MakerLab Scheduling Website Documentation

Overview: The project named "MakerLab" for Lewis University will go under development as Capstone project for my team. MakerLab will be an internal scheduling website that will allow student and faculty to rent out the 3-D printers for up to 5 hours a day. This website will be developed by MakerLab team with supervision of Dr. Cynthia Howard. MakerLab is necessary since Lewis does not have any active way of renting and tracking its 3-D printers.

Goals: MakerLab will provide scheduling and renting services to faculty members and students of Lewis University.

User: users that will include active students and faculty will be able to perform following tasks on computer or mobile phones:

- Create a separate account to
- Rent 3-D printers
- Manage account transitions
- Check availability of a specific printer
- Able to see activity report

Admin: Admin will be granted access to the following services from their computer or mobile phones:

- Create new admin account
- Provision student and faculty accounts
- View printer status and rentee
- Change printer availability
- Able to see users' activity report and ability to export them.

Non-Functional requirement: MakerLab will be written in multiple languages and tools. Below is the breakdown of Languages and technologies:

- **PHP:** we will use php to write interactive part of the website where php would need to read and write to server to check user credentials and printer's availability.
- **MySQL:** We will be using MySQL database to store user's information for login purposes. We will MySQL database to correspond with existing databases at Lewis University.
- **HTML with CSS and Bootstrap:** we will use these technologies to enhance MakerLab front page so it will be user friendly and easy on the eyes.

Future iterations: Future iteration shall include enhancement to MakerLab scheduling website. Which may include but not limited to:

- Bug fixes and general enhancement
- Integration of OctoPrint
- Integration of Lewis accounts so user can see their rental on myLewis portal
- Addition of informative links and videos regarding 3-D printer's how to's.
- More Viewing Options for Users and Admin
  - Customizable Views to personal Preference
    - Color Labeled

- Different Graphical Templates
- Automated Reserving Option
  - Automatically check if a period of time has become available at a later time, and reserve that period for a different user.

<u>Site map with brief description:</u>

Home

1. **Login**
    1.1. Lewis Email as username
    1.2. Password
2. **Sign up**
    2.1. Full Name
    2.2. Lewis Email as username
    2.3. Lewis ID
    2.4. Password
    2.5. User: (Student OR faculty)
3. **News**
    3.1. Lewis MakerLab news
4. **Announcement**
    4.1. Announcement specific to printers and their availability
5. **Support Center**
    5.1. Lewis Contact info

Account Main Page

1. **Scheduling screen**
    1.1. Select Start date
        1.1.1. Select from integrated calendar
        1.1.2. Select End date
        1.1.3. Select from integrated calendar
        1.1.4. Select Start time
        1.1.5. Select from 7:00 AM
        1.1.6. Select End time
        1.1.7. Select from list of times (Max 5 hours)
    1.2. Select Printer
        1.2.1. Printer # 1
        1.2.2. Printer # 2
        1.2.3. Printer # 3
2. **Profile**
    2.1. Full Name
    2.2. Email Address (Lewis Email as a username)
    2.3. Lewis ID
    2.4. Password (blank) with clickable button to change it

3. **Activity report**
    3.1. Rental details
        3.1.1. Transaction status: (Open or completed)
        3.1.2. Date of transaction