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CSCI 4600

Dr. Hasan

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Vision Document: Textbook Loan Program

**1 Introduction**

* 1. Purpose

This document outlines the vision for The Textbook Loan Program, a software application that aims to provide an efficient platform for students to borrow textbooks, track loans, and manage returns within an educational institution.

* 1. Scope

The Textbook Loan Program will feature options for students to search textbooks, check availability on textbooks, place holds on textbooks, borrow books, update their profile information and manage their loan periods. It will also allow administrators to check books out to students, check books back in, manage inventory, and generate reports.

1. **Positioning**
   1. Business opportunity

The Textbook Loan Program addresses the problem of high-cost textbooks for students. By utilizing an easy-to-use platform students have access to free textbooks on loan, reducing financial burden. This program also provides inventory management for educational institutions, streamlining textbook distribution and tracking.

* 1. Problem Statement

Many students face challenges in affording textbooks, leading to an increased need for a free textbook loan program. In addition, education institute libraries often struggle with managing textbook inventories, ensuring timely returns, and tracking book usage. This system can provide a solution through an automated system.

1. **Stakeholder and user descriptions**
   1. Stakeholder summary

Name: Jesse Pickard

Represents: Team member

Role: Member of the software development team. Helps perform testing, quality assurance, and quality controls to ensure the software is performing accurately and according to development goals.

Skills: Competent in Java 21, C++ coding languages.

Name: Dustin Zook

Represents: Team member

Role: Member of the software development team. Helps perform testing, quality assurance, and quality controls to ensure the software is performing accurately and according to development goals.

Skills: Competent in Azure Data Studio, MSQL, Java 21, HTML, CSS, and JavaScript.

Name: Austin Jones

Represents: Team member

Role: Member of the software development team. Helps perform testing, quality assurance, and quality controls to ensure the software is performing accurately and according to development goals.

Skills: Competent in Java 21, and C++ Coding language.

* 1. User summary

Name (User types): Administrator, Remote, User

1. **Product Overview**
   1. **Product Perspective:**

The product will be comparable to some programs such as Texts for Vets, however this program will be available to not only veterans but to the general student body as well. This program is intended to help anyone from any lifestyle maintain any outstanding debts or balances, to prevent any mishaps or add to any personal difficulties.

* 1. **Summary of Capabilities**

This product will be a benefit for many different students, for example, the older students who are just now returning to school to possibly change their career or further advance it; will have this program as option that could potentially alleviate the stress with purchasing books with money that they may not have at that moment. This product will also provide the benefit of being able to track their loan repayment or debt consolidation processes online and provide assorted options for repayment or term lengths.

4.3 Assumptions and Dependencies

A) Assumptions

JavaFX Compatibility: JavaFX should be compatible with the latest java version and the operating systems used by the institution.

User Access Devices: it is assumed the user will have access to the system from devices (PC’s, laptops) capable of running Java based applications.

Basic User Knowledge: users are assumed to have back computer literacy, including how to login, search, and interact with the GUI.

B) Dependencies

JavaFX Framework: any depreciations or major changes in JavaFX could affect the functionality of the system.

SQL Database: any changes to the structure of the database may require modification to the programs code.

Security Protocols: the systems authentication features may need to be changes if there are security standards updates.

1. **Product Features**
2. User authentication: provides secure login functionality for both students and administrators.
3. Search functionality for books: search for textbooks using title, author, or ISBN.
4. Book reservation system: allows students to place holds on books.
5. Book borrowing with loan period tracking: allows admins to check books out with a return date.
6. Return functionality: allow students to return textbooks automatically updating the inventory and flagged overdue status.
7. Admin dashboard: provides administrators with tools to add, update, and delete textbook and student accounts.
8. Real time availability for textbooks: displays current availability status for each textbook.
9. Loan history tracking for students: allows students to view their current and previous textbooks that were checked out.
10. Reporting functionality for administrators: allows admins to generate reports on textbook inventory, active loans, and overdue textbooks.
11. Advanced sorting features: allows users to filter their search to have improved accuracy and efficiency.
12. **Constraints**
    1. Complexity

The constraints of the application include the complexity of the program and expanding features past the core functionality may lead to missed deadlines. Learning new technologies is another constraint if unfamiliar with JavaFX, advanced SQL techniques, or Microsoft Azure. Cross platform compatibility is a constraint since JavaFX applications may not behave the same across different operating systems.

1. **Other Product Requirements**

* The application should be responsive and user friendly.
* The database should ensure data integrity and prevent duplicate records.
* Security measures must be implemented to protect sensitive user data and comply with FERPA policies.