

Product Backlog - Team 4

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Problem Statement: It is often difficult for students to form study groups with fellow classmates because of busy schedules or due to the lack of contact information. StudyBuddy helps find nearby classmates that may be able meet up and help a student with their coursework or a particular problem.

Background Information: Every college student has been new and/or confused at some point. When you don't know anybody in your class, and are having trouble, sometimes it is difficult to find help outside of professor or TA office hours. While online discussion boards such as Piazza exist, they are not well-suited for receiving help in a timely fashion and do not allow people to talk through a problem in person. Additionally, most classes don't even offer an online discussion board of any sort to begin with. Therefore, we decided to develop this application so that students can receive quick help in-person and can easily collaborate with one another when they need help.

Environment: Our application will run on Android devices, so we will be coding in Java within the Android Studio IDE. GitHub will be used for source control. We will be using the Purdue.io API to access the Purdue course catalog and retrieve each student's schedule. We will be using the Parse (BaaS) framework for our backend and the Sinch API for messaging. An SQL database will be used to store user login info.

Functional Requirements:

Backlog ID	Functional Requirements	Hours
1	As a user, I would like to log in with my purdue account to access my course list.	10
2	As a user, I would like to create a new request to receive help for a particular class, thus creating a new study group.	15
3	As a user, I would like to receive a push notification when a user who needs help with a class I am in is nearby.	10
4	As a user, I would like to receive a push notification when a user has accepted my request for help, thus joining my study group.	5
5	As a user, I would like to send and receive messages from the user(s) in my study group.	25
6	As a user, I would like my preferences (course list) to be updated and saved when I ask the application to update my current course information.	5
7	As a user, I would like to flag a user for abusing the system.	5
8	As a user, I would like to write a short description about my location and problem when I send out a request for help.	10

9	As a user, I would like to set how long my request should last.	5
10	As a developer, I would like expired requests to be deleted automatically.	10
11	As a user, I want to be able to log out and switch users.	5
12	As a user, I would like to view how much longer a request will be active for.	5
13	As a user, I would like to create a StudyBuddy account.	10
14	As a user, I would like to change my StudyBuddy account password.	5
15	As a user, I would like to delete my account.	5
16	As a user, I would like to silence notifications for the application.	5
17	As a user, I would like to be able to view my course list.	5
18	As a user, I would like to be able to see the active requests for help for the classes I am enrolled in.	10
19	As a user, I would like to be able to see the number of students for a particular request.	5
20	As a user, I would like to be able to accept a request for help, thus joining a study group.	5
21	As a user, I would like to be able to join a study group as another student who needs help.	5
22	As a user, I would like to quit the study group I am currently in.	5
23	As a user, I would like to view the request information for the study group I am in.	5
24	As a user, I would like to open the application.	1
25	As a user, I would like to close the application.	3
26	As a user, I would like to change my display name.	1
27	As a user, I would like to change my profile picture.	2
28	As a user, I would like the request time limit to be reset to 30 minutes if the time remaining is less than 30 minutes and a user sends a message.	5

Non-Functional Requirements:

- As a user, I would like my purdue account password to be used and saved securely by the application.
- As a user, I would like the application to be aesthetically pleasing.
- As a user, I would like the application to be easy to use.
- As a user, I would like to remain anonymous when I flag another user.
- As a user, I would like to not receive any notifications from users I flag.
- As a developer, I would like to be able to easily test GPS-related functionality.

Use Cases:

Case 1: Login and import enrolled courses 1. User selects login on Welcome page 3. User enters Purdue username and password 5. User confirms course list	System Responses 2. Display Purdue login page 4. Verify authenticity and import and display courses 6. System adds courses to local database 7. Display main page
Case 2: Request Help 1. User selects a course from his/her course list 3. Select "Request Help" button 5. Input problem title, description, location, and time limit. 6. User taps submit button.	System Responses 2. Display active request list for the specified course 4. Display request creation screen 7. Problem information is sent to our backend and a new request is created. 8. Display request info page.
Case 3: Respond to Help Request (Through Push Notification) 1. Tap notification box 3. Tap "Accept" button to accept help request 5. Indicate whether or not you want to be a helper	System Responses 2. Display request info page. 4. Ask user if they want to be a helper or not 6. Display study group chat page.
Case 4: Respond to Help Request (Through Course List) 1. User selects course he/she wants to help with. 3. User selects request to help with. 5. Tap "Accept" button to accept help request 7. Indicate whether or not you want to be a helper	System Responses 2. Display list of active requests. 4. Display request info page. 6. Ask user if they want to be a helper or not 8. Display study group chat page
Case 5: Send message to Study Group 1. Open side menu and tap the "My Group" button 3. User taps text box to send a message. 5. User enters message they wish to send. 6. User taps the send button	System Responses 2. Display the study group chat 4. Upon text box selection, display a keyboard 7. Display message in chat log for all users in study group. 8. If there is less than 30 minutes remaining in the group timer, set it to 30 minutes.
Case 6: Join study group (Through Course List) 1. User selects course he/she wants to help with 3. User selects group to join 5. User indicates whether or not he/she wants to be a helper	System Responses 2. Display list of active requests 4. Ask user if they want to be a helper or not 6. Display study group chat page
Case 7: Navigate to Settings Screen 1. Open side menu 2. Select "Settings"	System Responses 3. Display settings screen
Case 8: Update a User's Courses 1. Navigate to settings screen 3. Press the "Reload Courses" button 5. Enter Purdue username and password and press "OK" button	System Responses 2. Display settings screen 4. Prompt user for Purdue username and password 6. If credentials are correct, display "Syncing..." message and sync course info in the background. If credentials are not correct, display an error and ask the user to try again.
Case 9: Flag Another User for Abusing the System 1. User selects another user by tapping on name. 3. User selects "Report/Flag User". 5. User taps text box to report a problem. 7. User enters his/her reason for reporting the user. 8. User taps the send button.	System Responses 2. Display selected user profile with a list of options 4. Display a text box and submit button 6. Upon text box selection, display a keyboard 9. Register the problem to the database

Case 10: Create Account 1. Open application for the first time. 3. Input new account information into input boxes. 4. Press the "Create" button to create the new account	System Responses 2. Application loads to create account screen 5. Send information to our backend and create the account in our database. 6. Display Welcome page
Case 11: Delete Account 1. Navigate to settings screen 3. Select delete account option 4. Select "yes" or "no" option	System Responses 2. Display settings screen 4. Ask user if they are sure 5. If "yes" then delete user from database and log them out. If "no" dismiss dialog box and do nothing.
Case 12: Change Password 1. Navigate to settings screen 3. Select change password option 4. Enter new password and click submit	System Responses 2. Display settings screen 3. Display change password view 4. Update user's password in the database
Case 13: Silence Notifications 1. Navigate to settings screen 3. Uncheck the "Receive Notifications" option	System Responses 2. Display settings screen 4. Option is unchecked and user no longer receives notifications
Case 14: Logout and Switch Users 1. Navigate to settings screen 3. Select logout option 5. Enter user credentials to login and click "login" button	System Responses 2. Display settings screen 4. Log user out and display login screen 6. Validate user credentials. 7. If user credentials are valid, display Purdue login page. If user credentials are invalid, display login screen.
Case 15: Change password 1. Navigate to settings screen 3. Select change password option 5. Enter old, new and re-type new password	System Responses 2. Display settings screen 4. Display page with 3 labelled text boxes 6. Validate, check and store new password to database 7. Display "Success" or "Failure" message 8. Redirect to settings screen
Case 16: Delete Account 1. Navigate to settings screen 3. Select "Delete Account" option 5. Select "Yes"	System Responses 2. Display settings screen 4. Display confirmation message 6. Remove account from database and redirect to login page
Case 17: View course list 1. After logging in with Purdue account and downloading course list, navigate to the course list page.	System Responses 2. The users courses should be listed in a table.
Case 18: View active study groups 1. Select a particular course you would like to see the group for from the course listing page.	System Responses 2. A new view is loaded with a list of the requests for that particular course.
Case 19: Refresh group list 1. Swipe down (pull to refresh).	System Responses 2. Send a request to the database to give the application an updated list of groups. 3. Change on screen list of groups
Case 20: Joining a study group as someone that wants help 1. Navigate to your course list 2. Select the course you want help in.	System Responses 3. Display a list of study groups in the selected course, with numbers displaying the number of helpers, and total

4. Select the group you want to be in. 6. Tap "Accept" button to accept help request	number of people in the group 5. Display group info page 7. Display study group chat page
Case 21: Quit study group 1. Navigate to group chat screen 3. Tap group info icon on the action bar at the top 5. Tap "Leave Group" button 7. Tap "OK" button	System Responses 2. Display group chat screen 4. Display group info screen 6. Show dialog asking user to confirm 8. Remove the user from the group and return to the course list screen. If the user was the last user in the group, then destroy the group.
Case 22: View Study Group Chat 1. Open side menu and tap the "My Group" button	System Responses 2. Open the study group chat
Case 23: Open application 1. User opens application by clicking the app icon	System Responses 2. If logged in; load their profile and class list from the local storage device. 3. If no profile has been logged in, pull up the login screen and prompt user to log in or create a new account
Case 24: Change display name 1. Navigate to settings screen 3. Select "Change Display Name" option 5. Enter new display name	System Responses 2. Show settings screen 4. Show dialog prompting user for new display name 6. If display name is valid, accept new display name. Otherwise, show an error and ask the user to try again.
Case 25: Change profile picture 1. Navigate to settings screen 3. Select change profile picture 5. Take photo OR select photo from gallery	System Responses 2. Show settings screen 4. Prompt user to go to media gallery or take a photo 6. Change user's photo to selected option
Case 26: Receive Push Notification when user joins group 1. User joins a study group	System Responses 2. When another user joins said study group, the user receives a push notification alerting them that someone joined their study group.