Project Structure Document

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The Bug Tracking System project will follow a standard Maven project structure: The Bug Tracking System project follows a modular structure that separates the different services and components. The project structure is as follows:

```
bug-service
  - src
    ├─ main
          — java
            └─ com.example.bugtracker.bugservice
                ├─ controller

    □ BugController.java

                  model
                  └─ Bug.java
                  - repository
                   └─ BugRepository.java
                   - service
                   └─ BugService.java
          - resources
       - test
        └─ java
            └─ com.example.bugtracker.bugservice
                └─ service
                   └─ BugServiceTest.java
  — pom.xml
project-service
  - src
    ├─ main
        ├─ java
            └─ com.example.bugtracker.projectservice
                  — controller
                   └── ProjectController.java
                  - model
                   └─ Project.java
                  — repository
                   └── ProjectRepository.java
                   - service
                   └── ProjectService.java
          - resources
        test
        └─ java
            └─ com.example.bugtracker.projectservice
                \sqsubseteq service
                    └── ProjectServiceTest.java
  - pom.xml
user-service
  - src
      — main
```

```
java
            └─ com.example.bugtracker.userservice
                - controller
                  └─ UserController.java
                 — model
                  └─ User.java
                  - repository
                  └─ UserRepository.java
                  - service
                  └─ UserService.java
          - resources
      - test
        └─ java
            └─ com.example.bugtracker.userservice
                └─ service
                  └─ UserServiceTest.java
  - pom.xml
pom.xml
```

Explanation of Directories and Files

- bug-service: This directory contains the Bug Service module, responsible for managing bugs.
 - src/main/java/com.example.bugtracker.bugservice: This package contains the Bug Service module's Java source files.
 - controller: This directory contains the Bug Controller class for handling bug-related API endpoints.
 - model: This directory contains the Bug model class representing the bug entity.
 - repository: This directory contains the Bug Repository interface for database operations.
 - service: This directory contains the Bug Service interface and its implementation for business logic.
 - src/main/resources: This directory contains the configuration files and resources for the Bug Service module.
 - src/test/java/com.example.bugtracker.bugservice: This package contains the unit and integration tests for the Bug Service module.
- project-service: This directory contains the Project Service module, responsible for managing projects.

- src/main/java/com.example.bugtracker.projectservice: This package contains the
 Project Service module's Java source files.
 - controller: This directory contains the Project Controller class for handling project-related API endpoints.
 - model: This directory contains the Project model class representing the project entity.
 - repository: This directory contains the Project Repository interface for database operations.
 - service: This directory contains the Project Service interface and its implementation for business logic.
- src/main/resources
 : This directory contains the configuration files and resources for the Project Service module.
- src/test/java/com.example.bugtracker.projectservice : This package contains the
 unit and integration tests for the Project Service module.
- user-service: This directory contains the User Service module, responsible for managing users.
 - src/main/java/com.example.bugtracker.userservice: This package contains the User Service module's Java source files.
 - controller: This directory contains the User Controller class for handling user-related API endpoints.
 - model: This directory contains the User model class representing the user entity.
 - repository: This directory contains the User Repository interface for database operations.
 - service: This directory contains the User Service interface and its implementation for business logic.
 - src/main/resources
 : This directory contains the configuration files and resources for the User Service module.
 - src/test/java/com.example.bugtracker.userservice: This package contains the unit and integration tests for the User Service module.
- pom.xml: The main Maven configuration file for the entire project, specifying the project dependencies and build configurations.

This project structure follows a modular approach, where each service (bug, project, user) is contained within its own directory. Each service directory contains its own set of source files, test files, and resources. This modular structure promotes separation of concerns and allows for easier maintenance and scalability of the project.