Collaboration Assignment 4: Software Specifications – Part B

Project Title: CollegeCorner - A Student Social Platform

Course: Software Engineering

Institution: [Your Institution Name]

Submitted by:  
Keenan Jones & Ubaid Khan

Date: October 2025

# 1. Introduction

CollegeCorner is a social networking platform designed to enhance student engagement, collaboration, and academic networking within college environments. Building on Part A, this section focuses on refining the system specifications, requirements modeling, and architecture details necessary to transition the platform from concept to implementation.

# 2. Functional Requirements

\*\*Completed by: Keenan Jones\*\*

1. User Authentication and Profile Management: Students can create personal profiles, log in, update information, and customize visibility settings.  
2. Post Creation and Interaction: Users can share posts, images, and links while being able to like, comment, and reply to discussions.  
3. Group Formation and Collaboration: Students can create or join groups based on academic interests, courses, or extracurricular activities.  
4. Event Scheduling and Notifications: The system will allow event creation with reminders and push notifications to users who RSVP.

\*\*To be completed by: Ubaid Khan\*\*

[Add remaining system functions such as direct messaging, privacy controls, content moderation, and admin management.]

# 3. Non-Functional Requirements

\*\*Completed by: Keenan Jones\*\*

1. Performance: The platform must handle at least 10,000 concurrent users with minimal latency.  
2. Security: Data encryption (AES-256) will be used for sensitive user data, and regular security audits will be conducted.  
3. Usability: The UI/UX design will prioritize accessibility and simplicity to ensure ease of navigation for all users.  
4. Scalability: The system should easily scale with cloud infrastructure to support future feature expansion.

\*\*To be completed by: Ubaid Khan\*\*

[Add non-functional requirements such as reliability, portability, maintainability, and compliance standards.]

# 4. Use Case Modeling

\*\*Completed by: Keenan Jones\*\*

Use Case Example: 'Create and Join Study Groups'  
  
Actors: Student User, System  
Preconditions: User must be registered and logged in.  
Flow of Events:  
1. User navigates to the 'Groups' section.  
2. User creates a new group or searches existing ones.  
3. The system validates and saves the group information.  
4. Other users can discover and join the group.  
Postconditions: The group is visible and accessible to all members.

\*\*To be completed by: Ubaid Khan\*\*

[Add an additional use case such as 'Send Direct Message' or 'Attend Event via Calendar Integration.']

# 5. System Architecture

\*\*Completed by: Keenan Jones\*\*

The CollegeCorner system follows a three-tier architecture:  
- \*\*Presentation Layer:\*\* Handles the user interface (web and mobile) using frameworks such as React Native or Flutter.  
- \*\*Application Layer:\*\* Implements business logic through APIs developed in Node.js.  
- \*\*Data Layer:\*\* Utilizes a cloud-based database (e.g., Firebase or MongoDB) to store user profiles, posts, and event data.  
This architecture supports modularity, scalability, and efficient load distribution.

\*\*To be completed by: Ubaid Khan\*\*

[Add diagram description or explanation of communication between system components and data flow.]

# 6. System Design and Implementation

\*\*Completed by: Keenan Jones\*\*

The design emphasizes component-based development with reusable UI modules. For example, the 'Post Component' can be used across feeds, groups, and event pages. The implementation phase will use Agile methodology to iteratively develop and test features.

\*\*To be completed by: Ubaid Khan\*\*

[Describe database schema, backend service integrations, and testing frameworks.]

# 7. Conclusion

\*\*Completed by: Keenan Jones\*\*

This document expands upon the foundational specifications established in Part A by defining functional and non-functional requirements, architectural structures, and system design choices. These elements lay the groundwork for CollegeCorner’s implementation phase, ensuring the platform meets user needs efficiently and securely.

\*\*To be completed by: Ubaid Khan\*\*

[Add closing remarks or reflections on collaboration and contribution.]