**Software Requirements Specification**

**for**

StudyBuddy

**Version 1.0 approved**

**Prepared by Ethan Morin, Noah Rushing, Alexander Ayer, Sany Dagher, Denis Simost, Alexander Drolet**

**Team GOATs**

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**Revision History**

| **Name** | **Date** | **Reason For Changes** | **Version** |
| --- | --- | --- | --- |
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# **Introduction**

## **Purpose**

## This Software requirement specification document defines the software requirements for the StudyBuddy application. The product is a user-friendly study assistance tool designed to aid in the motivation of students. This document describes the functional and nonfunctional requirements that the system must meet and covers the full scope of the product.

## **Document Conventions**

In this document, we follow the standard software requirement specification conventions. Requirements are listed under each system feature below. Each requirement will be labeled as a functional or non-functional requirement. Requirements will be listed with the standard ‘REQ - XX’ format.

## **Intended Audience and Reading Suggestions**

This document is intended for anyone who is interested in the StudyBuddy application. This could include developers, project managers, marketing staff, users, testers, or document writers. For developers, project managers, testers, and document writers, we suggest that you read the full SRS document. For marketing staff, we recommend moving on to section **4**, which describes the StudyBuddy system features.

## **Product Scope**

The purpose of the StudyBuddy application is to aid students in motivating themselves to study their course work. The core features will include creating a secure account, adding other users as friends, and taking and sharing photos for your friends to see. As well as seeing the photos that your friends share. This application aims to create a social network revolving around studying. This product aligns with our goal to increase time spent learning and delivering a software that meets that goal.

# **Overall Description**

## **Product Perspective**

StudyBuddy is a new app designed to help students stay motivated while studying. It’s all about creating a virtual study group where you can share what you’re working on and see what your friends are up to. It’s not part of any bigger system, but it might connect with other apps or social media in the future. The main idea is to make studying feel less lonely and more fun by letting you share your progress with friends.

## **Product Functions**

***Create an Account****: You can sign up, log in, and customize your profile.*

* Add Friends: You can add friends and see their study updates.
* Share Study Photos: Take a pic of your study session and share it with your friends.
* Study Streaks: The app tracks how many days in a row you’ve studied and reminds you to keep it up.
* Social Feed: See what your friends are studying and get inspired.
* Notifications: Get alerts when your friends post new study pics or hit milestones.

Basically, it’s like a social network, but for studying. You can cheer each other on without having to be in the same room.

## **User Classes and Characteristics**

* Students: High school, college, or anyone who needs to study and wants some extra motivation.
* Teachers: They might use it to keep an eye on their students and encourage them.
* Study Groups: Groups of friends who want to stay connected and motivated, even if they can’t meet up in person.

Students will probably use it the most, sharing pics and checking in on their friends. Teachers might use it less, but they’ll still find it helpful for keeping students on track.

## **Operating Environment**

* Phones: Both iOS and Android, so pretty much everyone can use it.
* Internet: You’ll need a decent internet connection to share pics and see what your friends are up to.
* Hardware: It’ll run on most modern phones, but older devices might struggle a bit.

## **Design and Implementation Constraints**

* Security: Your data (like photos and login info) will be encrypted so no one can snoop on it.
* Speed: The app should load fast and handle lots of users without crashing.
* Easy to Use: We want it to be super simple like, just a few taps to share a study pic.

## **User Documentation**

* User Guide: A simple guide to show you how to use all the features.
* Help Section: Quick answers to common questions right in the app.
* Tutorials: Videos to walk you through the basics.
* FAQs: A list of common problems and how to fix them.

## **Assumptions and Dependencies**

* Third-Party Stuff: We’ll use services like OAuth for logging in and cloud storage for your study pics.
* Tools: We’re building the app with Expo and React Native, so it works on both iOS and Android.
* Internet: You’ll need a good connection for most of the app’s features.
* Users: We’re hoping students will love it and use it a lot, but we’ll see!

# **External Interface Requirements**

## **User Interfaces**

User Interface Mockups (Password: 123):

https://www.figma.com/proto/5a6veX6CoiM2PIB08cusi6/UI-Mockups-1?node-id=26-6&p=f&t=iCM9swCASBJOIFq1-1&scaling=min-zoom&content-scaling=fixed&page-id=0%3A1

# Functional Requirements/System Features

Priority Scale: HIGH = Primary feature of app/Core functionality required to make app work

MEDIUM = Quality of life but not necessarily required for app to function

LOW = Not integral to app and can be prioritized after HIGH and MEDIUM

## **Photo Taking/Sharing Requirement**

4.1.1 Description and Priority

* User wants to be able to take pictures and share them in real-time
* Priority HIGH

4.1.2 Stimulus/Response Sequences

* User takes photo / App saves photo
* User shares photo / App notifies people on User’s friend list that User is studying.

4.1.3 Functional Requirements

REQ-1: App should be able to ask User for permission to access Camera

REQ-2: App should be able to access User’s camera if permission is given

REQ-3: App should be able to save photo

REQ-4: App should be able to share photo and notify friends

## **Captioning Requirement**

4.2.1 Description and Priority

* User wants to be able to add caption to post to describe what they are working on and provide context
* Priority HIGH

4.2.2 Stimulus/Response Sequences

* User shares photo / App creates post with the photo
* User adds text caption / Text caption is updated to original post in real time

4.2.3 Functional Requirements

REQ-1: App should be able to allow user to add text caption to post

REQ-2: App should be able to update post showing new user caption

4.3 **Categorization Requirement**

4.3.1 Description and Priority

* User wants to be able to add a subject/category to their post so they can track study habits across different topics
* Priority MEDIUM

4.3.2 Stimulus/Response Sequences

* User shares photo / App creates post with photo
* User selects category / App saves that post under that specified category
* User checks personal category statistics / App shows every post under selected category including newly added post

4.3.3 Functional Requirements

REQ-1: App should allow user to categorize a post under a specific subject

REQ-2: App should save that post as well as any others with that selected subject

REQ-3: App should be able to display stats of every subject the user has studied (Example: You have studied History [4] times!)

4.4 **Feed Viewing Requirement**

4.4.1 Description and Priority

* User wants to be able to view a “feed” of friend’s study sessions and be able to see when they are studying
* Priority HIGH

4.4.2 Stimulus/Response Sequences

* User opens the app / Feed showing friend's study posts should appear (Similar to other social media like Facebook, Instagram, etc.)
* User scrolls with their finger / App will show more posts from friends if there are more posts to be shown

4.4.3 Functional Requirements

REQ-1: App should allow user to see friend’s study posts on the homepage of the . app

REQ-2: App should allow user to scroll and see additional posts from other friends

4.5 **Post Reaction Requirement**

4.5.1 Description and Priority

* User wants to be able to react to a friend’s study post with an emoji
* Priority MEDIUM

4.5.2 Stimulus/Response Sequences

* User sees friend’s post on feed / App should display a button to add a reaction to a post
* User reacts to the post with an emoji / App displays that somebody reacted to the post and notifies the original poster that somebody has reacted to their post

4.5.3 Functional Requirements

REQ-1: App should be able to let users add emoji reactions to posts

REQ-2: App should be able to notify original poster that somebody has reacted

REQ-3: App should display all emoji reactions on the post so everybody can see

4.6 **Badge Displaying Requirement**

4.6.1 Description and Priority

* User wants to be able to earn badges for maintaining a study streak
* Priority LOW

4.6.2 Stimulus/Response Sequences

* User studies multiple days in a row / App displays corresponding badge on the user’s profile depending on number of days in study streak

4.6.3 Functional Requirements

REQ-1: App should be able to make badges depending on number of days studied

REQ-2: App should be able to display correct badge on user’s profile based on study . streak

4.7 **Streak Reminder Requirement**

4.7.1 Description and Priority

* User wants to receive reminders that they haven’t studied for a day so they don’t break their streak
* Priority LOW

4.7.2 Stimulus/Response Sequences

* User doesn’t study for a day / App sends notification to User reminding them to study as to not lose their study streak

4.7.3 Functional Requirements

REQ-1: App should be able to send user notification if they have not studied for over . 24 hours.

4.8 **Streak History Requirement**

4.8.1 Description and Priority

* User wants to be able to see previous longest study streak
* Priority LOW

4.8.2 Stimulus/Response Sequences

* User loses a streak / App saves that streak number in the user’s profile *if* it was their longest streak to date
* User checks their stats / That previous streak is displayed as their longest streak ever

4.8.3 Functional Requirements

REQ-1: App should be able to display User’s previous longest study streak

4.9 **Friend Invitation Requirement**

4.9.1 Description and Priority

* User wants to be able to invite friends to study with them
* Priority HIGH

4.9.2 Stimulus/Response Sequences

* User checks friends list / App displays friends list
* User invites friend to study with them / App checks if User is currently studying and if they are invites other friends to study alongside them
* Friend agrees to study with User / Original post will show that Friend is studying with User

4.9.3 Functional Requirements

REQ-1: App should be able to allow User to add friends

REQ-2: App should be able to allow User to invite friends to study together

REQ-3: App should be able to display that two Users are studying together

4.10 **Quiet Hours Setting Requirement**

4.10.1 Description and Priority

* User wants to be able to set certain hours of the day where they cannot receive notifications so that they don’t get distracted outside of their study schedule
* Priority MEDIUM - HIGH

4.10.2 Stimulus/Response Sequences

* User sets hours where they cannot receive notifications / App will not send user notifications during specified times

4.10.3 Functional Requirements

REQ-1: App should be able to have notifications turned off during certain hours of the day that the User chooses.

4.11 **Study Leaderboard Requirement**

4.11.1 Description and Priority

* User wants to be able to see leaderboard of most active friends
* Priority LOW

4.11.2 Stimulus/Response Sequences

* User checks leaderboard / App displays friends with the most studying time on the User’s friends list

4.11.3 Functional Requirements

REQ-1: App should have a leaderboard that displays most active friends based on the . amount of time they spend studying

4.12 **Offline Mode Capability Requirement**

4.12.1 Description and Priority

* User wants to be able to use the app without a constant internet connection
* Priority HIGH

4.12.2 Stimulus/Response Sequences

* User opens app without being connected to internet / App still allows User to log study sessions, but user cannot access online features like seeing the feed or leaderboard

4.12.3 Functional Requirements

REQ-1: App should be able to log study sessions without a wifi connection

4.13 **App Customization Requirement**

4.13.1 Description and Priority

* User wants to be able to customize app appearance (Dark mode, different colors, etc)
* Priority LOW

4.13.2 Stimulus/Response Sequences

* User opens settings / Different customization options are displayed for the user to choose
* User changes appearance setting / App is visually changed to reflect that and User settings are saved

4.13.3 Functional Requirements

REQ-1: App should have different visual settings that User can choose between

4.14 **Simple Sign-in Requirement**

4.14.1 Description and Priority

* User wants to be able to login in a simple, non-confusing manner
* Priority HIGH

4.14.2 Stimulus/Response Sequences

* User creates account / App requires user to set a username & password and securely store the information
* User turns on 2FA / App will send an email to user with a randomly generated code if the user has 2FA turned on
* User opens app without having signed out before closing it last / App will remember User is still signed in and go straight to homepage without requiring login

4.14.3 Functional Requirements

REQ-1: App should be able to securely store usernames and passwords

REQ-2: App should have a setting for users to attach an email to their account for . 2FA purposes

REQ-3: App should remember if User previously logged in on that device or not

4.15 **Apple/Google Login Requirement**

4.15.1 Description and Priority

* User wants to be able to bypass username and password by using their Google or Apple accounts instead
* Priority HIGH

4.15.2 Stimulus/Response Sequences

* User opens app to login screen / App displays Google and Apple buttons
* User chooses either / App will remember User’s Google or Apple accounts if previously logged in using those and allow user to immediately go to homepage without asking for username or password

4.15.3 Functional Requirements

REQ-1: App should have optional Google and Apple account login capabilities

# **Other Nonfunctional Requirements**

## **Performance Requirements**

* The app should load the main dashboard within **2 seconds** on a stable internet connection.
* Users should be able to upload a study session photo, and it should be available to their friends within **5 seconds** of submission.
* The app should handle at least **1000** **online users** without noticeableslowdowns.

## **Safety Requirements**

* If a user is reported multiple times for inappropriate content, their posting privileges will be temporarily suspended until review.
* The app should not encourage excessive study behaviors that could harm mental health. This could be achieved through adding **break reminders** or soft limits on study streaks.

## **Security Requirements**

* Users authentication must require a **secure login** (email/password, OAuth, or biometric authentication for the mobile app).
* All data, including study photos and user interactions, must be encrypted at rest and in transit using AES-256.

## **Software Quality Attributes**

* **Availability:** The app should maintain a **99.9% uptime** to ensure reliable access for users.

## **Business Rules**

* Users must be at least **13 years old** to create an account.
* Users should be able to **delete** their own posts and manage their study history.