Project Documentation Plan

[Novice Programmer/Peer Tutoring Mobile App]

Documentation Overview

Project Introduction

Peer tutoring is an instructional strategy that consists of student partnerships, linking high achieving students with lower achieving students or those with comparable achievement, for structured learning sessions. According to Rohrbeck, Ginsburg-Block, Fantuzzo, &Miller(2003), peer tutoring is "*systematic, peer-mediated teaching strategies"[1]*. Many statistics have proved that peer tutoring is effective for students' progress and increases social motivation. However, at present there are not enough service that helps facilitates this. This peer tutoring mobile app is aimed at providing matching service for students who need help with those who are willing to offer help and also helps facilitates tutoring sessions that can be utilized to coordinate on-the-go sessions. Students can easily set up meeting sessions before or after class or during lunch. This app also allows students to post a listing of the subjects, time and location that they can offer help or need help. And other students can search by subject, time or location and register for suitable sessions. Also, students can easily communicate with each other through this app and no private information will be leaked out. In order to motivate students to offer help, tutors can be paid for the service they provided.
This mobile app is projected to be finished by April, 2018.

Project Requirement

Functional Requirement

H: 1. Users of this app should be able to register and log in to the system:
1.1 This app should have databases to store the information of users including their username, password, emails and other basic information.
1.2 Whenever a user is registered, the database should be able to update.

H: 2. Tutors could create multiple sessions, and students could schedule/cancel the appointments:
2.1 Whenever a tutor post a new session, the database should be able to update with information about this session (time, subject, location, etc.)
2.2 When students schedule/cancel an appointment posted by instructors, the database should update correspondingly.

H: 3. Users could search for the available time, location and subject in order to make appointments for academic help:
3.1 When users are doing the search, the system should have a list of all tutees' time/location/subject and other needed information(email, etc.).

3.2 System should be able to differentiate whether the user is a tutor or a tutee so that there will be different lists shown.

L: 4. Tutors could choose to give a volunteer service or not:
4.1 Based on the database about the sessions, system should display whether the service is volunteer or not to other users.
4.2 If the service is not volunteer, the database should store the working hours of tutors and calculate the pay based on total working hours.

L: 5. Both tutors and tutees could rate on each other:
5.1 The database should have two lists keeping track of tutors and tutees' rating as a personal information.

L: 6. Tutors and students could both invite other tutors or students to the same session:
6.1 When tutors or students invite others, the database should check whether the username exists or not.
6.2 System should send the invited users a message, then users could choose accept or not
6.3 System should inform the inviters the feedback from the invited.

Nonfunctional Requirement

H: 1. Availability Requirement
1.1 This app supports most of the Android devices and operates on most of Android platform.
1.2 The latest version of this app should be available for users from Appstore for free.
1.3 This app should be able to use for users with the latest app version on their cellphones. For users with old versions, they should update before use it.
1.4 This app should be available both with WLAN and Cellular network connection.
1.4 This app should be available to users all the time as long as users meet the requirements above.

H: 2. Security Requirements
2.1 This app should mask baleful, pornographic information created by users.
2.2 This app should mask users' full credit card numbers unless the users choose not to.
2.3 This app should mask users' personal information to other users under any circumstances.
2.4 This app should not use users' personal information such as location without the users' permission.
L: 3. Capacity Requirements
3.1 This app should meet the capacity requirements in app store.
3.2 This app should be able to extend its capacity during version updating.
L: 4. Performance Requirements

4.1 This app should meet the performance requirements in app store such as speed, resources management, and battery consumption.
M: 5. Reliability Requirements
5.1 This app should be well tested and will not crash due to normal user operations.
5.2 This app should not crash by some incorrect user operations.
L: 6. Other Requirements
6.1 This app should be easy to use for adults and child older than 5.
6.2 This app should contain a help page for users.
6.3 This app should be able to receive user feedbacks.

Project User Cases

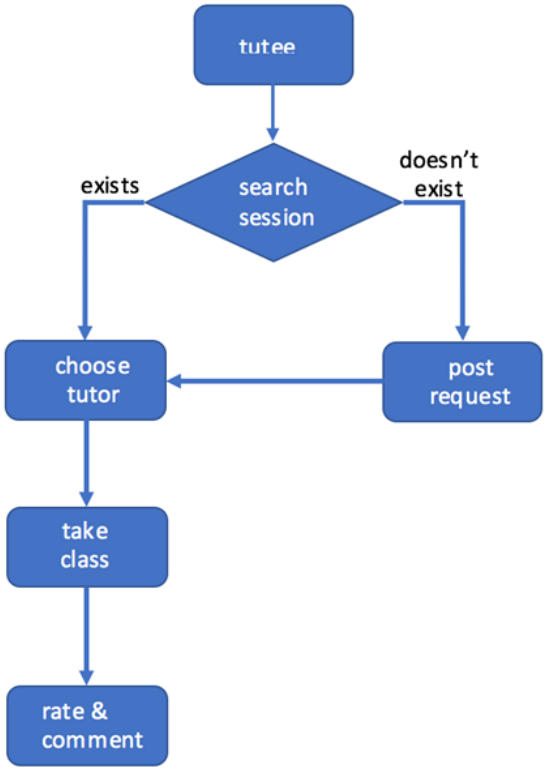


Figure 1. User case for tutee

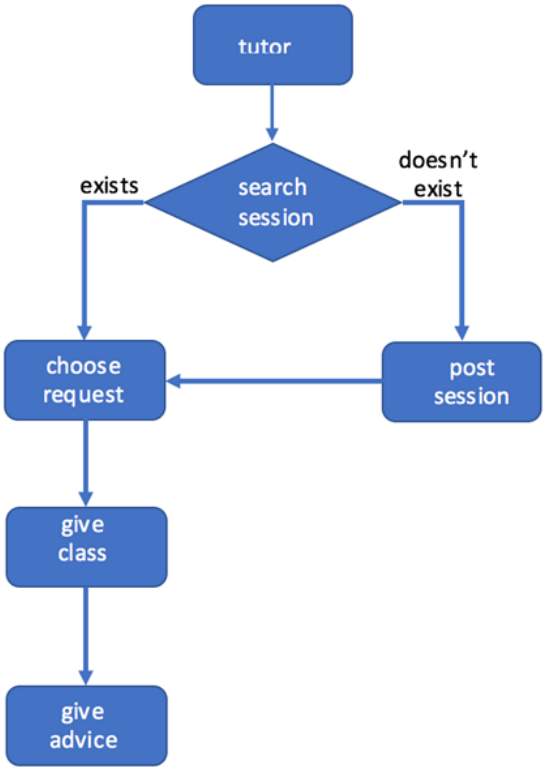


Figure 2. User case for tutor

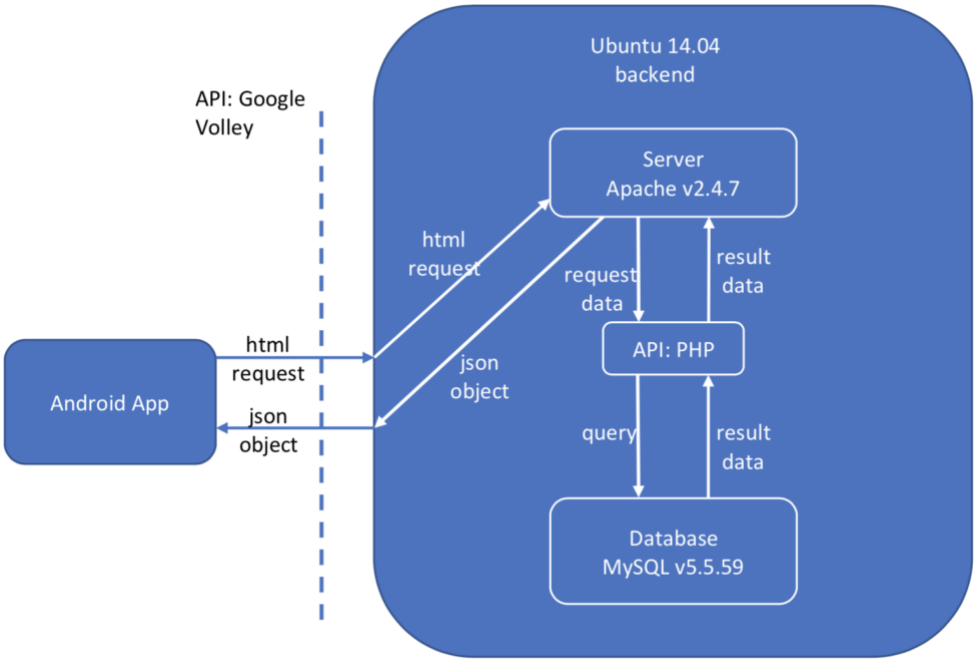


Figure 3. System Architecture

Outline of Deliverables

Deliverable	Purpose	Audience	Start	Finish	Notes
Project Documentation Plan	Provide an overview of the whole project	Owners, Project master, Project developer, Project tester	02/19	04/15	None
Code	Basic content of the app	Project master, Project developer, Project tester	02/19	04/15	None
Readme	Help the team work corporately	Owners, Project master, Project developer, Project tester	02/19	04/15	None
Support Manual	Help users to use the app	Owners, Users	02/19	04/15	None

Detailed Content Plan

Project Documentation Plan:

This is a documentation plan for a peer tutoring app project based on Android platform. The development of this project are designed to last for 8 weeks from February 19th to April 15th. The final project documentation will be sent to owners and it will provide an overview of the whole project as well as details of development. The Project Documentation will be in the form of a .pdf document and will be delivered and presented on April 20th.

Task ID	Description	Owner	Start	Finish	Dependencies
Requirement	Describes the refined functional and nonfunctional requirements	Adel Fahmy	01/27	02/07	None
System Architect	Build system	Adel Fahmy	02/08	02/11	Requirements
Plan	Split work into sprints and make plan for the project	Adel Fahmy	02/12	02/18	System architecture
Code	Write and test code	Adel Fahmy	02/19	04/09	Plan
Improve	Test and improve the performance of whole system	Adel Fahmy	04/10	04/15	Code Plan

Code Development:

This is a code plan for a project which is designed for a peer tutoring app in Android platform. This development of this project starts from February 19th and will finish on April 15th. The final portable code for the project will push into Git and it will contain all the parts to run this app in android device and also a complete documentation on how to install the project in the RAEDME.md.

Sprint 1:

Sprint 1 contains three parts of the app. The first one is the registration system that will establish the users' database, which will allow user to register and log into the app. The second one is the function of creating session which allow tutors to create session with corresponding information such as data or subject. The third one is the volunteer service which allow tutors to decide if the service is free or they should be paid

Task ID	Description	Owner	Developer	Start	Finish	Dependencies
Authenticate	Design login/registration system and users' information database, including android code and php code	Adel Fahmy	Junru Wang; Jiuyun Zhang	02/19	03/03	None
Session Create	The user could add subject name, time, location and contact information, including android code and php code	Adel Fahmy	Xinyu Zhou; Zu Liu	02/19	03/03	Authentication
Volunteer	Create volunteer class based on the users' class, including android code and php code	Adel Fahmy	Junru Wang; Jiuyun Zhang	02/19	03/03	Session Create

Sprint 2:

Sprint 2 is based on the work of Sprint 1. The first task is update the session model in the database. This will allow students to search the matching course through the sessions that are created by tutors. The second task is to establish the rating system that allow students and tutors to give feedback on each other after the course. This task will need to create a new attribute in the users' model. The last task is to design a help page for users who first come to the app and also a feedback page for users to make their comments.

Task ID	Description	Owner	Developer	Start	Finish	Dependencies
Search	The users could type the subject name to search the session they wanted, including android code and php code	Adel Fahmy	Xinyi Gong; Junru Wang; Xinyu Zhou	03/04	03/16	Session Create
Rating	Design rate system, storing users' rates and show them in the app, including android code and php code	Adel Fahmy	Jiuyun Zhang	03/04	03/16	Session Create
Help& Feed	Design help and feedback page for users, store the feedback in the databse	Adel Fahmy	Zu Liu	03/04	03/16	None

This part is mainly to realize the non-functional requirements. The first one is to add some keys to the users' information and do some tests to make sure the app will not leak information by accidence. The second goal is to improve performance of the app such as page loading speed and resource management to make the app meet the

requirement of the app store. The third one is to add an invitation function which allow students and tutors to invite other users to the course. This task may need to interact with other applications such as emails.

Task ID	Description	Owner	Developer	Start	Finish	Dependencies
Security	Make sure the password meets the requirement and hash it with appropriate function	Adel Fahmy	Xinyi Gong; Junru Wang; Zu Liu	03/17	03/27	Authentication
Invitation	Add a button for users to input their invitee to attend session, including android code and php code	Adel Fahmy	Xinyu Zhou	03/17	03/27	Session Create
Performance	Meet the performance requirements in the app store	Adel Fahmy	Jiuyun Zhang	03/17	03/27	None

Sprint 3:

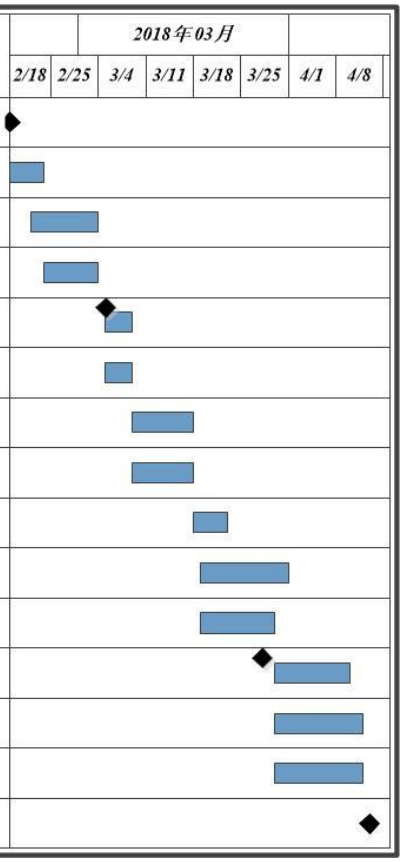
This sprint is mainly to do some tests to improve other aspects of the app. First is to do tests to make sure that users could get the latest version in the app store and after installing the app could connect to the WLAN. Second task is to extend the capacity of the app to allow multiple users log into and use the app at the same time. The third one is to test the app with corner cases to ensure that the app could deal with different kinds of incorrect operations.

Task ID	Description	Owner	Developer	Start	Finish	Dependencies
Availability	Update the latest version in app store and could connect to WLAN	Adel Fahmy	Zu Liu	03/28	04/15	None
Capacity	Support multiple students and tutors online at the same time	Adel Fahmy	Xinyu Zhou	03/28	04/15	None
Reliability	Make app work normally when users do incorrect operation	Adel Fahmy	Xinyi Gong; Junru Wang; Jiuyun Zhang	03/28	04/15	None

Schedule:

Task:

ID	Task	Start Time	End Time
1	Start	2018/2/19	2018/2/19
2	Authentication System	2018/2/19	2018/2/23
3	Create Session	2018/2/22	2018/3/3
4	Volunteer Service	2018/2/24	2018/3/3
5	Search	2018/3/5	2018/3/8
6	Rate	2018/3/5	2018/3/8
7	Make appointment	2018/3/9	2018/3/17
8	Supporting functions	2018/3/9	2018/3/17
9	Invite or Add	2018/3/18	2018/3/22
10	Security	2018/3/19	2018/3/31
11	Performance	2018/3/19	2018/3/29
12	Availability	2018/3/30	2018/4/9
13	Capacity	2018/3/30	2018/4/11
14	Reliability	2018/3/30	2018/4/11
15	finish	2018/4/13	2018/4/13



Employee: