

2024 CSC493 – Capstone Weekly Reports¹

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Select Report Date: Oct 16, 2025

Part 1: Weekly Progress Report

- **Accomplishments:** What did you accomplish since the last class meeting? (*up to 3 points*)

Since the last class meeting, I audited and corrected data across 200+ printers fixing inaccurate IPs, MACs, asset tags, and serial numbers; standardizing formats; resolving duplicates; and replacing placeholders like UNKNOWN and 0.0.0.0. I also diagnosed and removed a major admin bottleneck where the printer change page blocked on live SNMP polling; I switched it to use cached status with an asynchronous refresh so pages load immediately while live status still updates in the background. I verified the improvement by spot-checking multiple devices, confirmed faster loads and correct live updates, and committed and pushed the changes to GitHub.

- **Challenges:** What are your current roadblocks? (*up to 3 points*)

I'm still running into trouble verifying devices via SNMP because different models behave inconsistently: some only respond to v1, others to v2c, a few use non-standard or unknown community strings, and several have SNMP disabled or blocked by firewalls. This leads to retries and timeouts, so even with shorter settings and asynchronous, on-demand refreshes, I'm still waiting on slow or unreachable devices and sometimes only getting partial data due to vendor-specific OIDs. I've tried prioritizing minimal health checks before deeper walks, but some models still require full walks to return anything useful. The time cost compounds across many printers, and without per-device SNMP overrides or a clear source of truth, avoiding blind retries remains a persistent bottleneck.

- **Desired Discussion Points:** Do you have any desired discussion points that are not related to roadblocks? (*up to 2 points*)

SNMP latency is still holding back load times on individual printer pages. I switched the admin change page to use cached status with asynchronous/on-demand refresh so the view renders quickly, but slow or unreachable devices still delay verification. To push load times down further, should I pre-warm PrinterStatus on a schedule (so pages never trigger polling), tighten SNMP timeouts/retries or make refresh strictly on demand, and/or add per-device SNMP version/community overrides to avoid fallbacks? Are there other ideas—like DB query optimizations, trimming heavy inlines, or alternative lightweight health checks—that you'd recommend to make these pages consistently fast?

- **Future Goal(s):** What do you plan to accomplish before our next class meeting? These plans should be related to roadblocks or discussion points. If you plan to change direction, explain why. (*up to 2 points*)

Before the next class, I plan to cut page load and verification time further by tuning SNMP (drop timeouts to ~2s with 0–1 retries), disabling any auto force-refresh so polling only runs on demand, and adding per-device SNMP overrides (version/community) to avoid blind retries; I'll also pre-warm cached statuses with a periodic task so admin pages never block on polling and measure improvements with simple page timing checks. In parallel, I'll prototype a barcode-based intake workflow to speed inventory updates: add a barcode/UPC field to items, build a “scan-to-lookup/adjust” page that works with keyboard-wedge scanners for instant quantity changes, and, if time permits, explore a camera-based

¹ Detailed Weekly Report requirements can be found here: [2024 URCPP Capstone - Using Agile and Reporting Out](#)

option (e.g., QuaggaJS) for quick scans without dedicated hardware. These changes directly target the current latency and manual-entry bottlenecks.

Part 2: Time Reporting

Make sure that as you fill out the first prompt, you include in enough detail in the summary. For example, "debugging" is vague, but "debugged function X to make sure that when user does action Y, it is called and returns the value Z" is better.

- **Time Spent:** Briefly explain how much time, *outside of class*, spent on your project. If you worked on multiple components, each should get a detailed summary. Make sure to add up all the hours and minutes correctly. *Add as many rows as you need to the table below. Please do not include hours in class as part of this section. (up to 4 points)*

| START | FINISH | HOURS | DETAILED SUMMARY |
|--------------|---------------------|-------|--|
| 9/23 10:50AM | 9/23 11:50AM | 1 | Researched the implementation of DUO and how that would affect my permissions and how much of my current infrastructure I would have to change to implement it. I determined that it would not be worth it as it wouldn't replace my current login anyway, but it can be added on as a stretch goal. |
| 9/25 10:00AM | 9/25 11:50AM | 2 | 1 hour was spent building the base of the Manager Site that would be used by building managers. I implemented different blocks to be filled out in the future, with group ordering and listing the printers in that group. The last hour was spent determining and testing adding the groups of printers to the manager's site to be seen without allowing the manager's site to actually change the data of the printers through their request forms. |
| 9/27 1:00PM | 9/27 5:00PM | 4 | I wired in the manager dashboard with group order and quick-paper shortcuts (roughly 2 hours), tightened the staff/manager supply form logic so it auto-fills and hides the group toggle (around 1 hour), and refreshed the supply/issue templates to match the dark theme (another hour). |
| 9/28 12:30PM | 9/28 4:30PM | 4 | I started with a one-hour walkthrough with my boss where we focused on security touches, then I spent roughly 1.5 hours locking staff orders to single printers and tightening the manager form handling, and the final 1.5 hours updating the QR portal so it uses the dark theme, only exposes issue reporting publicly, and forces a login before ordering. |
| | WEEKLY TOTAL | 11 | |

- **Total (Cumulative) Project Time Spent:** After the number of hours and minutes, make sure to briefly explain whether you are on track and if not, what you may need to do in order to achieve what you set out to accomplish. *(up to 2 points)*

I have spent about 69 hours on this project in total. I think I am still ahead of schedule as I am implementing a lot of stretch goals as I am going and plan on adding more functionality I am planning to implement some hardware scanning so that way the inventory screen can be updated at a faster rate and easier and at this point I am just adding onto it until my boss says he thinks it is good enough for live testing in buildings.

Rubric:

The following rubric will be used, but they might change as needed.

Accomplishments (3 points)

1 point for a general description of progress, 2 points for specifics on progress, 3 points for specifics AND referring to previous targets and explaining how current accomplishments build on previous ones.

Challenges (3 points)

1 point for mentioning there are roadblocks, 2 points for specifics, 3 points for specifics AND what was done already to try to overcome them.

Desired discussion points (2 points)

1 point for at least one relevant discussion point as a general question, 2 points for relevant discussion points with specifics

Future Goals (2 points)

1 point for concrete future targets (i.e. "working more on the project" is a zero, but "working on getting component X to interface with component Y" suffices), 2 points for tying in the targets with what was hopefully discussed in the meeting.

Time Spent (4 points)

1 point for including general statements of how much time was spent ("4 hours on coding"), 2 points for splitting time into specific parts ("1.5 hours on research on component X, 1 hour coding, 2.5 hours debugging"), 3 points for specific parts and details on the pieces ("1.5 hours researching Turtle interface for drawing concentric circles given inputs from the user, 1 hour coding function X that used that interface, 2.5 hours testing function X by giving it multiple values and fixing errors for values A, B, C, and D"). 1 Point for totalling the hours correctly.

What happens if your time on a task is interrupted and you don't have a concrete (or discrete) end time? In this case put the start time in, and the word "interrupted" for the end time and include the task total time. Rounding to the nearest 15 minutes is acceptable. (*This makes adding up times easier, especially when you use decimal hours, i.e. 3.75 rather than 3 hours 45 minutes.*)

Total (Cumulative) Project Time (2 points)

1 point for summing the values correctly, 2 points for the total time AND reflection on progress (you are confident to fit the target and if not, what course corrections you anticipate needing to make)

Resources

Here's a link to this Weekly Report Template – Make a copy and use it:

[2024 CSC493 Weekly Report v2 TEMPLATE](#)