Project Definition Document

# 1. Project Name

KitHub – Campus Used Equipment Library

# 2. Project Summary

KitHub is a platform that allows university students to borrow various items such as lab tools, cameras, and sports equipment from a shared inventory. The system aims to increase resource efficiency by providing temporary access to items that students only need for a short period of time. This promotes sustainability, reduces costs, and supports both academic and extracurricular activities on campus.

# 3. Objectives

At the end of this project, we aim to develop a functional and user-friendly web application with the following key objectives:  
• Enable secure registration and login for students and administrators.  
• Allow students to browse and search the equipment inventory by category.  
• Provide a borrowing system with request, approval, and return tracking.  
• Support item status management (available / borrowed / overdue).  
• Inform users about important actions (e.g., approval, return deadline).  
• Allow administrators to add, remove, or update equipment entries.  
  
Our goal is to support campus sustainability by maximizing equipment reuse and to reduce student costs by offering a reliable, easy-to-use equipment lending system.

# 4. Scope

Includes:

• Web-based platform accessible to students and administrators.  
• Equipment list with category filters and availability status.  
• Borrowing process: request → administrator approval → return.  
• Notification system for approval status, return date reminders, etc.  
• Simple administrative dashboard for product and user management.

Excludes:

• Physical inventory tracking technologies (e.g., RFID, barcode).  
• Financial systems (fines, payments, deposits).  
• Integration with university databases or third-party tools.

# 5. Target Audience

• Primary: University students (undergraduate and graduate) who need temporary access to a variety of equipment.  
• Secondary: Faculty members, student associations, and campus clubs who can act as lenders or inspectors.

# 6. Key Features

• Secure user registration and login system  
• Equipment catalog with filtering and search  
• Borrow and return request flow with status tracking  
• Notifications and reminders for actions and due dates  
• Administrative tools for equipment management

# 7. Deliverables

• Functional web application hosted on GitHub  
• Project documentation:  
 - Project Definition Document  
 - Project Plan Document  
 - Software Requirements Specification (SRS)  
• Software architecture diagram and description  
• Design pattern–use case mapping matrix  
• GitHub repository with individual contributions and commit history

# 8. Project Success Criteria

• The application processes borrow transactions without functional errors for at least 95% of test cases.  
• All key features listed in the project description are fully implemented.  
• Page load times and response actions are under 2 seconds under standard test conditions.  
• The code is modular and well-documented enough that another developer can change a feature in an hour.

# 9. Task Matrix

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| --- | --- | --- |
| **Task** | **Description** | **Responsible Member** |
| Project Definition | Writing summary, objectives, scope, audience, and success criteria | Aylin Barutçu |
| Project Planning | Timeline, resource planning, risk analysis, communication plan | İlbey Efe Taşabatlı |
| SRS Document | Functional & non-functional requirements, use cases | Betül Biçer |
| Software Architecture Design | Diagram creation, layered explanation, use case alignment | Mehmet Karatekin |
| Design Pattern Mapping | Pattern identification, justification and matrix creation | Betül Biçer |
| Document Integration & Review | Final formatting, version control, proofreading | Aylin Barutçu |
| GitHub Repository & Contributions | Code commits, collaboration setup, linking documentation | İlbey Efe Taşabatlı |
| Admin Panel Features (Dev) | |  | | --- | |  |  |  | | --- | | Admin logic: approval, inventory edit, user management | | Mehmet Karatekin |
| Borrowing Logic Implementation | Borrow request workflow and notification triggers | Betül Biçer |
| UI Design & Frontend Structure | Page layout, navigation, user input handling (login/dashboard) | Aylin Barutçu |