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## EE/CprE/SE 4920 Status Report #5

3/14/2025 – 4/3/2025

Group sdmay25-23

Project title: Code Critiquer System for the C Language and Embedded C

Client &/Advisor: Dr. Diane Rover

### Team Members/Role:

James Joseph - Secure System Design, CPR E 2880 Liaison

Samuel Lickteig - Backend System Design

Alix Noble - Testing

Andrew Sand - Team Organization, CPR E 2880 Liaison

Owen Sauser - Client Interaction, Frontend System Design, CPR E 2880 Liaison

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- **Status Summary**

Throughout this status report period, the team continued making great strides toward implementing critical system functionality to be demoed to the team's advisor. Notably, students can now send feedback to instructors based on critique results, instructors can designate files to exclude from critiquing, users can now manually reset their passwords, and code composer studio compilation is now part of the critiquing pipeline. Additionally, work on the final documentation has begun. As the end of the Iowa State University Spring 2025 semester approaches, the team is looking ahead to manage goals, demos, and documentation to ensure everything is ready for a final deliverable.

- **Project Milestones**

- Code composer studio compilation complete
  - Works with new file exclusion feature
- Password resetting for all roles
- Admin account for managing professors
- Students can now submit comments/questions regarding antipatterns caught in code
- Files can now be excluded from critiquing

- **Past Week Accomplishments**

- James Joseph:
  - Updated libclang to support compile-time binary operation symbol checking
  - Updated miscellaneous problems with full-project upload

- Implemented file exclusions for instructor-provided code
  - Added XPath checking for init function calls (Lab03 bug of the week)
- Samuel Lickteig:
  - Completed student feedback collection
  - Added information tooltips to feedback page
  - Reworked password resetting to be usable for all roles
  - Created admin role/page for managing professors
  - Added test accounts for each role
- Alix Noble:
  - Worked on instructor's student report
- Andrew Sand:
  - Fixed some minor problems with the GitLab Issues
  - Started on the final documentation
    - Researched prior team's final documents and other previous senior design teams'
    - Looked over the requirements to assess areas of improvement and work
    - Started on the design document
- Owen Sauser:
  - Got the code composer compilation working with the new file exclusion feature.
  - Got the password resetting for students re-implemented.
    - Changed it from an automatic thing that is done when they log in for the first time to a button on their home page.
    - The page requires the user to enter their old password followed by the same at minimum 8 character password twice.
- **Pending Issues** (If applicable)
  - James Joseph:
    - N/A
  - Samuel Lickteig:
    - N/A
  - Alix Noble:
  - Andrew Sand:
    - N/A
  - Owen Sauser:
    - N/A

- **Individual Contributions** (Note: The “Hours Cumulative” section is independent from the members’ cumulative hours from the Fall 2024 semester)

<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b>	<b><u>Hours this Week</u></b>	<b><u>Hours Cumulative</u></b>
James Joseph	Fixed 288 code upload and added Lab03 bug of the week antipattern. Added the ability to exclude files from analysis	20	53
Samuel Lickteig	Student feedback collection completed, admin role made, added professor/TA password resetting, added test accounts	8	37
Alix Noble	Worked on student report	5	19
Andrew Sand	Began Final Documentation Work	5	20
Owen Sauser	Finished the code composer studio compilation and added password resetting functionality back	8	25

- **Comments and Extended Discussion** (Optional)
- **Plans for the Upcoming Week**
  - James Joseph:
    - Lab04 and Lab05 bug of the week
  - Samuel Lickteig:
    - Demo preparation
  - Alix Noble:
    - Continue work on student report
  - Andrew Sand:
    - Get a working draft ready for the final documentation to start reviewing/revising/getting feedback
    - Start working on implementation of Bug Killing Code Standards as suggested by the team advisor
  - Owen Sauser:
    - Preparing documentation for future teams on the code composer compilation setup.
    - Preparing for student demo to our advisor

- **Summary of Weekly Advisor Meeting** (If applicable/optional)

### **3/24/2025 Summary:**

- Sam had worked on the student feedback functionality
  - He demoed that to Dr. Rover during the meeting
  - Feedback:
    - Make the “Send Comment/Feedback” column wider
    - Should probably explain what the severity factor means (Have some sort of help section)
      - Would be good to add to the results page?
    - Clarify the header title of the “Send Comment/Feedback”
    - In the future, probably allow the student to edit their comments, but that is probably not for the MVP
- Update from Owen: CCS Compilation seems to be working
  - He is working on getting the documentation sorted out for it
  - Needs to get his branch onto the server to fully test
  - Found that there does not seem to be any critical changes between running it on Linux vs. Windows (Other than the environment paths)
- Need to find an approach to exclude instructor-provided files from analysis
  - Most of them do not follow a lot of the conventions that the critiquer checks for
- Create target dates or a timeline of when we are start demoing pieces or functionality of the system
  - This would be something to do in the next Thursday meeting

### **3/31/2025 Summary:**

- Started the meeting with going over what work people have accomplished
- James:
  - Implemented Bug of the Week #3
    - Discussed possibility of making a generic version of it
    - This would be rather difficult with how it is currently set up due to needing to dynamically get the device names
    - A potentially solution is for instructions to edit a list of devices that are checked for
    - Also could add the ability for instructors to add xPath-based antipatterns
  - Implemented excluding files from being critiqued
- Sam:
  - Admin account is set up

- Dummy accounts for testing have been set up
- Began adding information bubbles to the feedback page
  - Severity might be defined in a Michigan Tech paper, so need to look at that for proper definitions
  - Also should probably add these information bubbles over each of the column headers
- Owen
  - CCS Compilation is implemented
    - Need to hook this up with the newly implemented exclude files feature
  - Student password resetting has been reimplemented
- Andrew
  - Started working on final documentation deliverables
    - Need to clean up setup instructions
    - Need to make new graphics of the updated design and architecture
- Demo schedule
  - Should be more geared toward user features
    - “Can I use BLANK as a BLANK user?”
  - Need to be able to sit down at the end of the semester with a CPR E 2880 Instructor or TA and show them the system working
  - Dr. Rover would like to do weekly demoing
  - Should have testing data and stuff to make demoing easier