



### *Team 2 - Product Backlog*

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## **Problem Statement**

Despite the plethora of social media apps available, staying connected with friends you don't often see is challenging, as popular social media platforms do not tend to promote close, intimate friendships. Our project, SnapBattle, aims to solve this problem by challenging friend groups to share photos of their daily lives that best respond to specific prompts.

## **Background Information**

### **Audience**

In our digital society, many, if not most people, utilize social media to provide updates to friends and to see what friends have been up to. However, the main issue with current social media is that it tends to encourage shallow connections with a large number of people. On the other hand, our app is meant for people who are looking for deeper connections with a small number of people, whether that be close friends or family.

### **Similar Platforms**

A trendy social media platform today is *Instagram*, where users can upload posts, stories, and reels that contain picture/video content, which can be seen by all public users or only following users. This allows users to share their latest memories and update followers and friends through the app. *BeReal* is another popular social media platform, but it has a completely different premise than *Instagram*. *BeReal* notifies users at any random time during the day, and users must upload a picture of what they are currently doing within two minutes of the notification. Otherwise, they will post their *BeReal* late. This post is then available to those who are friends with the user and available to others until the next notification is made; users also cannot view their friends' posts unless they post a picture themselves.

### **Limitations**

On *Instagram*, most users might only interact with one another by following one another and liking each other's posts. In other words, interactions on Instagram are not very engaging nor

very meaningful, especially since many users may have hundreds or thousands of followers. Thus, our app attempts to solve this issue by engaging a small group of friends through daily photo prompts for which friends must find fitting scenes in their daily lives to capture and upload.

Although *BeReal* might also seem to solve this issue, *BeReal* can be problematic in the sense that users must upload a photo at an unannounced time. On the other hand, our app gives users the entire day to upload a photo. Additionally, many photos uploaded to *BeReal* can be meaningless, since the point is to take a picture of whatever you are doing at an exact moment. However, the point of our app is to take a picture that responds to some daily prompt. Hence, users are given more freedom in what they capture, and they also need to deliberate more about what kind of picture to take, making the entire process more engaging and more fun. In addition, our app has a daily and weekly voting system where users can vote on what they believe to be the best response to a given prompt. Thus, this feature encourages users even more to put greater thought into what they choose to upload.

## Functional Requirements:

Profile Settings
1. As a user, I would like to create an account with an email and password.
2. As a user, I would like to sign into my account.
3. As a user, I would like to be able to change my username.
4. As a user, I would like to delete my account and all the pictures associated with it.
5. As a user, I would like to be able to change my password.
6. As a user, I would like to be able to choose a profile picture and change it later if wanted.
7. As a user, I would like to be able to recover my password if I cannot sign in and I forgot my password ( <i>if time allows</i> ).
8. As a user, I would like to be able to have a biography section viewable by other users to showcase my personality
Groups and Friend Settings
9. As a user, I would like to create a group of friends and become the group administrator.

10. As a user, I would like to be able to join an existing group of friends when sent an invitation.
11. As a user, I would like to search for a user by username and view their profile information (username, profile picture, biography, achievements, etc.)
12. As a user, I would like to be able to invite a user to a group of friends.
13. As a user, I would like to add/remove friends from my account.
14. As a user, I would like to view the list of friends in my group.
15. As a user, I would like to be able to leave a group.
16. As a user, I would like to be able to block users.
17. As the administrator of a group, I would like to be able to transfer my permissions to someone else if I leave the group.
18. As the administrator of a group, I would like to be able to kick users.
19. As the administrator of a group, I can set a maximum number of users that can join my group.
20. As a user, I would like to be a part of multiple groups ( <i>if time allows</i> )
<b>Daily Photo Prompts and Responses</b>
21. As a user, I would like to be able to receive random prompts every day.
22. As a user, I would like to receive push notifications when the prompts are released ( <i>if time allows</i> )
23. As a user, I would like to receive notification reminders if I have not responded to the prompt by the deadline ( <i>if time allows</i> )
24. As an administrative user, I would like to be able to set/edit a time for my group to receive prompts every day.
25. As an administrative user, I would like to be able to set/edit a time for my group to send picture responses by.
26. As an administrative user, I would like to choose how long daily and weekly voting periods are. Daily voting periods should start immediately after the daily submission deadline, and weekly voting periods should start immediately after the last daily voting period of the week.

27. As a user, I would like to take a photo inside the app to submit to a daily prompt with two resubmissions.
28. As a user, I would like the option to save every submission that I make to my local phone album.
<b>Daily and Weekly Votes / Leaderboard</b>
29. As a user, I would like to participate in a daily vote to choose the best picture-prompt combination of the group for that day.
30. As a user, I would like to see the results of the daily voting contest at the end of the daily voting period.
31. As a user, I would like to receive 1 leaderboard point if my response to the daily prompt received the greatest number of votes within the group
32. As a user, I would like to participate in a weekly vote to choose the best picture-prompt combination of the week, where only picture-prompt combinations that won daily votes are possible options to vote for.
33. As a user, I would like to see the results of the weekly voting contest at the end of the weekly voting period.
34. As a user, I would like to receive 3 leaderboard points if one of my prompt-response combinations wins a weekly contest with the greatest number of votes.
35. As a user, I would like to see the leaderboard of the friend group, which is updated with the results of both daily and weekly votes and which resets every two weeks.
36. As a user, I would like to be able to choose a date anytime within the past year and view/save the daily prompt-response combination that won that day
37. As a user, I would like to be able to choose a date that falls on a weekly voting deadline anytime within the past year to view/save the prompt-response combination that won that week
38. As a user who is at the top of the leaderboard when it resets, I would like to receive an achievement that I can show on my personal profile page.
<b>Comments</b>
39. As a user, I would like to be able to leave comments on my friend's daily photo submissions.
40. As a user, I would like to be able to view the comments on my daily photo submissions and my friends' daily photo submissions.

41. As a user, I would like to be able to edit my comments on my friend's daily photo submissions.
42. As a user, I would like to be able to delete my comments on my friend's daily photo submissions.
43. As a user, I would like to be able to reply to the comments that other users have commented on my post.
44. As a user, I would like to be able to delete comments on my daily photo submission.
45. As a user, I would like to block comments on my daily photo submission, meaning that no one can comment on my photo submissions
46. As a user, I would like to be able to like comments on my daily photo submission.
<b>Battle Shop / Coins</b>
47. As a user, I want to earn coins (currency) and/or achievements for my consistent participation in daily submissions and daily/weekly votes. For example, I want to earn 1 coin every time I submit a photo before the daily deadline <i>(if time allows)</i>
48. As a user, I would like to see the coins (currency) that I have earned <i>(if time allows)</i>
49. As a user, I would like to open a shop where I can buy various items (buffs/nerfs) with the coins I have in order to get an edge in competition (for example, I could buy an item that resets the daily prompt for everyone to something I want) <i>(if time allows)</i>
50. As a user, I would like to be able to see the items (buffs/nerfs) I have purchased and are ready to activate <i>(if time allows)</i>
51. As a user, I would like to be able to activate the items (buffs/nerfs) I have whenever I want <i>(if time allows)</i>
<b>Global Snaps</b>
52. As a user, I would like to be able to open my photo-response combination that won the week to the public <i>(if time allows)</i>
53. As a user, I would like to see a feed of various photo-response combinations that won weekly contests in different groups <i>(if time allows)</i>
54. As a user, I would like to be able to anonymously like any public photo-response combination. <i>(if time allows)</i>
<b>Message System</b>

55. As a user, I would like to have automatically-created group chat for the group that I am in
56. As a user added to an existing group, I would like to see the history of the chat before I was added
57. As a user, I would like to be able to see if people are typing in chat ( <i>if time allows</i> )
58. As a user, I would like to be able to send messages in the group chat that are viewable by all other users in the group. Other users should see my username as well as my profile picture along with my message.
59. As a user, I would like to be able to reply directly to another person's message ( <i>if time allows</i> )

## **Non-Functional Requirements:**

### **Architecture and Performance**

We plan to use React Native for our front-end, Node.js/Express.js for our back-end, and MongoDB for our database. React Native will allow our application to be available to both Android and iOS users without having to rewrite code for each platform. Our backend will host a REST API, in order that the front-end software and back-end software can communicate in a consistent manner. Lastly, MongoDB is suitable for this project because it is inexpensive and can scale horizontally easily, which is needed to support many users. We hope to be able to support at least 500 users concurrently. Furthermore, it is likely that our data will be changing frequently so MongoDB will be better fitting for the project than a relational database. Additionally, since we need to store images on the backend, we would likely need a Cloud Storage platform such as Google.

### **Security**

As another social media platform, security is vital to ensure that users feel safe using our app. We hope to ensure that pictures uploaded by users to certain groups will be secure within the database and visible only to those within the chosen group. Requests to and from the server will be encrypted to ensure that stolen information will not expose sensitive information.

### **Usability**

We want the interface to be simple and easy enough for average users to understand. For our app to be user-friendly, it is important to make the app navigation clear. This is especially true because this application will be accessible to both Android and iOS. Furthermore, it is often hard to fit a lot of things onto a mobile screen, meaning that we will have to have many screens for various purposes, with navigation between each one.

In addition, because our entire idea is based on interactions between friends in a group, we need to ensure that editing groups and group settings (such as prompt release times and deadlines) should be simple for group administrators (users that create a group).

### **Hosting/Deployment**

Because we have a separate front-end and back-end, we can deploy each on separate platforms. Since this is a cross-platform mobile app, we will attempt to deploy our app to both the Google Play Store and the App Store. Moreover, we will attempt to host our backend on Heroku, which will be able to handle a minimum of 500 requests per minute. For our pictures in particular, we hope to store all the pictures on Google Cloud.