SW Engineering CSC648/848 Spring 2021

Docupaxx

Team 7

Milestone 5

5/20/21

Team Members: Kyle Humphrey(<u>khumphrey@mail.sfsu.edu</u>)(Team Lead), Can Sirin (Frontend Lead), Amron Berhanu (Backend Lead), Anna Pham, Vi Dao, Janson Leong, Rodrigo Gallardo

URL: http://18.144.82.140:3000/home

History Table:

Milestone Version	Date of Submission
M5V1	5/20/21
M4V1	5/13/21
M3V2	4/29/21
M3V1	4/22/21
M2V2	4/8/21
M2V1	4/1/21

M1V2	3/11/21
M1V1	3/5/21

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1. Product summary: Please copy this section from M4v2 (it is put here again for completeness of M5)

- Name of the product
- Explicit list of ALL major committed functions (your FINAL P1 functions for which you will be graded) your team shall actually deliver (and test for) (you should use plain English and not language used for formal specs, like if you would talk to a customer). This is your FINAL functional commitment. Present this in a list format, with each item max 1-3 lines
- What is unique in your product
- URL to your product

Product Name: Docupaxx

Priority 1 List:

i . Unregistered User

- 1. Unregistered users shall be able to navigate to the registration page.
- 2. Unregistered users shall be able to create an Account.
- 3. Unregistered users shall be able to know what features are included on Docupaxx.
- 4. Unregistered users shall be able to navigate to an Organization's page.
- 5. Unregistered users shall be able to navigate between supportive pages.

ii . Individual User

- 6. Individual users shall be able to sign into the website.
- 7. Individual users shall be able to log out from the website.
- 8. Individual users shall be able to create a new Package.
- 9. Individual users shall be able to see their own Packages.
- 10. Individual users shall be able to remove their own Packages.
- 11. Individual users shall be able to give a name to a Package.
- 12. Individual users shall be able to view an Application Requirement Package

- 13. Individual users shall be able to add a Document to Packages.
- 14. Individual users shall be able to remove Documents from Packages.
- 15. Individual users shall be able to remove Documents from the website.
- 16. Individual users shall be able to rename Packages.
- 17. Individual users shall be able to download any Package to the device.
- 18. Individual users shall be able to rename Documents.
- 19. Individual users shall be able to search between Packages by name.
- 20. Individual users shall be able to search between Documents by name.
- 21. Individual users shall be able to navigate to an Organization's page.
- 22. Individual users shall be able to send a Package to an Organization.
- 23. Individual users shall be able to view their own Packages sent to an Organization.
- 24. Individual users shall be able to take a quiz.
- 25. Individual users shall be able to exit a quiz.
- 26. Individual users shall be able to view a list of organizations.
- 27. Individual users shall be able to navigate between supportive pages.
- 28. Individual users shall be able to reset passwords.
- 29. Individual users shall be able to edit their email address.
- 30. Individual users shall be able to make a one-time payment for their Account

iii. Organization

- 31. An organization shall be able to display its Organization Page.
- 32. An organization shall be able to display its Application Requirement Packages.
- 33. An organization shall be able to receive submitted Packages.

iv. Organization Lead

- 34. An Organization Lead shall be able to sign into the website.
- 35. An Organization Lead shall be able to log out from the website.
- 36. An Organization Lead shall be able to modify the organization's page.
- 37. An Organization Lead shall be able to invite Organization Members to the organization.
- 38. An Organization Lead shall be able to create Application Requirement Packages.
- 39. An Organization Lead shall be able to modify Application Requirement Packages.
- 40. An Organization Lead shall be able to delete Application Requirement Packages.
- 41. An Organization Lead shall be able to create an Application Requirement for an Application Requirement Package.
- 42. An Organization Lead shall be able to modify an Application Requirement for an Application Requirement Package.
- 43. An Organization Lead shall be able to delete an Application Requirement for an Application Requirement Package.
- 44. An Organization Lead shall be able to view submitted Packages.
- 45. An Organization Lead shall be able to download submitted Packages.
- 46. An Organization Lead shall be able to navigate to an Organization's page.
- 47. An Organization Lead shall be able to navigate between supportive pages.
- 48. An Organization Lead shall be able to reset passwords.
- 49. An Organization Lead shall be able to remove Organization Members from the organization.

v . Organization Member

50. Organization members shall be able to sign into the website.

- 51. Organization members shall be able to log out from the website.
- 52. Organization members shall be able to view submitted Packages.
- 53. Organization members shall be able to download submitted Packages.
- 54. Organization members shall be able to navigate to an Organization's page.
- 55. Organization members shall be able to navigate between supportive pages.
- 56. Organization members shall be able to reset passwords.
- 57. Organization members shall be able to create an Account.

vi. Admin

- 58. An Admin shall be able to sign into the website.
- 59. An Admin shall be able to log out of the website.
- 60. An Admin shall be able to navigate to an Organization's page.
- 61. An Admin shall be able to navigate between supportive pages.
- 62. An Admin shall be able to view an Organization Page.
- 63. An Admin shall be able to delete an Individual User's Account.
- 64. An Admin shall be able to delete an Organization.
- 65. An Admin shall be able to approve an Organization.

vii. Document

- 66. A Document shall be owned by an Individual User.
- 67. A Document shall be able to have its name modified.
- 68. A Document shall be able to be uploaded by an Individual User.
- 69. A Document shall be able to be downloaded by an Individual User.
- 70. A Document shall be able to be downloaded by an Organization Member.
- 71. A Document shall be able to be downloaded by an Organization Lead.

72. A Document shall be able to be removed from the website by its owner.

viii. Package

- 73. A Package shall be able to have its name modified.
- 74. A Package shall be able to have its Documents displayed.
- 75. A Package shall be submitted by an Individual User.
- 76. A Package shall be able to be viewed by an Individual User.
- 77. A Package shall be able to be viewed by an Organization Member upon submission.
- 78. A Package shall be able to be viewed by an Organization Lead upon submission.
- 79. A Package shall be able to be created by an Individual User.
- 80. A Package shall be able to be downloaded by an Individual User.
- 81. A Package shall be able to be downloaded by an Organization Member upon submission.
- 82. A Package shall be able to be downloaded by an Organization Lead upon submission.

ix. Application Requirement Package

- 83. An Application Requirement Package shall be able to be created by an Organization Lead.
- 84. An Application Requirement Package shall be able to be modified by an Organization Lead.
- 85. An Application Requirement Package shall be able to be deleted by an Organization Lead.
- 86. An Application Requirement Package shall be able to have their list of Application Requirements displayed.
- 87. An Application Requirement Package shall be viewed by an Individual User after taking the quiz.

x. Application Requirement

- 88. An Application Requirement shall be able to be created by an Organization Lead.
- 89. An Application Requirement shall be able to be modified by an Organization Lead.
- 90. An Application Requirement shall be able to be deleted by an Organization Lead.
- 91. An Application Requirement shall be able to be viewed by an Individual User.
- 92. An Application Requirement shall be able to be viewed by an Organization Member.

xii. Quiz

- 93. Quiz shall be able to have its Questions displayed.
- 94. Quiz shall be able to be taken by Individual Users.
- 95. Quiz shall be able to be taken as many times desired.
- 96. Quiz shall display results to Individual Users.
- 97. Quiz shall show Application Requirement Package according to certain organizations.
- 98. Quiz shall be able to be exited by an Individual User.

xiii. Question

- 99. Question shall determine the type of search done for the choices to the next Question.
- 100. Ouestion shall be displayed in a Ouiz.
- 101. Question shall be viewed by an Individual User.
- 102. Question shall be answered by Individual User.
- 103. Question shall be created by Admin.
- 104. Question shall be modified by Admin.

xiv. Account

- 105. Account shall be created by an Unregistered User.
- 106. Account shall require one time fee payment if the Account Type is Individual User.

- 107. Account shall require a monthly fee for Organization account.
- 108. Account shall have access to different functionalities depending on the Account Type.
- 109. Account shall be able to be disabled by Admin.

xv. Password

- 110. Password shall allow a user to login to their account.
- 111. Password shall be able to display the date last changed.
- 112. Password shall be able to be changed.

xvi. Organization Page

- 113. Organization Page shall be able to be modified by Organization Lead.
- 114. Organization Page shall be able to be viewed by Organization Members.
- 115. Organization Page shall be able to be viewed by Organization Lead.
- 116. Organization Page shall be able to be viewed by an Individual User.
- 117. Organization Page shall be able to be viewed by an Unregistered User.
- 118. Organization Page shall show the Organization's Contact Information.
- 119. Organization Page shall show a list of Organization's members.
- 120. Organization Page shall be able to be viewed by an Admin.

Description

Saving documents has always been a hassle for people, as they have to search through all of their files, physically and digitally; to see where they are stored. Docupaxx not only solves this problem for its users, but also allows them to use their documents to easily apply to various organizations that are partnered with us.

Docupaxx allows organizations to create required document lists for their future applicants that contain all the necessary requirements for a given application. This way, organizations would have an easier time to increase their recognizability and have a better, solid application experience.

The main method for generating profit for Docupaxx is that we sell our services to partnering organizations, and they use our product. To market Docupaxx to organizations, we will propose our product through demos, either virtually or in-person. Once an organization partners with Docupaxx and gives Docupaxx permission on file sharing, the user will be able to send their required documents to the organization. As Docupaxx's revenue model, we have decided that individual members pay a one-time fee when registering. Additionally, organizations that want to partner with Docupaxx are required to pay a monthly fee. An organizations' motivation for using our product is because with Docupaxx's convenience, they can generate more revenue by onboarding more potential customers through another avenue. With our accrued revenue, Docupaxx plans to reinvest its profits into enhancing its services by improving security, having a more robust user experience, as well as boosting outreach through more expansive marketing campaigns. However, if an organization is already using services from other competitors, we will market and emphasize how Docupaxx reduces the inconvenience of

file reviewing, especially for incomplete and incorrect applications compared to our other

competitors.

A unique quality that our competitors do not have is our superior Quiz feature that leads

to a selection of organizations that users tend to apply or research. Once the user is presented

with the list of required documents for the Organization they are trying to apply for, they are able

to send in their documents to the Organization. The user is able to store files into their Docupaxx

dashboard that they could use and reuse for applying for organizations. Those packages are well

organized and could be filtered in order for easy access or directly searched through the search

bar. These features will allow Docupaxx to be quick and simple for users, since they will be

provided with a list of requirements needed for applying to any Organizations. Our combination

of taking the quiz for finding application requirements and organizing files, specifically for

applying, is something very unique.

Product URL: 18.144.82.140

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2. Milestone documents – M1-M4 (only V2s)

- M1V2, M2V2, M3V2 (with my horizontal prototype feedback included), and M4V2.
- V1s of the milestones must not be included in this document. However, they must be kept (frozen) in their original folders. You do not have to revise them based on changes after they were frozen. This way they are kind of "snapshots in time".

<u>M1V2</u>

https://github.com/CSC-648-SFSU/csc648-04-sp21-team07/blob/master/Milestones/M1/M1v2T07.PDF

M2V2

https://github.com/CSC-648-SFSU/csc648-04-sp21-team07/blob/master/Milestones/M2/M2v2T07.PDF

M3V2

 $\frac{https://github.com/CSC-648-SFSU/csc648-04-sp21-team07/blob/master/}{Milestones/M3/M3v2T07.PDF}$

<u>M4V2</u>

https://github.com/CSC-648-SFSU/csc648-04-sp21-team07/blob/master/Milestones/M4/M4S04SP20v2T7.PDF

3. Screen Shots of actual final product as shown in the demo, one per page

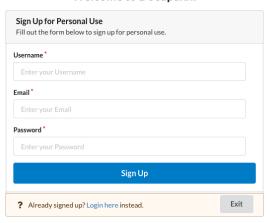
Section title: "Product Screen Shots" contains all **final** screen shots of your superior feature UI that you will demo (1 per page).

Product Screenshots

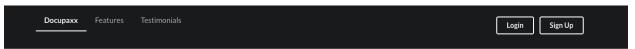
Sign Up



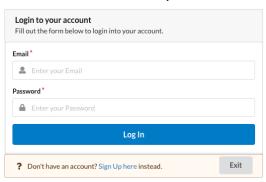
Welcome to Docupaxx!



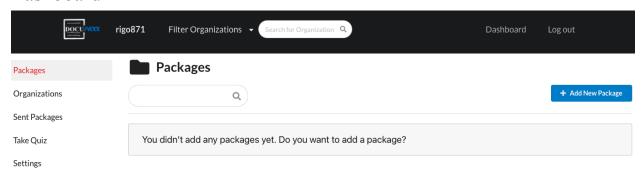
Login



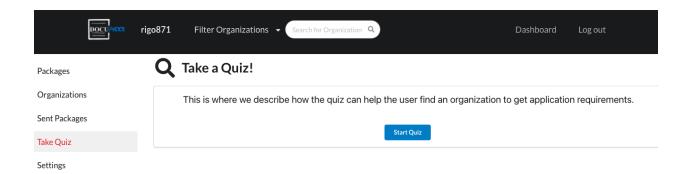
Welcome to Docupaxx!

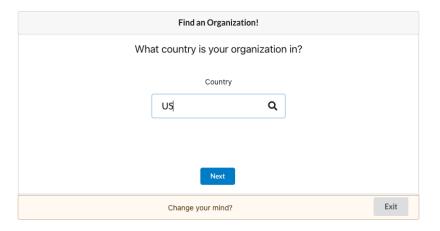


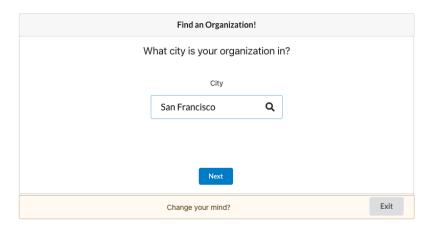
Dashboard

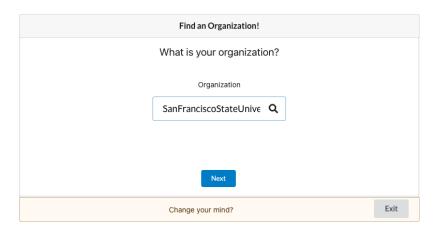


Quiz



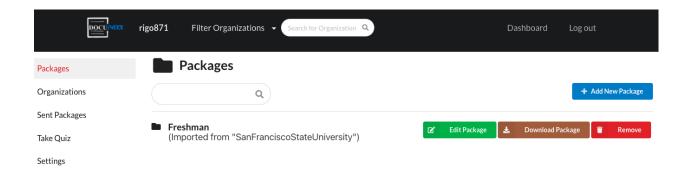






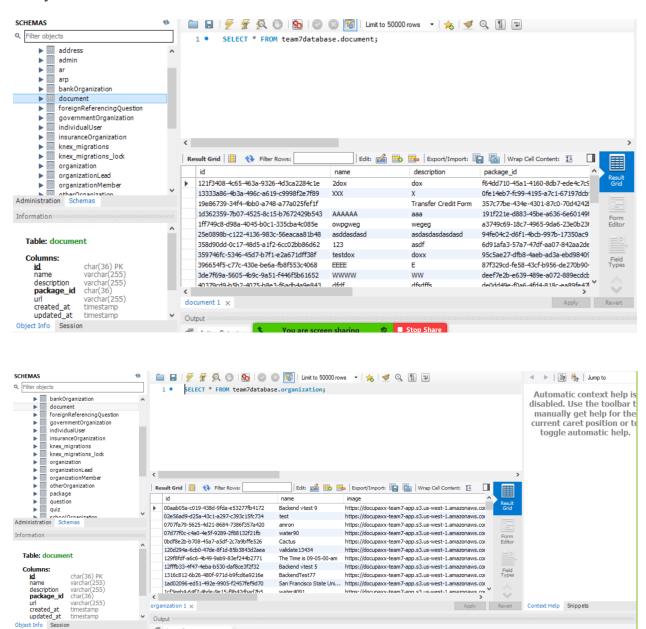


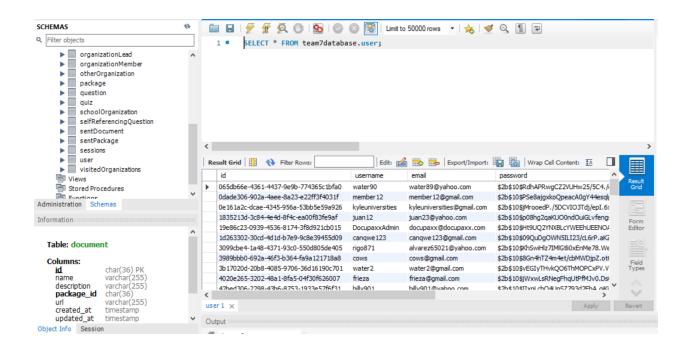


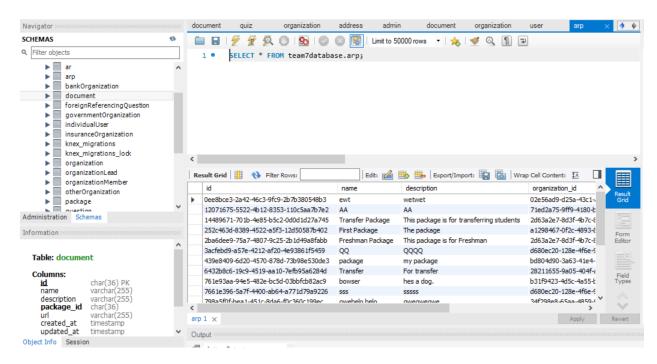


4. Screen shots of key DB tables (1-2 pages)

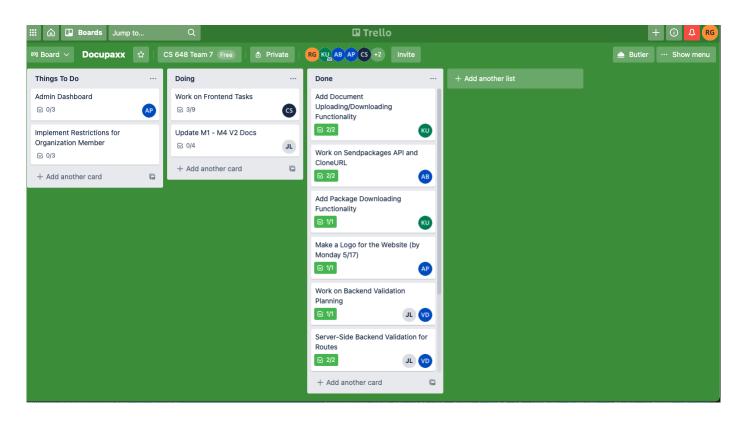
Show a snapshots of all important DB tables such as user table, item table, category table. Make it easy to read and review

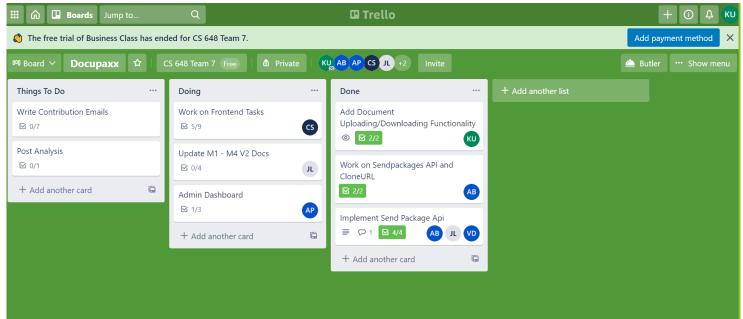






5. Screen shot(s) of your task management system (like Trello) showing a snapshot of your project management





6. Team member contributions



Kyle Humphrey

Thu 5/20/2021 2:44 PM

To: Kyle Humphrey; Can Sirin; Amron Alemu Berhanu; Vi Thua Dao; Anna Pham; Rodrigo Gallardo; Janson Jun Jie Leong



Overall as I believed I contributed very much to the project as a Team lead. From Milestone 0 - Milestone 5 I've arranged almost all the team meetings and made sure that we have been doing tasks accordingly.

For the documents, I of course, did not cling to any specific role. I tried to make myself for help, discussion and feedback on all chapters. I have also heavily contribute to the some areas that needed help, like the UI Mockups in Milestone 2. With that, I have also facilitated the team sprints and reviews for certain chapters that required teamwork.

For the coding, I have done a significant amount of coding. I have helped teach you many of you guys with some live sessions and some one-on-one programming with you guys. I have organized the code on the frontend and organized it somewhat on the backend. And of course, I have attended and discussed in both the Frontend and Backend Meetings as well.

Administrative

I have of course, done a lot of administrative work throughout the semester. I have facilitated the team meetings and done much scheduling. And of course, I have definitely assigned task and reassigned tasks to everyone

With these, I have done a considerable amount of work for this semester, but it's sometimes what comes with the job the Team Lead.

Kyle Humphrey

Reply Reply all Forward



Janson Jun Jie Leong Thu 5/20/2021 2:45 PM

To: Kyle Humphrey; Anna Pham; Rodrigo Gallardo; Can Sirin; Amron Alemu Berhanu; Vi Thua Dao

List of things done:

- Editing and Reviewing Documentation for Milestone 1 Milestone 5
- Contributed to usage of knex migrations to create tables in the database.
- Contributed to the creation of Objection.js Models and their respective relationships.
- Helped on many endpoints to allow requests to flow smoothly to and from the server.
- Helped on many methods with the endpoints for functionality of the website.
- · Helped with backend validation as well as file uploading.
- · Helped with QA Testing setup, testing and review.
- · Supplied some code for code review.





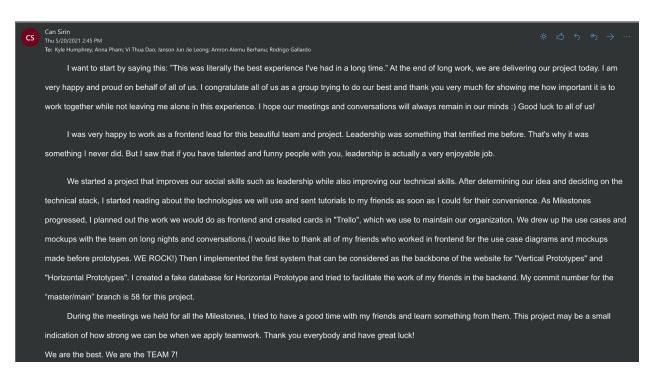
Hi guys,

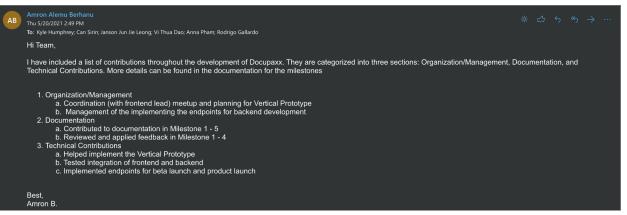
I am writing this to state my contributions on the project throughout the semester of Spring 2021 in CSC648 class.

- For every document contribution in each milestone, I believe I did fair amount of contributions on most of the chapters including reviewing, editing and applying feedback from teammates and the Professor.

 Mostly, in each milestone, I worked with my backend team on the backend part of those documents. During milestone 5, I worked with my backend team on editing our final change and commit of the database assects to previous milestones documents for keeping the consistency.
- For technical contributions, I worked with my backend team to design the database architecture. In the vertical prototype, I worked with my backend team to implement form validation, uploading files, migrations and models in order to create tables in the Docupaxx database. In the beta launch, I worked with my backend team on implementing real backend, debugging code with integration of backend to the frontend. I implemented Brrypt to encrypt password in the database, researched and implemented S3 bucket and uploading files in milestone 4. In general aspect of the project, me along with my backend teammates worked on testing the endpoints of methods to make sure it's working properly with frontend request.

Cheers, Vi Dao





To: Kyle Humphrey; Amron Alemu Berhanu; Can Sirin; Rodrigo Gallardo; Vi Thua Dao; Janson Jun Jie Leong

Hello Team 7,

During this project, in Milestone 1, I contributed to making the charts and summary in the Competitive Analysis. I also helped write and revise the executive summary. I also made Use Case #3 (the Live Feedback). As a team, I reviewed and gave necessary feedback to all the chapters. I also helped to apply the professor's feedback as well as coming up with questions to ask the professor for clarifications. With the professor's feedback, I reviewed the feedback edits with the team as well as contributed to making the edits for the Competitive Analysis.

In Milestone 2, as a team, I helped to write some main data items. Also as a team, I helped to edit and review the Functional Requirements. I contributed to drawing the UI mockups along with a short storyboard. I helped to create the UML diagrams and I contributed to the legal risks in the Key Risks chapter. As for the Database Architecture, the High-Level APIs and Algorithms, and the Network and Deployment Diagrams, I only reviewed those sections with the team.

In Milestone 3, as a team, I helped to expand on some of the Data Definitions. Also as a team, we went over the Functional Requirements one by one. I helped to make the wireframes for the mockups/storyboard for use cases 1 and 2. I also reworked all of the wireframes to make them consistent with each other. On the horizontal prototype, I helped to create the "About Us" page, the "Terms and Conditions" page, and the "FAQ page"/"About Docupaxx" page.

In Milestone 4, on the documentation, as a team, I helped to work on the product summary and reviewed it. I also set up some usability tests and had my boyfriend test the usability tests. As for the QA tests, code reviews, and self-checks on Security Practices, I only reviewed those sections with the team. For the adherence to Nonfunctional Requirements, we worked as a team to complete that section and we reviewed it. I also reviewed the Usability Test Instructions section and we reviewed the document as a team. As for the beta launch, I helped to write most of the Backend Validation Request code for checking duplicate usernames.

In Milestone 5, I contributed to the frontend development by creating the Admin dashboard. For the Admin dashboard, I created another tab for the Quiz Questions, as well as creating the add and edit quiz questions button. I also was able to get the users' and organizations' emails to display as well as creating the ability for the admins to remove the users and organizations. I also helped to allow the admin to approve the organizations.

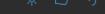
Thank you all, Anna Pham

Rodrigo Contribution Peer Review



Rodrigo Gallardo

Thu 5/20/2021 2:44 PM



To: Kyle Humphrey; Anna Pham; Can Sirin; Amron Alemu Berhanu; Vi Thua Dao; Janson Jun Jie Leong

A) I worked with my team members to complete the milestone documents on time and complete the tasks that were assigned to my best ability. I have listed the contributions based on the teams leads feedback from each milestone that we have done.

Documentation M1-M5

- · Contributed to the team milestone documents
- · Contributed to being M1 Editor
- · Contributed on editing the documents as a team
- Contributed to giving feedback
- Contributed to adding High level API's and Algorithms
- Contributed to adding key risks
- · Contributed to making wireframes and reworking them
- Contributed to setting up usability tests
- · Contributed to having family member do usability test beta launch website
- · Contributed to reviewing the milestone documents as a team and by myself

Reviewed

- UI Mockups and Storyboard (Review Only)
- Database Architecture (Review Only)
- Key Risks (Co-Primary Contributor)
- Project Management (Review Only)
- Product Summary (Review)
- Adherence to Nonfunctional Requirements (Review)

Horizontal/Beta Launch

- Login Pages
- Signup Pages
- Contact Us Pages
- Helped with Putting the Header and Footers in Supportive Pages
- Installed Email API on my Own Branch
- Worked on Fixing Bugs for the Email API & Worked on Contact Us Page Frontend in own Branch

GitHub Contributions

7. Post analysis – lessons learned (one page or so done by team lead)

During our experience in Team 7 working on our Docupaxx App, we have experienced many challenges. Going into this, we knew that Software Engineering was going to be a tough class. But we were definitely not prepared for what was in store of us.

During the weeks of CS 648 we found ourselves in intense work completing each of the Milestones to make a good product. We learned much about team work and how engineering works in an industry. Among these learning experiences, we came across many challenges.

One of the main challenges we faced was our time constraints. Because all of us had been simultaneously taking Upper Division Computer Science Courses, it has been very difficult to find ample to time to meet and work on the project. We resolved this by effectively planning times when we would all be free, and worked efficiently to get team work tasks done.

However, even with those countermeasures, the task of completing milestones akin to the level of industry were still very daunting. During many of the Milestones, we found ourselves very stressed near the end of completing them. The reasons for this were that we had underestimated the time it would take to do certain coding actions. Many times coding the website or installing a particular component would take hours to debug before the feature worked properly. As a result, we had been very delayed. To do better on these in the future, a good plan of action would be to place more emphasis on getting the required task done and prioritizing the most important parts about that task first.

Another big challenge we faced was difficulty with coding a website. Many of us in the team struggled with coding the React website, and there was unfortunately suboptimal progress done with time. Our team countered this by hold live sessions on how to use React and other SW tools related to the website, but it was not enough. Another plan of action we could do in the future to most effectively solve this problem is to undergo deep and intense training early in both areas of code (frontend and backend). This is because another problem we faced was that debugging on the website was very difficult because most team members were only experienced on frontend or backend, but not enough of both. Bugs could

be partially tested on only one aspect of the website, but not holistically. As a result, a significant amount of time was spent debugging after integrating changes. The solution for this is the same as the previous problem, better training of all members early on into the project so that productivity can be raised later. Overall, Team 7 has made it quite far in Software Engineering. But it is clear that we still have a lot to learn.