Software Requirement Specification

For

Camera Checkout System

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Date Created: 10/9/2024

1. Introduction
    - The purpose of this project is to produce a website with a database to keep track of the students checking out and returning cameras. We also hope to make an “app” and QR Code to make accessing this easier on smartphones. This would be done to provide a simpler way to keep track of these checkouts. The intended users are the students who will schedule camera checkout and return times as well as some professors who will monitor this data and approve or deny student checkouts. Ultimately, we hope to produce a database and website that will keep track of student’s camera checkouts and returns as well as make the process simpler for the professors compared to the current system. We hope to get this done by Spring Break.

2. Overall Description
    - User Classes and Characteristics:
      There will be two classes of users for this product. The first class of users is the student. The student will be able to create an account and login to their account to use the product. The student’s use of the app will include being able to view available equipment and request a checkout for any available equipment. The second class of users will be the instructor/administrator. The admin will be able to add and remove equipment in the checkout list. They will also be able to view all the equipment in the database and the checkout status of each item. Finally, the admin will be approving registration of students and removing the students who have graduated.
    - Product Functions:
      This product will allow students at Benedictine College to submit requests to check out equipment from their instructor for relevant classes. The product will also allow the instructor to approve requests for checkouts and view which items have been checked out and which ones are still available. There will also be a feature for sending notifications to the instructor and to the students.
    - Operating Environment:
      This product will operate on the web and be downloadable as a progressive web application on the user’s devices.
    - Design:
      This product will be designed as a progressive web application and website. It will use a database built upon MySQL and PHP for communicating with the application itself. The front end will be written in HTML, CSS, and JavaScript, and will be downloadable as an app on the user’s device.

3. System Features
    - The overall purpose of this project is to provide management tools for the client's equipment. The project must keep a ledger of check-in, and check-out times for all equipment, and notify the client and users of relevant dates and activities. This ledger is to be maintained by a database. During the development, priority will be put towards the proper recording of the data and generating the ledger. All other functionalities should be derived from this ledger. In terms of managing risk, the priority is to make sure that the database is properly initialized and able to be expanded upon.

4. Functional Requirements
    - The functional requirements of this project are directly related to the user roles. First, administrative functions are:
        i. Login
        ii. Add / Remove Users from the database
        iii. Add / Remove Equipment from the database
        iv. Approve / Deny Checkout requests
        v. Approve / Deny new Users
        vi. Check-in Equipment
        vii. View the ledger
    - For the users, the functional requirements are:
        i. Login
        ii. Requesting Check-Out time
        iii. Report Check-in time
    - Finally, the website must be able to:
        i. Notify the admin about new users and checkout requests.
        ii. Notify the users about upcoming return by dates and checkout approval/denial
        iii. account verification
5. Non-Functional Requirements
    - BC Network protocols
    - Server Space
    - Potential Purchases