HIGH-LEVEL DESIGN:

Users: Students, Workers, Admin

· Students = UT students majoring or minoring in CS, majoring in a related field that requires CS courses (e.g., data science, math programming), or members of student clubs that have a focus in CS (e.g., GWC, Coding Club)

· Workers = Staff and student workers who will be managing the makerspace

· Admin = Adds students, workers, and new equipment to app, plus everything students and workers can do. (All CS faculty will be Admins.)

Platform: All devices (mobile and immobile)

MOSCOW:

**M (MUST HAVE):**

Requirements for All Users:

· Profile setup: **(1 Week)**

o Set username and password

o Identify the user (student ID, membership in UT’s CS community (e.g., CS major, faculty, etc.))

· Login **(1 Week)**

· Super easy to use

· Web app so it runs on all devices **(XXX)**

Worker view base requirements:

· Indicate in the app that the Makerspace is available for student use because at least one Worker is present. **(2 Weeks)**

· Indicate in the app that the Makerspace is unavailable because the last Worker is leaving. **(2 Weeks)**

· Emergency button that texts all Admins that there is a serious problem in the Makerspace. **(3 Weeks)**

Student view base requirements:

· About the Makerspace: What it is, what equipment is available and what they are each used for. **(1 Week)**

· Instructions on how to use some of the devices (e.g., can you create the file on your computer or do you need to use the system in the Makerspace, how to replace filaments in the 3D printer, basic troubleshooting) **(1 Week)**

· Descriptions of the devices & some tools (e.g., what it can be used for, what it looks like) **(1 Week)**

· Emergency button that texts all Admins that there is a serious problem in the Makerspace. **(3 Weeks)**

**S (SHOULD HAVE):**

* Training flag for completion of instructions **(1 Week)**
* Schedule of sessions for training on a device (plus sign-up for that session) (Student view) **(3 Weeks)**
* Use app to see if the Makerspace is available. **(3 Weeks)**

**C (COULD HAVE):**

Nice features if time permits:

· Take Makerspace safety training and record in User profile. (All Users) **(2 Week)**

· App shows if a student has received in-person training on a machine. (All Users, although it may look different for Students vs Workers) **(2 Weeks)**

· Request training on a device (Student view) **(1 Week)**

· Show if User is trained on a device (Worker view) **(1 Week)**

· Reserve a device / see if a device is available / mark that you’re using a device (Student view) **(3 Weeks)**

· Request Worker run a job for you (only available for lasers and CNC devices) (Student view) **(1 Week)**

· See who has ID card access to the Makerspace (like if you wanted to get in because you left your keys) (Student and Worker view) **( 2 weeks)**

· Consumables inventory (All views) **(3 Weeks)**

· Tools inventory (All views) **(3 Weeks)**

**W (WON’T HAVE):**

Our notes and stuff

Laser Machine App

* Look at how to reserve room as optional feature
  + Google form like reserving a study room
* Multiple Lasers and 3D printers means Makerspace multiple ppl house
  + Reserve machine not room
* Utilize Google Form and Calendar
* Project Goals
  + Is Makerspace Available
  + Check what times are available
  + Cancel reservation
  + Limited Reservations a person can make
* Security
  + School Email
  + Training Flag
* Inventory of item
* Queue
* Sign in
* Inventory List
* Google Calendar/Schedule
* Limited Hours Open thus limited time reservations
* Pay for print like school printer
* training

Notes:

* Dreamweaver can use
  + Dreamweaver automatically makes website from program
* Program must run through website