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| **PROJECT / GROUP NAME** | **Group 14** | | | |
| **Start Date** | 2024.03.25 | **Finish Date** | 2024.07.10 | |
| **Aim /**  **Objective** | Backend implementation and deployment: Carry out code development in parallel, and implement back-end functions and interfaces based on project design documents and architecture design. Design and implement back-end code structure based on project architecture and entity relationships to ensure code readability and high performance. Connect architecture design and front-end development to ensure interface consistency. | | | |
| **Work package**  **Manager** | Liu Huiyang | | | |
| **Contributors to this package** | Sun Ruotong  Liu Xinran  Wang Shizheng  Qi Te  Zhang Juncheng | | | |
| **Description /**  **Activities** | Task 5.1 Implement interface   * 5.1.1 Design backend routing paths * 5.1.2 Complete the back-end request api according to the interface   Task 5.2 Handle database operations   * 5.1.1 Check and test whether relational database tables meet back-end usage requirements * 5.1.2 Establish an appropriate connection with the database and encapsulate basic operations such as addition, deletion, modification, and query   Task 5.3 Implement all classes   * 5.3.1 Establish corresponding simple class diagrams based on the ER diagram and functional description given in the architectural design * 5.3.2 Implement code according to the designed class diagram * 5.3.3 Maintain high cohesion and low coupling of class implementation while maintaining code readability and scalability   Task 5.4 Optimize completed code   * 5.1.1 Some code may need to be refactored   Task 5.5 Joint debugging of front-end and back-end   * 5.5.1 Accept errors reported by testers and analyze whether they are back-end code problems * 5.5.2 Assist with frontend staff to fix bugs | | | |
| **Milestones** |  | | | Week |
| M 5.1 Interface routing design completed  M 5.2 Test database meets requirements  M 5.3 Design class diagram based on ER diagram  M 5.4 Implement and optimize all classes  M 5.5 Optimize and refactor existing code  M 5.6 Complete front-end and back-end joint debugging | | | **4**  **7**  **7**  **9**  **13**  **16** |
| **Deliverables** |  | | | Week |
| D 5.1 Deliver the backend api part of the code  D 5.2 Deliver a database that establishes a connection to the backend  D 5.3 Deliver all backend classes  D 5.4 Deliver optimized and refactored code  D 5.5 Deliver all back-end code after joint debugging | | | **5**  **7**  **9**  **13**  **16** |