

Logbook

Salih Furkan Göktaş

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CS492

Member of T2506, Hipograf

This is a continuation of my logbook from CS491.

26 January - 1 February

This week I started planning our functional test cases for the upcoming Detailed Design Report submission. It was mostly carried out by relating them to User Stories we included in previous reports from CS491, since the user stories were effective at capturing core functionalities that would require testing.

2 February - 8 February

Planning for the detailed design report continued this week as I wrote down an outline for many of the test cases we were planning, resulting in around 30 functional test cases and then 5 non-functional test cases for each non-functional requirement we had (4 of them, for 20 non-functional tests in total)

We also had a group meeting on the 8th of February to discuss general facets of Hipograf, including:

- Testing (both functional and non-functional)
- The structure of the backend and its connections to the frontend
- Backend connections to the remote MongoDB database, alongside its setup and existing configuration
- Work division for the rest of the semester. This would get iterated on further down the line depending on the state of the project and necessity at different times but it served as a baseline to start from.

9 February - 15 February

After communicating to once again set-up regular Zoom meetings with our supervisor (like in CS491), we held a Zoom meeting with Supervisor Prof. Dr. Uğur Doğrusöz on the 13th of February. During the meeting, we discussed the current state of the project, along with some implementation details of the OCR subsystem for pdf test scanning and how it handled persistent data storage. Normally we would share our screen over Zoom to show our progress on the current state of the application during these meetings. Uğur Hoca expressed

his desire to be able to test out the application himself through a development build deployed on the internet, which I offered to work on.

16 February - 22 February

This week, we had our fourth meeting with the course instructor Mert Bıçakçı on the 16th of February. During this meeting, we discussed the Detailed Design report in detail, including what their expectations were for different sections. We particularly discussed the testing component for which I had planned approximately 50 tests, as indicated previously. When I asked whether it was a good number, Mert Hoca indicated that we could have a lower amount of tests that covered the necessary functionality. After this discussion I decided to lower the amount of test cases that we would include and make one test case cover a use case that covered multiple user stories.

After the meeting, I prepared the meeting minutes document summarizing the discussion topics of the meeting and sent it to both the course instructors and our supervisor.

23 February - 1 March

This week I worked on the deployment that our supervisor had previously requested. Using the same VDS that was being used for the project information website since CS491 (<https://info.hipograf.com.tr>), I deployed both the frontend and the backend using Apache and Gunicorn respectively, with api requests reverse proxied from the web server to the backend (more detailed deployment information can be found in the Final Report).

We had another Zoom meeting with Supervisor Prof. Dr. Uğur Doğrusöz on the 27th of February. During the meeting we discussed the work on the project and showed the deployed development build that he could access. He informed us that he would look through the project and create GitHub issues in our repository for suggestions he had, concerning both fixes and additions.

2 March - 8 March

After having previously planned a good number of the test cases and refined them based on the feedback of the course instructors in the meeting we held, I started work on the Detailed Design report itself this week, particularly the written sections.

Our Supervisor Prof. Dr. Uğur Doğrusöz created the GitHub issues that he previously indicated and we split the workload across group members.

9 March - 15 March

- This week, I continued working on and finalized the Detailed Design report. I worked on the following sections:
 - Introduction
 - Current Software Architecture

- Proposed Software Architecture (including updating previous UML diagrams)
- Subsystem Diagram & Services
- Test Cases
- Teamwork Details

On the 11th of March, I created a document in our shared project folder that documented various missing, incomplete or buggy behavior of the existing build of Hipograf. The document was iterative and I added to it over the course of the next few days, which also involved group discussions on how some key components were going to be improved, such as the prescription model not displaying an end time in its data model and the existing dashboard widget functionality.

This week we also took a group photo for the CS Fair Booklet submission.

We had another Zoom meeting with Supervisor Prof. Dr. Uğur Doğrusöz on the 13th of March. During the meeting we showed off the progress that we had made on the GitHub issues he had previously created.

16 March - 22 March

There was limited progress this week because of the Ramazan Bayramı, including no meeting with our Supervisor. We started working on the abstract of our project for the CS Fair Booklet, which required some iterating and general discussion on what we wanted to express with the limited number of characters we had.

23 March - 29 March

This week we finalized the project abstract for the CS Fair Booklet and got it approved by our Supervisor Prof. Dr. Uğur Doğrusöz, submitting the Google Form itself shortly after.

We had another Zoom meeting with Supervisor Prof. Dr. Uğur Doğrusöz on the 27th of March, where we discussed the latest additions to the project and our plans moving forwards.

30 March - 5 April

This week I created a very detailed account of every issue with Hipograf, ranging from user experience to visual bugs to logical errors to features that should be changed or added and even to entire pages that were missing from the current build of Hipograf. These issues were then categorized and turned into more than 15 GitHub issues that we could use to track the current state of the application and what was needed in which components within the final month of development. The issues were constrained to one application component to ensure

that people could end up working on them without creating conflicts with the work of other group members.

After having created the issues, we divided some of them out amongst group members. I took on issues about improvements to the hospital visits page and general frontend application navigation.

6 April - 12 April

The GitHub issues I authored in the previous week were meant to be used as living documents. Each issue was subdivided into an unordered list of tasks prepended with checkboxes, with the box being checked when a subissue was completed. As we iterated over and discussed the design of Hipograf, subissues were checked, deleted, edited or added to suit the needs of Hipograf in the existing development period, with plans to make regular check-ins to close the completed issues (by merging the features with the main branch through reviewed pull requests) and create new ones as necessary. As such, some effort went into reviewing the subissues and conducting functional testing on various newly added components of the application.

This week I also updated the development version of the site to make it more robust, including some additional security features (more information can be found in the Final Report).

This week we also had group discussions on some features that might facilitate the demonstration process for Hipograf, such as adding a temporary feature for the user to upload data directly. Since Hipograf's primary purpose is data visualization, being able to easily generate mock data for effective demonstration of these features was very important for the demo (and CS Fair).

13 April - 19 April

This week I worked on improvements and additions to the Diagnoses page of Hipograf, taking on the associated GitHub issue.

To allow our Supervisor to more accurately test the plot creation mechanism of the project, we worked on a custom user account for the development build where I uploaded some appropriate mock data that produced reasonable plots (if every blood test tests for different parameters, then it's difficult to plot the data since each subtest only shows up once)

As new features were added by other group mates, I did more functional testing. Some GitHub issues were closed, others were modified.

This week we also looked into different visual designs for the user interface of the project, setting up an alternative development build on a subdomain to ask for feedback from our supervisor.

This week, we had our fifth meeting with the course instructor İlker Burak Kurt on the 16th of April. During the meeting, we discussed the final report and the expectations the instructors had for different sections of it. We also briefly discussed the user manual, demo and the CS fair itself. After the meeting, I prepared the meeting minutes document summarizing the discussion topics of the meeting and sent it to both the course instructors and our supervisor.

We had another Zoom meeting with Supervisor Prof. Dr. Uğur Doğrusöz on the 17th of April, where we discussed the visual design choices between the two versions and the current state of the application in general.

This week I also started working on both the user manual and the final report, initially with planning for both. As a group, we discussed how some of the practitioner-patient data viewing logic should function in the project. There were different views amongst group members and we held a meeting in order to be able to reach a consensus that everyone was satisfied with.

20 April - 26 April

This week I finalized my work on the diagnosis list page and investigated the possibility of replacing the 3D model in the dashboard with a model that had a lower polygon count for the sake of performance. After some discussion with the group members, screenshots of the before-after and performance observations, we decided to move forward with the existing model. I also continued working on the final report.

We had another Zoom meeting with Supervisor Prof. Dr. Uğur Doğrusöz on the 24th of April, where we discussed the culmination of our efforts and the point that the project had reached. He especially emphasized the importance of having a good poster for CS Fair and the accumulation of solid mock data to be able to show off all of the application's features in both the demo and the CS Fair.

27 April - 3 May

This week, we all spent a lot of time ensuring that Hipograf was feature complete and ready for the demo. As we had largely completed the key GitHub issues, I gathered up a list of the final fixes and additions that had to be made to Hipograf. We held a group meeting where we discussed these points and added some depending on the group perspective.

I also helped finalize the Final Report. I mostly worked on the following sections:

- Introduction
- Requirements Details
- Final Architecture and Design Details
- Conclusion and Future Work

I also worked on the User Manual alongside Eren, writing textual descriptions to serve as general usage instructions for some of the application pages.

4 May - 10 May

This week I set-up the deployment of Hipograf that we would be using for the CS Fair, and then subsequently attended both our demo over Zoom and CS Fair. I believe that both went well, and that it was a wonderful experience overall.