**Garrett Leach – Fall 2017 – Senior Project Proposal**

For my senior project, I am designing an inventory management system for Northern Michigan University’s new Equipment Rental System. The project will be written using PHP, HTML, CSS, and JavaScript and will use MySQL for the database. It will make use of SAML to authenticate NMU users with the system. The project will also incorporate Bootstrap to ensure the website is responsive on a variety of devices such as desktop computers and mobile devices. Git will be used for source control. In this program, authorized NMU workers will log in through NMU and will be able to check out equipment to NMU faculty and students. The implementation of an administration system will allow the addition and removal of authenticated users. When checking out and checking in equipment the authenticated worker will add all relevant info, which will then be updated in the MySQL database. An interactive stats page will also be created allowing for relevant statistics, such as most popular item, to be displayed. I hope to learn more about PHP, databases, and integrating with already existing systems (such as NMU’s login system). This project will also allow me to experience making and maintaining a system that will see regular use.

Points:

(10) – User Management System (Admin/Authorized Users) allowing for addition/removal of authorized workers. Also allows for logging/seeing worker actions.

(10) – Use NMU API to look-up and validate students

(20) – Integrate with SAML Single Sign-on to log in through NMU

(20) – Responsive Displays (Everything looks good)

10 – Desktop/Laptop

10 – Phone/Tablet

(20) – MySQL

10 – Uses MySQL

10 – Tables are organized

(90) – Inventory

10 – Equipment can be added and removed from the inventory system

(20) – Transaction info is stored (who, what, when)

10 – Checking in equipment

10 – Checking out equipment

10 – Ability to flag (make a note) an item on check-in (damages, etc.)

10 – Attach and store images of equipment (proof of damage)

(20) – Equipment checkout

10 – Check if person checking out equipment (the customer) to is allowed to be checking out equipment.

10 – Display any flags before checking out an item

10 – Report what equipment is/isn’t available (status of each item)

10 – Email notification when an item is not returned on time

(40) – Stats Page

10 – Display most popular items

10 – Display what items are in for repair

10 – Display most frequent users

10 – Display which item has been checked out the most

(10) – Uses Git

Total: 220

A: 190

B: 170

C: 150

D: 130

F: <130

Technologies Used:

* HTML
* CSS
* JavaScript
  + JQuery
  + Bootstrap
  + HighCharts
* PHP
  + Joshcam
  + PHPMailer
* MySQL
* Git
* SAML