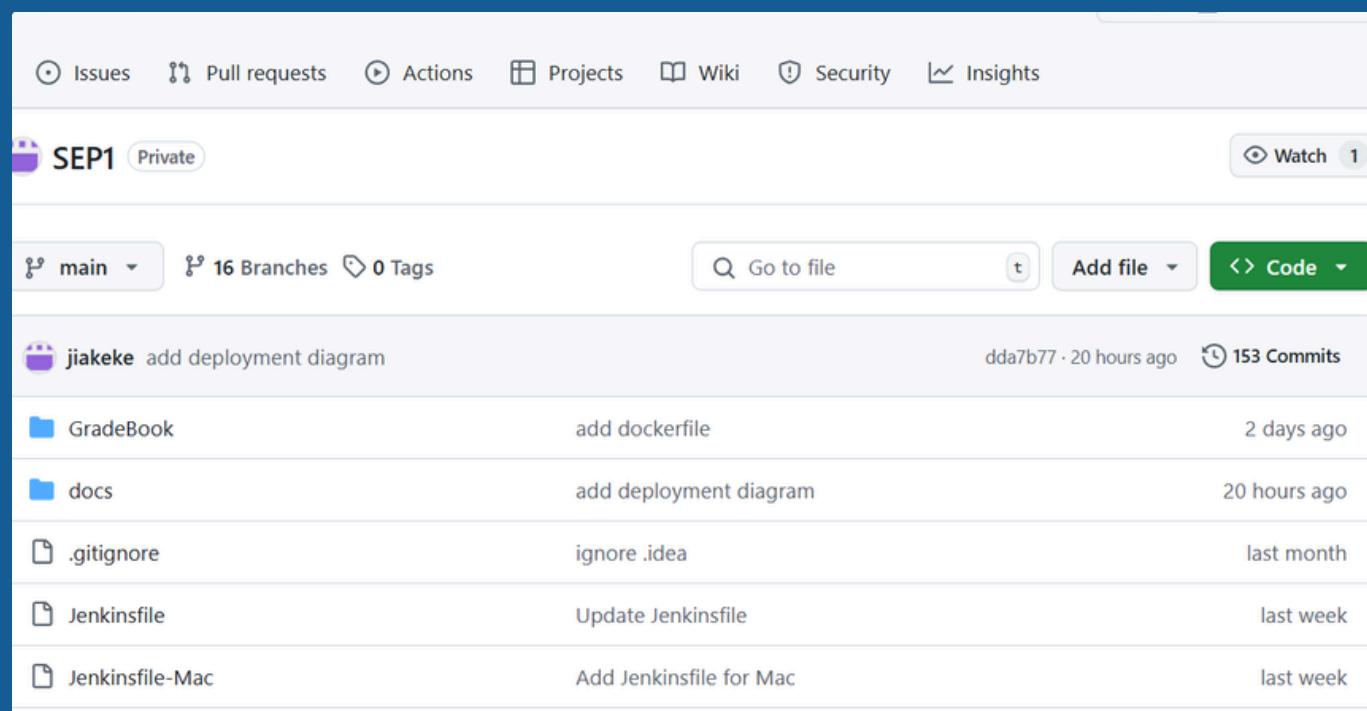
## BUG FIXING

AI provided efficient suggestions for debugging, helping to identify and resolve issues faster.

## TESTING ASSISTANCE

AI contributed to optimizing test cases, improving overall efficiency

# HOW WE COLLABORATED



A screenshot of a GitHub repository named 'SEP1'. The repository is private. It shows 16 branches and 0 tags. The main branch is selected. There are 153 commits from the user 'jiakeke'. The commits are listed as follows:

Commit	File	Date
add deployment diagram	jiakeke	dd47b77 · 20 hours ago
add dockerfile	GradeBook	2 days ago
add deployment diagram	docs	20 hours ago
ignore .idea	.gitignore	last month
Update Jenkinsfile	Jenkinsfile	last week
Add Jenkinsfile for Mac	Jenkinsfile-Mac	last week

Github

**16** branchs

**153** commits

**30** prs



# HOW WE MANAGED OUR PROJECT

## sprint1

sprint master:JiaKe  
sprint backlog:7  
done:7  
release:0  
postpone:0

## sprint2

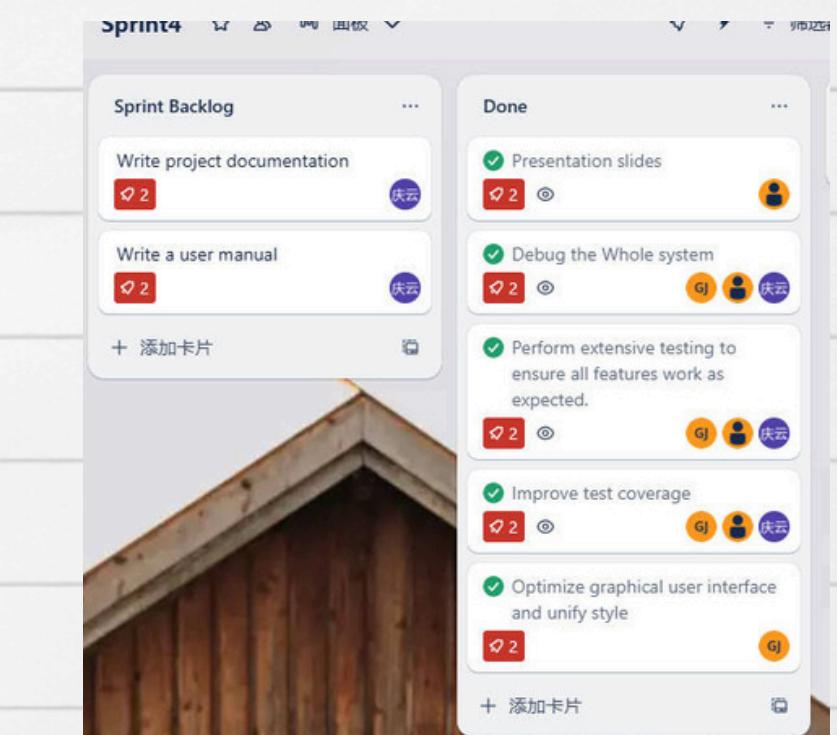
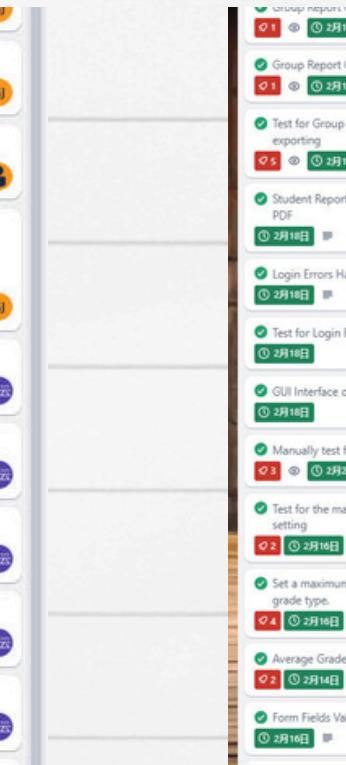
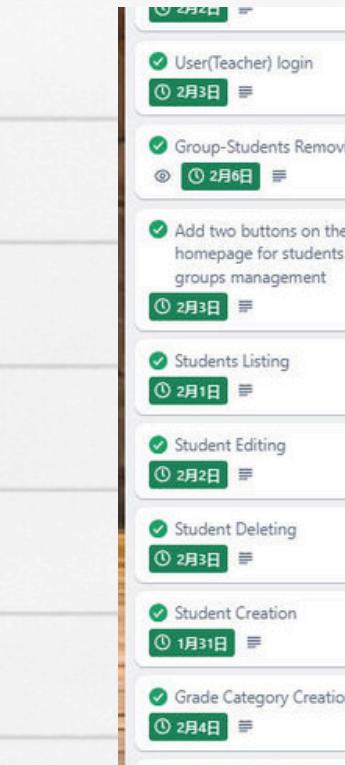
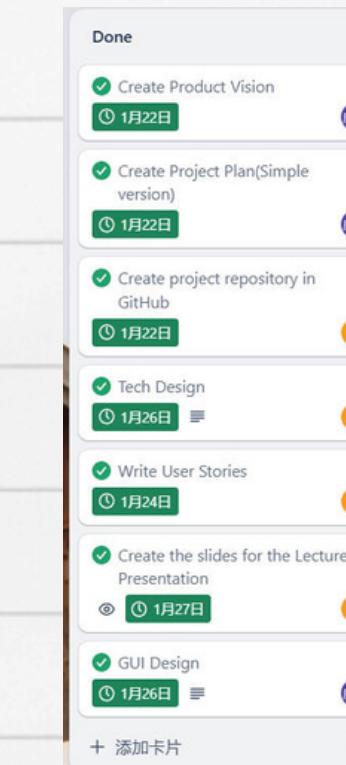
sprint master:QingYun Wang  
sprint backlog:27  
done:27  
release:0  
postpone:0

## sprint3

sprint master:YangYang  
sprint backlog:23  
done:23  
release:0  
postpone:0

## sprint4

sprint master:JiaKe  
sprint backlog:7  
done:5  
release:0  
postpone:0



ER

USER CASE

SEQUENCE DIAGRAM

ACTIVITI DIAGRAM

CLASS DIAGRAM

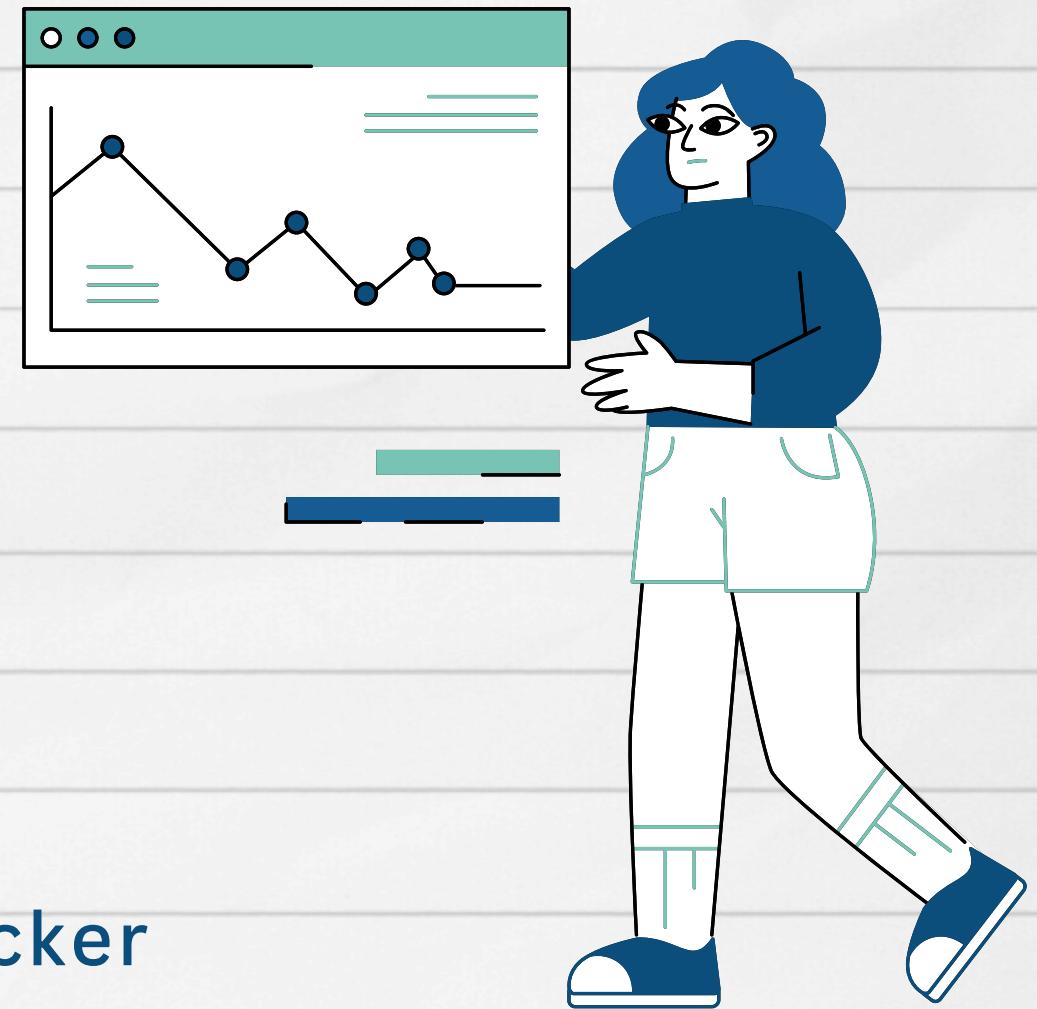
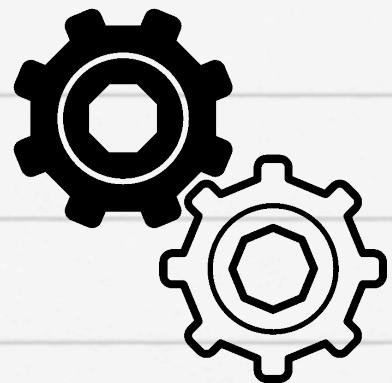
# ARCHITE CTURAL DESIGN



# WHAT WE USE



- Programming Language: Java, SQL
- Frameworks: JavaFX, JDBC
- Database: MariaDB
- Tools: IntelliJ IDEA, GitHub, Trello ,Jenkins , Docker
- AI Assistance: Copilot, ChatGPT



# SHOW DEMO



# LEARNING ACHIEVEMENT



- **Technical Aspect:**

- We developed a desktop application using JavaFX again, reinforcing our previous knowledge and gaining deeper insights into UI design and data interaction.

- **Project Management:**

- We took turns as project managers, experiencing task allocation, progress tracking, and team coordination, which improved our organizational skills.

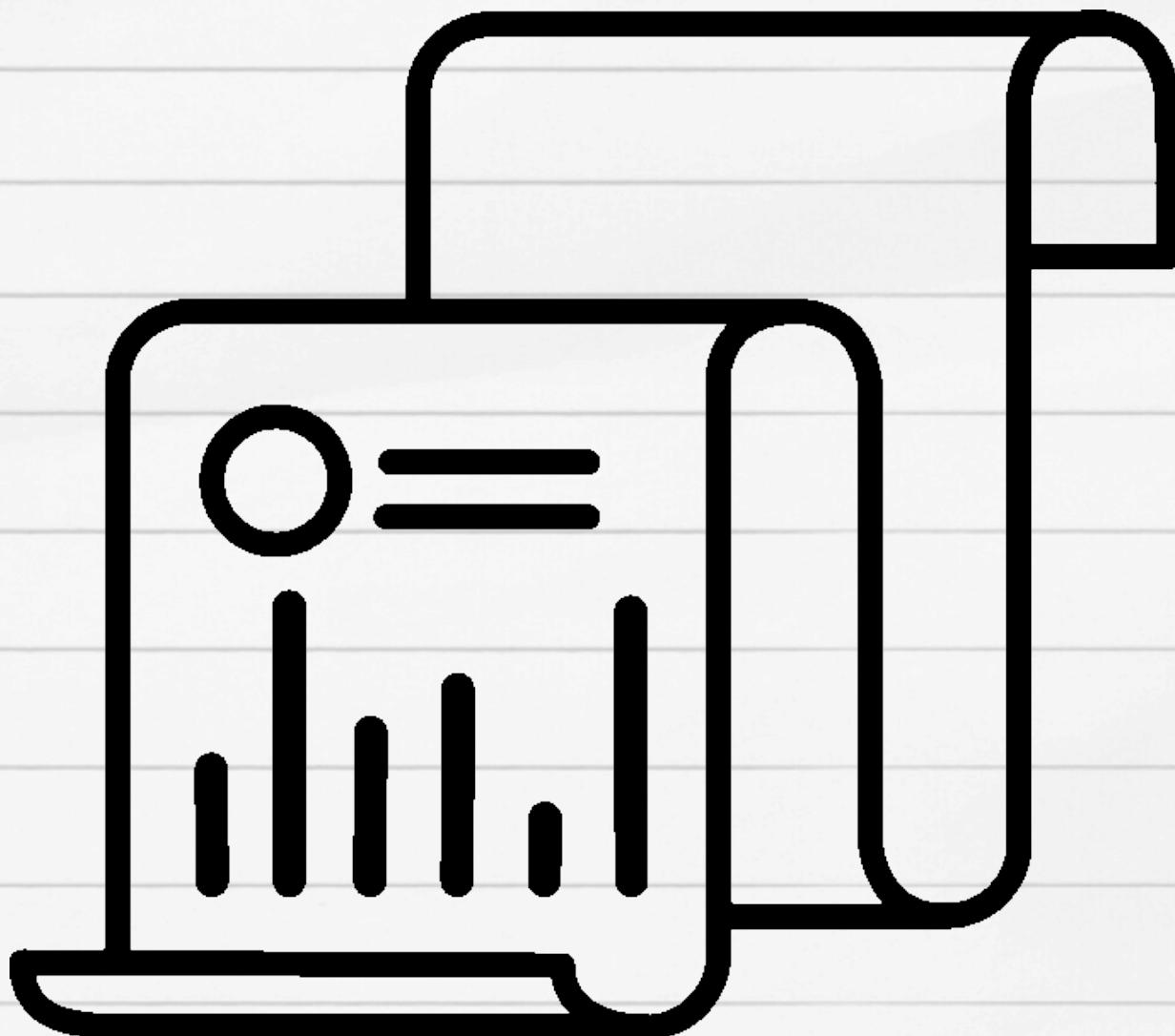
- **Team Collaboration:**

- Using GitHub for version control, we effectively managed code conflicts and optimized team collaboration, making development more efficient.

- **Testing & Deployment:**

- During testing and deployment, we encountered compatibility and environment issues. Through multiple attempts and adjustments, we successfully overcame technical challenges, ensuring system stability.

# DIFFICULTIES ENCOUNTERED



## UI-Related Testing

- Challenge: Testing JavaFX UI components requires simulating user interactions, which traditional unit testing tools cannot fully support.

## Running JavaFX in Docker

- Challenge: JavaFX depends on a GUI environment, while Docker containers typically run in headless mode.

# PLAN FOR FURTHER DEVELOPMENT

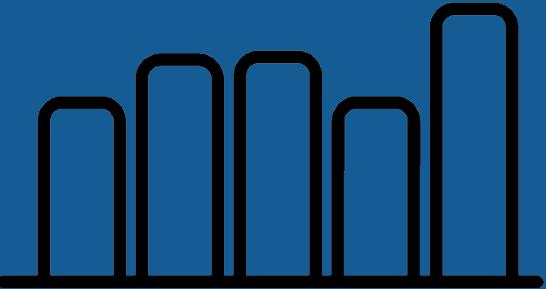
## Enhance UI Design

- Improve user interface layout for better usability.
- Optimize visual elements for a more intuitive experience.
- Ensure consistency across different screens.



## Add Data Statistics and Visualization

- Implement statistical analysis features to provide insights.
- Integrate charts and graphs for a clearer data presentation.
- Use libraries like JavaFX Charts or external tools for better visualization.



**THANK  
YOU VERY  
MUCH!**

