



Software Requirements Specification

CapGrab

Caption Sharing/Forum Mobile Application

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5 Requirements Specification

5.1 Introduction

This Software Requirements Specification documents the requirements for the CapGrab mobile application. CapGrab is a iOS application that allows users to receive caption ideas for photos that they plan to post on social media. When opening the app, the user will be asked to either sign in or create an account. The user will then be taken to their account page where they can browse the media they have posted, look at the captions people have offered, and/or create a new post. When creating a post, the user has an option to post it to the public forum, for all CapGrab users to see, or keep it private, for just the user's followers to see. The user can also visit account pages of the users they follow, browse the public forum, leave caption ideas on media, as well as up vote captions. The CapGrab system has three components: the mobile frontend, a database, and cloud storage. The frontend will be comprised of multiple pages, where the user can interact with the content of the app. The database will be used to hold user information, captions, and media paths. Finally, the cloud storage will be used to hold the media that the user's post.

5.2 Functional Requirements

5.2.1 User Interface

5.2.1.1 Sign In/Sign Up Screen

5.2.1.1.1 The Sign In Screen shall contain a tab that allows users to toggle between the "Sign In" interface and "Sign Up interface".

5.2.1.1.2 The "Sign In" interface shall contain two input fields for login credentials (email address and password).

5.2.1.1.3 The “Sign In” interface shall contain a “Sign In” button.

5.2.1.1.3.1 The “Sign In” button, upon a user’s press, shall initiate authentication of the user’s inputted credentials, and if successful, shall redirect the user to their home/forum feed screen.

5.2.1.1.4 The “Sign In” interface shall have validation checks for each input field.

5.2.1.1.5 The “Sign in” interface shall remain hidden (dotted) as a user types into the input field.

5.2.1.1.6 The “Sign Up” interface shall contain four input fields (email address, username, password, and confirm password).

5.2.1.1.7 The “Sign Up” interface shall have validation for password length and email address format.

5.2.1.1.8 The “Sign Up” interface shall contain a “Sign Up” button.

5.2.1.1.8.1 The “Sign Up” button, upon user’s touch, shall register the user and the inputted credentials into the database.

5.2.1.1.9 The Sign In/Sign Up Screen shall contain the CapGrab logo on the top of the interface.

5.2.1.2 Home/Forum Feed Screen

5.2.1.2.1 Home/Forum Feed Screen shall contain a scrollable table of pictures.

5.2.1.2.2 Home/Forum Feed Screen shall contain a navigation bar.

5.2.1.2.2.1 The navigation bar shall allow the user to switch between the pages of the application.

5.2.1.2.2.1 The user’s current page will be highlighted on the navigation bar.

5.2.1.2.3 Home/Forum Feed Screen shall have the CapGrab logo at the top of the screen.

5.2.3.2.4 The Home/Dashboard Screen shall have a “load captions” button under each piece of media in the table.

5.2.3.2.4.1 The “load captions” button will lead to the individual media screen of the photo that the button is under.

5.2.3.2.5 The Home/Forum Feed Screen shall have a reload button.

5.2.1.3 Search Screen

5.2.1.3.1 The Search Screen shall have a textbox at the top of the screen.

5.2.1.3.2 The Search Screen shall have a keyboard when the textbox is selected.

5.2.1.3.3 The Search Screen shall have a search button.

5.2.1.3.3.1 The search button shall return a list of CapGrab users based off the input of the textbox.

5.1.2.3.3.2 The users will be listed in the form of buttons.

5.1.2.3.3.2.1 When tapped, the user button will lead to

the specific users account page.

5.2.1.4 Upload/Post Screen

5.2.1.4.1 The Upload/Post Screen shall contain an upload button.

5.2.1.4.1.1 The upload button, upon a user's press, shall access the user's mobile device's camera roll.

5.2.1.4.2 The Upload/Post Screen shall contain an optional input field for a user to specify/describe the kind of caption they are requesting

5.2.1.4.3 The Upload/Post Screen shall contain a toggle button that selects whether their post will be public or private.

5.2.1.4.4 The Upload/Post Screen shall contain a "Post" button

5.2.1.4.4.1 The "Post" button, upon a user's press, shall add the photo to a database, and create a forum thread for it.

5.2.1.5 Notification Screen

5.2.1.5.1 There shall be a table of notifications

- There should be notifications stating when another user posts a caption on one of the user's photos.

- There should be notifications stating that the user has a follow request.

- There should be notifications stating when another user has accepted the user's follow request.

- There should be notifications stating when the user's caption posts have been upvoted.

- There should be notifications stating when the user's caption posts have been downvoted.

5.2.1.6 Account Screen

5.2.1.6.1 The Account Screen shall have a table of the user's posted photos.

5.2.1.6.2 The Search Screen shall have a "load captions" button under each photo.

5.2.1.6.2.1 When tapped, the "load captions" button shall direct the user to Forum Thread Screen for the photo above it.

5.2.1.6.3 The Search Screen shall display the name of the user.

5.2.1.6.4 The Search Screen shall display the user's CapGrab score.

5.2.1.7 Forum Thread Screen

5.2.1.7.1 The Forum Thread Screen shall contain the photo a user is requesting to be captioned.

5.2.1.7.2 The Forum Thread Screen shall contain an input field at the bottom of the screen to suggest a caption on the above image.

5.2.1.7.2.1 The input field, upon user's press, shall access/display the device's keyboard to enable typing capabilities.

5.2.1.7.3 The Forum Thread Screen shall contain a table/list of caption cards (in order of most upvoted to least upvoted)

5.2.1.7.3.1 The caption suggestion cards shall contain the username of the user that suggested it.

5.2.1.7.3.2 The caption suggestion card shall contain the caption suggestion.

5.2.1.7.3.3 The caption suggestion card shall contain an “up-arrow” icon for upvotes.

5.2.1.7.3.3.1 The upvote icon, upon user press, shall increment the number of upvotes by 1.

5.2.1.7.3.4 The caption suggestion card shall contain the number of upvotes for that specific caption suggestion.

- The Forum Thread Screen should contain a trash can icon on any of the user’s caption suggestions, allowing a user to delete their caption suggestion.

5.2.2 Database

5.2.2.1 The Database shall save user information.

5.2.2.1.1 The user information shall include the user’s name.

5.2.2.1.2 The user information shall include the user’s CapGrab score.

5.2.2.1.3 The user information shall include the user’s email.

5.2.2.1.4 The user information shall include the user’s username.

5.2.2.1.5 The user information shall include the user’s hashed password.

5.2.2.1.6 The user information shall include paths the user’s photos in the cloud storage.

5.2.2.2 The Database shall save photo information.

2.2.2.2.1 The photo information shall include the caption suggestions for the photo.

2.2.2.2.1.1 The caption suggestions shall have a upvote number associated with them.

5.2.3 Cloud Storage

5.2.3.1 The Cloud Storage shall hold the pictures that user’s post.

5.3 Performance Requirements

5.3.1 Application Load Efficiency -- Upon opening the application from the home screen of the device, there should be no longer than a 5 second wait for the user’s homepage to load if logged in. If not logged in, the login/create account page will load within 5 seconds.

5.3.2 Transitional Load Efficiency -- When switching between Search, Upload/Post, Notification, Account, and Forum Thread/Post screens, each screen should load immediately

5.3.3 Photo Load Efficiency -- Photos will load as quickly as possible given the internet connection of the user.

5.3.3.1 Photo Upload Efficiency -- Photos will upload as quickly as possible given the internet connection of the user.

5.3.4 User Page Load Efficiency -- Upon clicking a user's account, their Individual Media screen should load within 5 seconds.

5.4 Environment Requirements

5.4.1 Development Environment Requirements

5.4.1.1 This application will use Firebase, Swift, and Objective-C

5.4.2 Execution Environment Requirements

5.4.2.1 This application will run on any device with iOS 11 or above

5.4.2.2 To load data in the application, the device must have a Wi-Fi or Mobile data connection.