Department of Computer Engineering

Academic Term: First Term 2023-24

Class: T.E /Computer Sem – V / Software Engineering

Practical No:	1
Title:	**Software Requirement Specification**
Date of Performance:	27/07/2023
Roll No:	9592
Team Members:	Aston, Chhand, Slayde

Rubrics for Evaluation:

Sr. No	Performance Indicator	Excellent	Good	Below Average	Total Score
1	On time Completion & Submission (01)	01 (On Time)	NA	00 (Not on Time)	
2	Theory Understanding(02)	02(Correct)	NA	01 (Tried)	
3	Content Quality (03)	03(All used)	02 (Partial)	01 (rarely followed)	
4	Post Lab Questions (04)	04(done well)	3 (Partially Correct)	2(submitted)	

Signature of the Teacher:

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Abstract

The college social media app aims to create a platform for seamless communication, collaboration, and networking among university students. It facilitates user registration, login, a home feed, chat with friends, profile management, and a marketplace for buying and selling items within the college community.

Introduction

Purpose

The purpose of this project is to develop a college-specific social media app that enables students to connect, share resources, engage in discussions, and build a sense of community within the college.

Scope

The college social media app provides a user-friendly experience for student registration and communication within the college community, prioritizing data security and privacy.

References

[1] Smith, J., Johnson, A., "Social Media Usage among College Students," Journal of Higher Education Studies (2019).

[2] College Campus Events, Official Website.

[3] Firebase Documentation, Google.

General Description

Product Functions Overview

The college social media app offers the following functions:

- User registration and authentication
- Home feed displaying posts from friends and college events
- Chat feature for one-on-one messaging with friends
- Profile management for updating personal information and profile picture
- Marketplace for buying and selling items within the college community

User Characteristics

The main users of the app are college students with diverse interests and backgrounds, making it versatile and adaptable.

General Constraints

The app is compatible with most Android devices capable of internet access and browser support.

Specific Requirements

Inputs and Outputs

Input: User Registration

- Full name

- Email address

- College ID or username

- Password

Input: Chat Messages

- Recipient's username or college ID

- Message content

Input: Marketplace Listings

- Item name

- Item description

- Price

- Photo of the item (optional)

Output: Home Feed Content

The home feed displays posts from friends, college events, and relevant announcements.

Output: Chat Messages

The app displays received messages in the chat interface.

Output: Marketplace Items

The marketplace displays listings of items for sale within the college community.

Functional Requirements

1. User Registration and Login:

- Users can register using their college email or social media accounts.

- Existing users can log in with their credentials.

2. Home Feed:

- The home feed shows posts from friends and college events in real-time.

- Users can like, comment on, and share posts.

- The app provides notifications for new posts and events.

3. Chat with Friends:

- Users can search for friends by username or college ID.

- The chat feature enables one-on-one messaging between users.

- Users can send text messages and media files.

4. Profile Management:

- Users can update their profile information, including profile picture and bio.

- Privacy settings allow users to control the visibility of their profile to others.

5. Marketplace:

- Users can create listings for items they want to sell within the college community.

- The marketplace displays listings with item details and contact information.

- Users can message sellers for inquiries and negotiations.

External Interface Requirements

User Interface: The app will have an intuitive and user-friendly interface, with sections for the home feed, chat, profile, and marketplace.

Performance Constraints

The app should provide real-time data retrieval and messaging for a seamless user experience, maintaining responsiveness during peak usage.

Design Constraints

Software Constraints: The app will be developed for Android devices using Android Studio and Java programming language.

Hardware Constraints: The app should run on Android devices with internet connectivity.

Acceptance Criteria

Before acceptance, the app will undergo rigorous testing to ensure smooth functionality and bug-free operation. User feedback will be taken into account for improvements, ensuring a flawless user experience.

Post Lab Importance of SRS in Software Development and Requirement Elicitation Techniques

A) Importance of a well-defined Software Requirement Specification (SRS): SRS facilitates clear communication between stakeholders, reducing misunderstandings and ambiguities. It defines the project scope, preventing scope creep and managing expectations. Establishes requirement traceability, ensuring customer needs are met and validating the final product. Provides a basis for estimations, aiding in project planning and resource allocation. Enables risk mitigation by identifying potential issues early in the development process. Facilitates change management, helping assess proposed changes' impact. Improves quality assurance by enabling comprehensive testing.

B) Analysis and Improvements of SRS: Common ambiguities: vague language, lack of completeness, conflicting requirements, missing assumptions, inconsistent terminology, ambiguous use cases. Proposed improvements: conduct stakeholder reviews, use diagrams, define acceptance criteria, document assumptions, address non-functional requirements.

C) Comparison of Requirement Elicitation Techniques: Interviews: Effective for understanding specific needs but time-consuming and resource-intensive. Surveys: Efficient for gathering a broad overview of user needs but may lack detailed insights. Use Case Modeling: Aids in identifying functional requirements and system interactions, requires a clear understanding of system boundaries. Effectiveness in Gathering User Needs: Interviews capture detailed requirements but are more suitable for critical projects. Surveys provide quantitative data from a larger audience but lack qualitative depth. Use case modeling complements other techniques and visually represents system behavior. Ultimately, a combination of these techniques can ensure a comprehensive understanding of user needs and contribute to a successful software development project.