Project Plan

Agile Software Project Management System
by
Team Coca-Cola

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Client: Ms. Phang Min Hui

Project Plan

1.1 Introduction:

- ● *Purpose*

- The purpose of this project plan is to document planning assumptions and decisions which involves a system that supports the agile software development lifecycle by allowing users to perform various functionalities.

- ● *Background*

- Agile started life on software projects, and suits to those projects the most, providing the right circumstances are in place to adopt Agile. Not all project can use Agile to deliver as it is especially relevant where there is real uncertainty about the expectations and requirements relating to the end deliverable. As software projects are slowly getting more and more popular, user often is quite poor at defining clear requirements at the start of many types of projects. This is possibly the biggest issue that Agile Software Project Management System produces a solution for. By using the Agile principles and creating a system that supports the agile software development lifecycle is the main reason in the creation of the Agile Software Project Management System.

1.2 Key Personnel:

- ● *Stake Holders*
- Prof. Patrick Then
- Ms. Phang Min Hui
- Ms. Fu Swee Tee

- ● *System user roles*

- Project manager
- Project members
- Admin

2. Terms of Reference:

- ● *Goal*

- The goal of the project is to create a system that supports the agile software development lifecycle by allowing users to perform various functionalities.

- ● *Objectives*

- The objectives of the project are listed down below:

➤ To give users more flexibility in customizing the functions in the system (Profile, Progress, Document generator)

➤ To improve the security of the system to protect the confidentiality of the projects and information of users

➤ Allow users to communicate within the system using functions such as live chat and announcement board

➤ Improve the UI of user to access to functions more easily

- The product backlog items are listed down below:

🟦 All user roles

🟩 Project Manager & Project Member

🟪 Project Manager

❖ Live chat function (All user roles)

❖ View members' progress and progress of projects in Progress page (All user roles)

❖ Change the layout of the Calendar page (All user roles)

❖ Auto language translation (All user roles)

❖ Hide important information in URL using base64 encryption (All user roles)

❖ Receive email when resetting account password (All user roles)

❖ Give user to customize their own version of document in Document Generator (Project Manager, Project Member)

❖ Save documents in database for the document generator so that they are editable before generating the documents (Project Manager, Project Member)

- ❖ Redirect to live chat function by clicking on the notification (Project Manager, Project Member)
- ❖ Create sub-form to choose Project/Board/Task for time tracker function (Project Manager, Project Member)
- ❖ Project image is also clickable instead of just the word in Project Page (Project Manager, Project Member)
- ❖ Edit project details (Project Manager, Project Member)
- ❖ Improve GitHub page UI (Project Manager, Project Member)
- ❖ Add send message function in another column under Member's page (Project Manager, Project Member)
- ❖ Add user status: online or offline in another column under Member's page (Project Manager, Project Member)
- ❖ Upload and Display profile picture in another column under Member's page (Project Manager, Project Member)
- ❖ Allow user to change their personal information (Project Manager, Project Member)
- ❖ Allow project manager to make announcement regarding projects (Project Manager)

● *Scope*

- The scope of the project is to improve the Agile Software Management System developed in Software Engineering Project A. 3 different roles will get different improvement on their functionalities and UI of the system. The improvements will be added to all user roles includes **live chat function, viewing members' progress and the project progress, improved new layout of the Calendar page, auto language translation, hide important information in URLs using base64 encryption and receive email when resetting account password.** The system will also improve features that are accessible by project manager and project members such as improving the **Document Generator to give user to customize their own version of document** and **to save documents in database so that they are editable before generating the documents.** Besides**, users can click on the notification that will redirect to live chat function** and **a sub-form to**

choose either Project/Board/Task in time tracker function. In Progress page, **users can also click Project image instead of just the word to view Project details, edit project details** and have an **improved GitHub page UI** to improve user experience while interacting with the system. On the other hand, in Member's page, **users can send message to other users** add **view user status as either online or offline.** Apart from that, **users can upload their own profile picture, change their personal information** and **also display their profile picture** in Member's page. Lastly, for Project Managers only, they will be able **make announcement regarding projects to other project members.**

● *Critical success factors*

- The critical success factor for the Agile Software Project Management system will be a **Working System**. It is only possible for client to be using the system developed, it must be working and fulfil their requirements by providing features that can help them during the development of their project. Besides, the system must also be **Flexible and Innovative**. This is to shows that the difference from the application that are already available out in the market. Lastly, the system will need to adapt to **Rapid response to demand, technology and personnel changes**. The system should be able to provide most of the features needed by the client so that there is a reason for them to choose this system for their Agile software project management process.

● *Acceptance criteria*

No	Backlog Items	Software Product Quality	Definition of Done
1	Live chat function	➢ Performance Efficiency – Time Behavior	➢ Live chat is to create a fast connection between project manager and his/her project member to discuss about the project. ➢ The percentage of the functions within response time must be >= 5%.
2	View members' progress and progress of projects in Progress page	➢ Usability - Accessibility	➢ By allowing users to view members' and project progress, they can view it from different perspective and viewing angles. The capability to

				achieve this task must be >=90%.
3	Change the layout of the Calendar page	➢ Usability - User interface aesthetics	➢	The changes made to the layout of the Calendar page is to allow users to have a better experience on the UI and the satisfy their interaction with it. The satisfaction towards the UI of the calendar page must be >=90%.
4	Auto language translation	➢ Usability - Accessibility	➢	User can choose which language the website will be using depending on which language they are most comfortable working with. The degree of accessibility must be >=90%.
5	Hide important information in URL using base64 encryption	➢ Security - Confidentiality	➢	Important information such as projectID must be encrypted to prevent unauthorized personnel getting the information from the system which should be confidential towards the public. The chances of unauthorized personnel to access to the system must be <=5%.
6	Receive email when resetting account password	➢ Security - Confidentiality	➢	The email account used to register the account will receive an email when password is reset. This is to notify the user that someone has reset the password and making sure that the person must be authorized. The chances of unauthorized personnel to access to the system must be <=5%.
7	Give user to customize their own version of document in Document Generator	➢ Usability - Accessibility	➢	By letting users to customize their own version of document allow users to take full control on the document and not exactly following the frames given by the system. The degree of accessibility must be >=90%.
8	Save documents in database so they are editable before generating the documents	➢ Reliability - Availability	➢	When users can save their documents in the system, they can edit them anytime they want without losing it. Users can come back anytime to the document generator to continue working on their document. The degree of availability must be >=90%.

9	Redirect to live chat function by clicking on the notification	➢ Usability - Operability	➢ When users view the notification in the notification section, it will redirect the users directly to that particularly chat. This level for ease of user must be at least 9/10.
10	Create sub-form to choose project/board/task for time tracker function	➢ Usability - User interface aesthetics	➢ By creating the sub-form, user can choose to only tracking time of project/board/task when it is needed. The sub-form will remain hidden when it is not needed so that it keeps the UI of the system clean and simple. The satisfaction towards the UI of the sub-form must be >90%.
11	Project image is clickable instead of just the word in Project Page	➢ Usability - User Error Protection	➢ By enabling this feature, the user can click on the project image while choosing projects. This prevents users from making error of not clicking the word where its clickable area is not that big. This chance of users making any error must be <=5%.
12	Edit Project details	➢ Usability - User Error Protection	➢ The user will be able to change the project details after creating the project. This is to allow user to protect users from making errors and they will not have to recreate a new project. They can just edit the project details to update it. The chance of users making any error must be <=5%.
13	Add send message function in another column under Member's page	➢ Reliability - Availability	➢ When user is in members page, they will be able to send message directly to the project member that they want from the page without navigating to other pages. The degree of availability must be >=90%.
14	Add user status: online or offline in another column under Member's page	➢ Functional Suitability - Functional Correctness	➢ In members page, the user status allows other project members to know whether the user is online or offline. The status must be correct according to the status of the user. The number of errors for testing must be <=5%.
15	Upload and Display profile picture in another column under Member's page	➢ Functional Suitability - Functional Correctness	➢ The profile picture that is displayed must be correct in terms of being the same as the one uploaded by the user in their profile. The number of errors must be <=5%.

16	Allow users to change their personal information	➢ Security - Confidentiality	➢ Only authorized personnel will be able to change personal information. The chance of unauthorized personnel performing this action must be <=5%.
17	Improve GitHub page UI	➢ Usability - User interface aesthetics	➢ The improvements made to the GitHub page UI is to allow users to have a better experience while searching using the feature. The satisfaction towards the UI of the GitHub page UI must be >=90%.
18	Make announcement for projects or other announcement related to the projects	➢ Usability - Operability	➢ Project manager will be able to post new announcement regarding the projects to update their project members on it. This feature should be easy to operate as it is considered as a daily routine on updating the progress of the project. The operability of the system must be at least 9 on the scale of 1-10.

3. Establishment:

● *Processes, Procedure Standards*

The team will be using agile software development which involves daily scrum. Daily scrum will be conducted by discussing the team progress, problem or task allocation in MS Team. Three question will be asked in the MS Team by the leader to keep track of what progress of each member had done while developing the project. The questions including what have you done on the project today, what do you plan to do next and do you face any difficulty while doing the task. For this project, the team will be meeting the client and supervisor once a week to keep involve them in the team progress, update and get direct feedback and review from the client so that the team can react as soon as possible. The meeting will be conducted through MS Team or Zoom and the conversation will be recorded for further reference after the meeting.

● *Project environment*

Due to the current pandemic, the entire project will be done virtually with the help of some software including MS Team, Zoom, WhatsApp, GitHub and Trello. The team will not be meeting face to face; therefore, the team have to

use communication application such as MS Team and WhatsApp to communicate throughout the whole semester while developing the software. The team will use WhatsApp to manage daily communications and MS Team to discuss about the three questions every day. In addition, the team will also use MS Team or Zoom to discuss and have meeting with the supervisor and client every week. The team will also use MS Team to hold the virtual meeting. GitHub is used to handle the project version control while Trello is used for task management. Apart from that, the team also used Toggl to keep track of time while doing the task.

The development tools that are used by the team are Adobe Dreamweaver, Visual Studio and Digital Ocean Server for hosting. The programming languages involved are HTML, PHP and JavaScript.

● *Project team training requirement*

The team might need to study and research about the framework which use PHP on how it works as the team do not have good experience and skill on the framework.

4. Activities, Deliverables and Capital Resources:

● *Deliverables*

No.	Deliverables	Date
1.	System Requirement Specification (SRS) Draft Submission	5 March 2021
2.	Project Plan Submission	5 March 2021
3.	Client Sign-off SRS Submission	TBC
4.	System Architecture Design	11 April 2021
5.	Team Documentation	11 April 2021
6.	System Finalization	11 April 2021

● *Activities and Tasks*

Activities and Tasks	Time (Hour)
1. Live chat function	**12**
1.1 Live chat UI for the system	3

1.2 Live chat backend for the system	7
1.3 Live chat database for the system	2
2. View members' progress and progress of projects in Progress page	**5**
2.1 Sub-form is created in progress page for user to view specific progress of project	2
2.2 Sub-form for members is created to view progress for each of the members	2
2.3 Display graph/chart based on the progress of project or members	1
3. Change the layout of the Calendar page	**5**
3.1 Making changes on the UI for calendar page	1
3.2 Allow user to create event based on their own color, title and duration and show on the calendar	2
3.3 Connecting projects task to show on the calendar page task reminder	2
4. Auto language translation	**5**
4.1 Connecting to Google Translate API	3
4.2 Create drop-down function for user to choose languages	1
4.3 Refresh the page to back to English version	1
5. Hide important information in URL using base64 encryption	**6**
5.1 Making some changes in the URL by hiding some of the information using encryption so that other user could not access other user's information	3
6. Receive email when resetting account password	**3**
6.1 Configure email setting for user to receive email notification when resetting password	3
7. Give user to customize their own version of document in Document Generator	**5**
7.1 Create another page for user to create their own documents	2
7.2 Users are allowed to input their own title and headings to generated as their own documents	3
8. Save documents in database so they are editable before generating the documents	**5**
8.1 Document generated from the document generator will be saved in the database.	2
8.2 User can access to edit the document in future by pressing edit button by editing the document are regenerate the document	2
8.3 Creating tables in database to save the data of	1

each document saved	
9. Redirect to live chat function by clicking on the notification	**3**
9.1 Create a notification icon on the headers beside user icon	1
9.2 Clicking the icon will redirect user to chat function that are developed	2
10. Create sub-form to choose Project/Board/Task for time tracker function	**4**
10.1 Create three sub-form for time tracker page	2
10.2 User will have to select projects, board and task before adding them and start the time tracker to track their time	2
11. Project image is also clickable instead of just the word in Project Page	**2**
11.1 Improve the UI of clicking projects in project page	1
11.2 User are allowed to click on the project image and redirect to the project instead of clicking just the word to access the project due to user usability	1
12. Edit project details	**2**
12.1 Create a form for user to edit the project details	1
12.2 Update the data that are edited in the database and webpage	1
13. Add send message function in another column under Member's page	**4**
13.1 A column created in members page table with send message icon	2
13.2 User are allowed to send message to the particular person in the team by clicking the icon	2
14 Add user status: online or offline in another column under Member's page	**4**
14.1 A column created in members page table with online and offline status indicator	2
14.2 An online status will be shown in the members page if the user is online and vice versa	2
15. Upload and Display profile picture in another column under Member's page	**5**
15.1 A column created in members page table with user profile picture	2
15.2 User are allowed to upload their own profile picture and update on the database	1
15.3 User are allowed to see their team members	2

profile picture in members page	
16. Allow user to change their personal information	**4**
16.1 Change the UI of user profile page	2
16.2 User are allowed to change their personal information and update on the database	2
17. Improve GitHub page UI	**2**
17.1 Change the UI for GitHub pages to make it more attractive and user-friendly	2
18. Make announcement for projects or other announcement related to the projects	**8**
18.1 Project manager are allowed to make announcement for the projects	3
18.2 Every member that are under the project will receive the announcement made by project manager in their notification icon on header	5

5. Resources:

● *Organization*

The main resources on this project development will be the team members. Team members including the leader of the team Lee Jia Jun and the members of the team including Jason Goh, Ahmed Tarek and Bong Siaw Zhen. The team had discussed and agreed that the scrum master and project manager will take turns among the team member itself during the development so that everyone in the team can experienced to be the scrum master and project manager. To be clarified, the scrum master will be taking the responsibility for other team member in the team to be more familiarized in Agile practices that will be used throughout the whole project development and trained to follow the practices appropriately. Apart from that, scrum master will also have to promote daily scrum meeting, planning, discussion, monitoring the whole development and also the sprint process. Scrum master will also be the person who could help another team member is required. The project manager, who will be the person who define the project scope of the team, allocate task for other team member, define the resource requirements and reassure the quality of the project developed. Apart from that, monitoring the project plan

and managing relationships with the client and the stakeholders are also done by the project manager throughout the whole development.

6. Risk:

The risk assessment includes both the identification of potential risk and the evaluation of the potential impact of the risk. A risk mitigation plan is designed to eliminate or minimize the impact of the risk events that will make a negative impact on the project. The team will prioritize the risk items that are listed according to the risk exposure score and a mitigation strategy will be created for the risk items. In order to calculate to risk exposure score for each of the risk items, the team had multiplied the likelihood and impact score so that the risk exposure score could be compared and prioritize the risk item from highest risk to lowest. After that, the team will also rate the likelihood value from 1 to 5 where the higher the value of likelihood, the higher the risk might happen during the development. Lastly, to prevent data lost, the project leader (Lee Jia Jun) will pull the latest file from the repository every night before 11:59pm and save it to a hard disk and Google Drive. The files in the hard disk and Google Drive will be the backups just in case any unforeseen circumstances happen.

After the risk exposure value is calculated, the team had come up with the mitigation strategy for every risk item and choose a category for each of the mitigation strategy in the table below.

No.	Risk Item	Likelihood (1 – 5)	Impact (1 – 5)	Risk Exposure	Mitigation Strategy	Category
1.	Will it use a lot of time to implement it?	3	2	5	Start the development of the system	Risk prevention

					earlier and do some research before develop the system	
2.	Will it cost a lot to implement it?	2	1	2	Research for free sources that could be found online that will minimize the cost of developing the project as much as possible.	Risk prevention
3.	Will it require stable database for it?	4	5	20	Invest for a more stable database that won't crashes after certain of time.	Risk transfer
4.	Is the database secured as personal information are highly concerned?	5	5	25	Invest some for hiring a cybersecurity to deal with the security part	Impact reduction
5.	Will the user abuse the system?	2	4	8	Reduce the number of input modification if it has too many requests.	Likelihood reduction
6	What happen if the data lost while development is	4	5	20	Backing up the data at the end of the day so that the team had the	Risk prevention

				version control of every day development process	
in process					

7. Schedule:

● *Delivery Phases*

No.	Item	Dependencies	Business Value (1 least – 10 most)	Sprint Needed (1|2|3|4)
1	Live chat function	-	10	1
2	View members' progress and progress of projects in Progress page	-	9	1
3	Change the layout of the Calendar page	-	7	1
4	Auto language translation	-	5	1
5	Hide important information in URL using base64 encryption	-	10	1
6	Receive email notification when resetting account password	-	9	1
7	Give user to customize their own version of document in Document Generator	-	7	2
8	Save documents in database so they are editable before generating the documents	5	5	2
9	Redirect to live chat function by clicking on	1	6	2

	the notification			
10	Create sub-form to choose Project/Board/Task for time tracker function	-	6	2
11	Project image is also clickable instead of just the word in Project Page	-	4	2
12	Edit project details	-	6	2
13	Add send message function in another column under Member's page	1	7	2
14	Add user status: online or offline in another column under Member's page	-	5	2
15	Upload and Display profile picture in another column under Member's page	-	5	3
16	Allow user to change their personal information	-	5	3
17	Improve GitHub page UI	-	5	3
18	Allow project manager to make announcement for projects or other announcement related to the projects	-	7	3

- *Overview*

The table of deliverables, features task breakdown and delivery phases above showing how the team had plan to develop the system in this semester. The team had a discussion before and had decided to split the development of the system into 3 sprints where 2 weeks per sprint. A sprint review will be conducted after the sprint ended with the supervisor and client to let them know the progress and what had been completed in the system. Sprint review

also conducted for the team to get immediate feedback and make changes on the system if required. The team had split the backlog item into three sprints, where 6 backlog items will be done in sprint 1, 8 in sprint 2 and 4 in sprint 3. The team had chosen to complete the backlog items based on the user roles of the features which all user roles will be first and the last backlog will be for project manager only since this semester is all about improving the system. The team had planned to have the system completed within these 3 sprints and deploy the system in Week 6 for this semester. Additional features might be added during the sprint if the features are required and could help to system to be better and user testing will be done after the deployment of the system.

● *External Dependencies*

Before developing the system, the team had decided to use Trello application for task management as the team had some experience in using Trello during previous semester. In Trello, the team had created a Trello Board to save all the features or backlog item in different list such as To Do, Doing and Done. The team will also create different card of the system features or backlog item in order for them to move the backlog item from To Do to Doing or Done when the sprint started. This could help the team to manage the task efficiently. At the same time, the team could track down the workflow of the completion of task in the burn-down chart that are offered in the Trello.

● *Assumptions*

1. Scope
   - The scope of the project will not be changed once the client signs off the Software Requirements Specification (SRS).
2. Methodology
   - Agile project management method will be used throughout the project development.
3. Technology
   - The team will use HTML, CSS, PHP, JavaScript in developing the system.

Time Line

| No. | Tasks | Sprint 1 | | Sprint 2 | | Sprint 3 | | - |
		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7 - 12
1.	Live chat function	12h						
2.	Convert tables in progress page into other form of charts	5h						
3.	Change the layout of the Calendar page		5h					
4.	Auto language translation		5h					
5.	Hide important information from URL using base64 encryption		6h					
6.	Receive email when resetting account password		3h					
7.	Give user to customize their own version of document in Document Generator			5h				
8.	Save documents in			5h				

No.	Description						Testing, Integration and Maintenance
	database so they are editable before generating the documents						
9.	Redirect to live chat function by clicking on the notification			3h			
10.	Create sub-form to choose Project/Board/Task for time tracker function			4h			
11.	Project image is also clickable instead of just the word in Project Page			2h			
12	Edit project details				2h		
13.	Add send message function in another column under Member's page				4h		
14.	Add user status: online or offline in another column under Member's page				4h		
15.	Upload and					5h	

No.	Task							
	Display profile picture in another column under Member's page							
16.	Allow user to change their personal information					4h		
17.	Improve GitHub pages UI						2h	
18.	Make announcement for projects or other announcement related to the projects						8h	

8. Budget:

The team did not spend any money in FYP A and FYP B as the team had decided to use the free sources that could be found online to build the system.

Semester	Estimated Cost (RM)
Sem 1 FYP A	-
Sem 2 FYP B	-

Document Approval

This document is approved by:

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