

# Grading Criteria

## Functionality (40 points)

1. User authentication and role-based access control implemented (10 points)
2. Equipment catalog with searchable and filterable items (10 points)
3. Borrow/request and return system implemented (10 points)
4. Logging and tracking of item status and condition (5 points)
5. Exporting reports and borrowing history (5 points)

## Backend (30 points)

1. Use of microservices for modular and scalable backend (10 points)
2. Proper database schema and migrations for users, equipment, requests, and documents (10 points)
3. Well-defined RESTful APIs for core entities (authentication, equipment, requests, documents, reports) (10 points)

## Additional Features (25 points)

1. QR code support for inventory check-in/out (5 points)
2. Email reminders (5 points)
3. Low stock and overdue notifications (5 points)
4. Usage analytics with Chart.js/Recharts (5 points)
5. Google Docs viewer or Cloudinary preview integration (5 points)

## Frontend (15 points)

1. User-friendly interface for all roles (e.g., filtered dashboards) (5 points)
2. Role-based views/dashboards (5 points)
3. Preview mode for items and documents before submission/requests (5 points)

## REST Endpoints (10 points)

1. Complete and functional implementation of all specified REST endpoints (10 points)

## Security (15 points)

1. Secure storage of passwords using encryption techniques (5 points)
2. Validation of all user input to prevent common attacks (e.g., SQL injection, XSS) (5 points)

3. Implementation of proper authorization mechanisms to control access to sensitive data (5 points)

#### **Scalability (15 points)**

1. Design considerations for scalability to handle a large number of users and homework assignments (5 points)
2. Optimization of the database for performance and scalability (5 points)
3. Scalability of the microservices architecture to handle increased traffic and demand (5 points)

#### **Code Quality (10 points)**

1. Clean and well-organized code (3 points)
2. Consistent naming conventions and formatting (3 points)
3. Descriptive comments to explain complex code or functionality (2 points)
4. Modular structure and reuse of components (2 points)

#### **Presentation (10 points)**

1. 1. Clarity and coherence of the project presentation (5 points)
2. 2. Demonstration of key functionalities and features with clear explanations (5 points)

**Total: 170 points**