Team 16 - Biweekly Report 4

Due March 10th

Written by: Sadir Abdul Hadi, Kristelle Feghali and Alexandru Chiriac.

1. Overview

During these 2 weeks, our final website started to get its shape. Our database, smart contract, and front end have now been linked and integrated, and normal users and institutions have different permissions as we planned. We met all our must haves and should haves, and we now have to finalise the functionalities and improve them, while also thinking how to make our website design simple yet appealing, such that the user experience would be straight-forward and pleasant.

2. Team Meetings

Meeting 1 - Tuesday, February 28th 2017

Attendees: Sadir, Alex, Kristelle

During this meeting, we mainly discussed the next step required to complete our website (the final architecture of the database, process of hashing documents...), and we showcased our work to our TA. He wasn't very happy as we thought we were all working on the same task, but then we explained to him that this happened because some team members were facing problems, and that we actually didn't work on the same task at the same time.

Meeting 2- Thursday, March 2nd 2017

Attendees: Sadir, Alex, Kristelle

During this meeting, we brainstormed about the details of the process of requesting signatures and signing documents, and drew diagrams to make sure we're all on the same wavelength. We've also split the work as follows:

- Kristelle: Developing a template to preview documents, with modals. Make sure documents in the filesystem can be efficiently associated with their data in mongoDB
- Alex: Transforming pdfs into strings, hashing those strings, architecture of databases
- Sadir: Integrating Kristelle and Alex's parts in the meteor project, Implementing the signature requests and signature functionalities.

Meeting 3 - Tuesday, March 7th 2017

Attendees: Sadir, Alex, Kristelle

During this meeting, we demoed our work up until now to our TA and Yun Fu. The feedback on our progress was very positive.

Meeting 4 - Wednesday, March 8th 2017
Attendees: Sadir, Alex, Kristelle, Andy Wallace (ATOS)
During this meeting with our client we updated them on our progress and demonstrated the components that were working (user login, file upload, blockchain storage) integrated in a functional web application. We discussed our plans for the following weeks, and justified some technical choices we've made and that Andy thought we might be asked about (such as choice of mongoDB).

3. Tasks Completed

- Linked every component we have built together
- Set 'institution' privileges so they differ from normal users
- Get the base64 encoding of a document
- "Signature request" and "sign document" functionalities implemented

Team progression: We feel that we are currently on track and that we passed the most difficult step in our project, which was combining all the elements that we've individually built together into a single web app. Another difficult task is now polishing the website and improving the functionalities.

4. Plan for the next two weeks

Although we are very busy during the last 2 weeks of the term, with many deadlines and courseworks to come, we're going to try to work as much as possible on these elements.

- Associate ethereum wallets to the different institutions
- Let the users ask for signatures from many institutions
- Adding metadata to the documents
- Error handling
- Build an appealing frontend

5. Difficulties we faced

- Hashing pdfs without taking their metadata into consideration (as this will result in different hashes for the same document)
- Integrating the different components
- Learning how to structure noSQL databases in a professional way

6. Individual section

Sadir
During the last 2 weeks, in addition to organising meetings and interfacing with the client, I worked on the presentation we needed to make to Yun Fu and our TA. Furthermore, I worked on different technical aspects, including:

- Setting up the database to have 2 categories of users with different permissions (users/ institutions)
- Adapting the “pdf to string” function provided by Alex to not take metadata into consideration, and integrated it into the website
- Moving the document hashing from the smart contract to the website backend, in order to reduce Gas Usage on ethereum
- Implementing the “Sign a document” and “Request a signature” functionalities by building the required databases.
- Integrating Kristelle and Alex’s documents visualiser and modal to the website.

Kristelle

During the past two weeks I worked on managing the files uploaded by the users. At first, the files uploaded were not displayed for the user to see and I had some issues figuring out how the files were stored in mongodb, since we were giving all the files the same name before storing them. I tried to create an id for each by using a function that creates random strings. However, I later found out that the documents were actually uploaded with their real name as well as with the one we gave to them. Thus, I was able to create a delete function and a display function to see a list of the files uploaded. Moreover, I created a modal with a dropdown menu so the user can choose which institution to request a signature from, and an alert message to notify the user that the request has been sent. During the following two weeks I plan to work on sending a notification to the user once his document has been signed as well as creating a timeline of the each users’ documents which will be displayed in the users account page.

Alex

In the past weeks I have helped out with various bits that were useful in linking our work together. I have helped Kristelle add the file upload functionality as well as with the file viewing and file list components. I have also sent Sadir a function which gets the base64 encoding of a PDF. During the next weeks I will help with the design and implementation of the front end of our web app.