

Progress Report

- Increment 2 -

Group #21

1) Team Members

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2) Project Title and Description

File Portal - A lightweight web application that allows transmission of data/files in real time between two computers, or allows a user to drop a file, with the option to encrypt and/or lock it with a password and send an invite to retrieve the file to another user with a link or email.

3) Accomplishments and overall project status during this increment

We have finished most of the backend functionality during this increment. We chose to implement the backend in Go since that would give us the opportunity to learn a new language. We've implemented user management functionalities (login, register) and are using MySQL to store user information.

In addition to learning Go and implementing the backend, we started experimenting with deployment platforms. We have deployed a Digital Ocean server running an HTTP server for our backend as well as a Digital Ocean MySQL instance. Now all parts of our project – frontend, backend server, and database – are deployed on production-grade servers.

4) Challenges, changes in the plan and scope of the project and things that went wrong during this increment

Go had (and still has) a steep learning curve. We're not just learning language syntax; we're also learning libraries and good design practices to implement scalable backends. We also had never used Digital Ocean, so deploying a server and a database were novel experiences and took some time.

It's hard to call those setbacks because we learned a lot during this increment, but we did have to spend a lot of time learning rather than building.

5) Team Member Contribution for this increment

- a) Gabriel wrote the Progress Report.
- b) Leonardo wrote the RD document except for the first diagram, which was designed by Gabriel.
- c) Irfan wrote the Implementation and Testing document.
- d) Gabriel wrote the initial backend logic (http server setup, user management, database connection). Leonardo wrote the logging middleware to collect usage metrics. He also made the login and “forgot password” pages. Irfan has been implementing a streaming protocol for real-time file editing, but it’s not on the repository because it is still in experimental stages.
- e) Gabriel filmed the video documenting our project.

6) Plans for the next increment

In the next increment we plan to build the missing backend logic for file storage and sharing. We also want to deploy an Amazon S3 storage bucket to store file objects. Finally, we want to implement our file streaming solution with WebRTC to allow multiple users to edit the same file in real time.

7) Stakeholder Communication

Dear Stakeholders,

This is an update on the File Portal platform we’re developing for you.

Over the last month we’ve designed most of our core backend functionalities. Those include user management (registering an account, logging in, resetting a user’s password) and database setup (setting up a connection between our HTTP server and a database).

We have also started deploying our code. The servers where the final application will be deployed are already up and running. We are using the Digital Ocean platform, and if you desire to you could even test it yourself.

We are starting development on the last few backend functionalities: file storage and sharing and real-time peer-to-peer file editing.

We have faced some challenges during the development of this project. Our team had never worked with Go before, so we learned the language syntax as quickly as possible. Along the way we have also learned more advanced features like working with goroutines and networking libraries. Every setback has been easy to overcome and we have made consistent progress throughout the development process.

Feel free to contact our team with any questions or requests – we would love to walk you through our progress in detail! For now, I have attached a video with a basic demo of our product.

Thank you for your continued support and interest on our project.

Best Regards,

Group 21

8) Link to video

<https://youtu.be/P-15t1dkxZ4>