

BIS 698 Information System Project

Group 9

Krishna Mohan Reddy Ailuri

Himabindu Mandem

Sai Prasanna Goduguluri

Prahlada Reddy Kasani

Sainikhil Reddy Pannala

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Business Background

The **CMU Rental Hub** provides students with temporary access to items they may need, such as appliances, monitors, projectors, tables, or chairs. This is especially helpful for new students who have recently moved to college. The university also has unused resources that can be shared with students, allowing them to access necessary items without the need to purchase everything.

The **CMU Rental Hub** provides a convenient system for students to view available items and rent them for a specific period. This helps students save money while making better use of the university's existing resources.

Problem Description:

Many students, particularly those new to the university, face challenges when they need items temporarily, such as monitors, projectors, appliances, tables, or chairs. Since they cannot bring everything, they need and may not want to spend extra money purchasing these items, it becomes difficult for them to settle comfortably.

On the other hand, the university has unused resources, like extra furniture and appliances, which could benefit students. However, there is no organized system to make these items available to those who need them. As a result, students often waste time and money searching for affordable options, while these resources remain unused.

This creates challenges for both students and the university. Students find it difficult to get what they need, and the university's resources remain unused. A system that lets students check and rent items for a short time would solve both problems effectively.

Project Description

The application will have separate interfaces for administrators and students to make the rental process easy.

- Administrators can add or update item details, while students can check availability and rent items as needed.
- The interface will be simple and easy to use.
- All item details, like names, descriptions, quantities, and prices, will be stored in a database.

Project Feasibility

Economic Feasibility:

The project is affordable as it uses free tools like Python, SQL Server, HTML, and CSS. Data will be stored using simple CSV files, which do not add any extra cost. Since the project is part of a course, the team will complete all the work, keeping expenses low. Additionally, the CMU Rental Hub focuses on reusing pre-owned items, helping save resources, and avoiding the need to buy new ones.

Technical Feasibility:

- *Python GUI*: To design the application interface (UI) and establish a connection with SQL Server.
- *SQL Server*: Backend database for storing and managing all the rental items, prices, descriptions, and details.
- *Excel/CSV/MS Access*: To upload and manage data efficiently, which is then stored in the SQL Server database.

Schedule Feasibility:

The project can be completed within the semester by dividing it into smaller steps:

Phase	Task	Duration	Details
Planning	Collect ideas & requirements	Week 1-2	Features and tools needed for the project
Design	Layout designs	Week 3-4	Planning the appearance of the system
Development 1	Building Frontend	Week 5-6	Creating the user interface using Python GUI, HTML
Development 2	Database Set up	Week 7-8	SQL Server for storing rental items data
Testing	Test & Debug	Week 9-11	Fixing errors and issues in the system
Final Touches & Submission	Improvements and Submission	Week 12-15	Making updates based on feedback and submitting the project

Agile Approach:

The project will follow an agile method, developing the system in small steps. Regular feedback from the professor will guide improvements, with changes made as needed.

Operational Feasibility: The Rental Hub system simplifies the process for students to search for and rent items, while administrators can efficiently manage inventory and rentals. Its user-friendly design ensures both students and administrators can navigate it easily. By utilizing existing items, it helps save costs and minimize waste.

Expected Outcomes

- Students will have an easy way to browse and rent the needed items temporarily.
- Administrators will be able to handle items and rentals in a structured manner.
- The system helps students save time by displaying items that are available
- Unused resources will be reused, making them affordable and reducing waste.