

StudyBuddy: Software Engineering Project

Ali Ganji (Z23599848)

Nilay Oral (Z23607537)

Leilani Grogan-Mowatt (A00019111)

Maywon Niazi (Z22525705)

Tavishi Lamba (A00019627) Group 777

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1 Introduction

StudyBuddy is a web-based collaborative platform designed to support university students in organising study activities, connecting with peers, and improving academic collaboration and wellbeing.

The system enables students to:

- Create personal profiles containing course, year, and module information.
- Search for study partners based on module and availability.
- Send and manage study session requests.
- Provide ratings and feedback.
- Report or block inappropriate users.

The project is developed using Agile Scrum methodology and integrates ethical, security, and accessibility considerations throughout its lifecycle.

2 Project Description

StudyBuddy is a group software engineering project designed to support university students in organising their study activities, connecting with peers, and improving collaboration and wellbeing. Users can create an account in order to find other people to study or chat with based on a variety of categories, such as the type of course a user is studying or what kind of person they would like to study with. Users can send chat requests to study together, search for people via different filtering categories, and provide ratings for people they have studied with.

3 Team Code of Conduct

To support a productive and respectful working environment, our team agrees to follow the principles outlined below. These guidelines define how we interact, collaborate, and manage our responsibilities throughout the project.

3.1 Communication Standards

- Communicate clearly, respectfully, and professionally with all team members.
- Ensure that everyone has the chance to share ideas, raise concerns, and give feedback.
- Reply to messages and emails from teammates within a 24-hour period.

3.2 Teamwork and Collaboration

- Contribute fairly to group work and support one another in completing tasks.
- Take responsibility for individual duties while holding each other accountable as a team.
- Show flexibility and understanding toward the different commitments and circumstances of team members.

3.3 Compliance with Rules and Policies

- Follow all project-related rules and expectations outlined in this document and elsewhere.
- Act in accordance with University policies and academic regulations at all times.

3.4 Managing Non-Compliance

If a team member is unable to attend a meeting or lab, they can receive a summary of what was covered. Continued absence without prior communication may be reported to the module tutor. Ongoing failure to complete assigned tasks or repeated actions that delay team progress will be discussed as a group, and appropriate steps will be taken to resolve the issue.

4 Scrum Practices

1. **Sprint Planning:** Every timetabled lesson or whenever it is requested by a group member, the team will meet to decide which tasks will be completed during the sprint. Tasks will be designated by the Scrum Master or chosen by group members.
2. **Sprint Review:** At the end of each sprint, the team will review completed work, gather feedback, and identify improvements for upcoming sprints.
3. **Daily Stand-ups:** The Scrum Master can conduct weekly meetings at the library or via Microsoft Teams. These meetings focus on completed work, current challenges, and to see if any assistance is required from a team member, while remaining flexible to students' schedules.

4.1 Defined Roles and Responsibilities

Scrum Master: Coordinate and guide the Scrum process. Regularly check progress and address any obstacles faced by the team. Ensure agreed workflows and timelines are followed.

Project Owner: Manage and prioritize the project backlog. Communicate the project vision and objectives clearly to the team. Evaluate completed work and request changes if required.

5 Ethical Issues Identified - StudyBuddy

5.1 Introduction

StudyBuddy is a collaborative platform intended to support university students by enabling peer-to-peer study matching, scheduling, communication, and resource sharing. Because the system may process personal data, enable interaction between users, and potentially touch on wellbeing-related experiences, its design must be ethically grounded and aligned with professional standards for responsible computing.

5.2 Data Privacy and Data Protection (UK GDPR)

StudyBuddy may handle direct identifiers (name, email, profile photo) and indirect identifiers (timetable patterns, modules, study preferences). StudyBuddy should treat student data as sensitive and minimise collection to what is essential for the core service.

Ethical obligations and mitigations:

- **Data minimisation:** collect only what is necessary.
- **Purpose limitation:** use data only for stated purposes.
- **Storage limitation:** define retention periods and deletion processes.

- **Integrity and confidentiality:** implement secure storage, transport security, and access control.

5.3 Informed Consent and Transparency

Ethical systems require that users understand what they agree to. StudyBuddy must provide clear information about what data is collected, how matching works, how long data is kept, who can see what, and how users can delete accounts and data.

5.4 Security, Confidentiality, and Secure Engineering

Security is not merely technical; it is an ethical duty because breaches can harm users and erode trust. Professional standards emphasise protecting confidentiality and preventing foreseeable misuse.

5.5 User Safety, Harassment, and Moderation

Any platform enabling messaging, matching, or user-to-user interaction carries risk of harassment, bullying, and unwanted contact. StudyBuddy should incorporate reporting mechanisms, moderation procedures, and basic safety features like blocking or muting.

5.6 Inclusivity and Accessibility

Inclusivity requires that StudyBuddy be usable for students with diverse needs, including those using assistive technologies. Following WCAG guidance helps reduce exclusion and supports fairness.

5.7 Bias, Fairness, and Matching Algorithms

Even simple matching can introduce bias. StudyBuddy should define fair matching criteria (subject, level, availability) rather than sensitive personal traits and provide transparency about how matches are generated.

5.8 Wellbeing Features and Mental Health Sensitivity

If StudyBuddy includes wellbeing components, it must not imply clinical authority. Safeguards include using careful language, avoiding diagnosing users, and signposting to official university or NHS support resources.

5.9 Academic Integrity and Intellectual Property

As a study support platform, StudyBuddy could be misused to facilitate plagiarism or answer-sharing. Mitigation expectations include clear platform rules promoting collaboration, content guidelines, and reporting mechanisms for academic misconduct.

6 User Stories

- **US1 – Create profile:** As a student, I want to create a profile with my course, year and modules so that other students can understand what I study.
- **US2 – Login to account:** As a student, I want to log in to my account so that my profile and activity are kept secure.
- **US3 – Search by module:** As a student, I want to search for study buddies by module so that I can find someone studying the same subject.
- **US4 – View user profiles:** As a student, I want to view another student's profile so that I can decide if they are a good match for studying together.
- **US5 – Send study request:** As a student, I want to send a study request to another student so that I can organise a study session.
- **US6 – Accept or decline requests:** As a student, I want to accept or decline study requests so that I can control who I study with.
- **US7 – Dashboard:** As a student, I want to see upcoming study sessions and pending requests in one place so that I can arrange my study plans easily.
- **US8 – Filter by availability:** As a student, I want to filter study buddies by availability so that I can find someone who is free at similar times.
- **US9 – Ratings and feedback:** As a student, I want to leave feedback after a study session so that other students can feel more confident when choosing a study partner.
- **US10 – Report or block a user:** As a student, I want to report or block a user so that I feel safe if someone behaves inappropriately.