**Finalised Project Idea Project Title**

“StudySync – Collaborative Study Quiz App”

Problem Statement Students often struggle to revise effectively on their own. Existing apps are either too complex, not free, or not tailored to collaborative study sessions. Our app aims to make study more interactive, simple, and competitive.

Target Users

University and high school students People preparing for exams who want engaging study sessions High-Level Features User Accounts & Profiles – sign up/login, track progress. Create & Join Quiz Games – real-time multiplayer or solo mode. Question Bank – custom user-made questions + preset templates. Scoring & Leaderboard – live scores, milestones (e.g., streaks), personal stats. Progress Tracking – win rate, accuracy, improvement history. Simple UI – clean, intuitive layout (JavaFX desktop app). Offline Mode (Optional) – practice quizzes without internet.

High-Level Requirements Functional Requirements

The system must allow users to register, log in, and manage their profile. The system must allow a user to create a quiz game and invite others to join. The system must run multiplayer quizzes in real time, handling disconnects/rejoins. The system must calculate and display scores during and after each game. The system must record player history and display stats (e.g., accuracy). Non-Functional Requirements Usability: Intuitive design, easy to learn within 5 minutes. Performance: Quizzes should run smoothly with <1 second delay between question/answer submission. Reliability: Should support at least 5 concurrent users without crashes. Portability: Runs on Windows, Mac, and Linux (via JavaFX). Security: Passwords stored securely (hashed & salted).

**Initial Research Comparable Applications**

* 1. Kahoot!

Strengths: Very popular, fun for classrooms, real-time multiplayer, mobile/web support. Weaknesses: Requires premium subscription for advanced features, UI can feel cluttered, primarily targeted at schools. Difference: Our app will be free, more lightweight, and designed for smaller study groups/friends, not just classroom settings.

* 1. Quizizz

Strengths: Allows teachers to create quizzes, supports both live and homework modes, has a large library of questions. Weaknesses: Heavily focused on education sector, many features behind paywall, limited personal stats/tracking. Difference: Our app will focus on personal performance stats (accuracy, streaks, win rates) and competitive gameplay rather than just assignment tools.

* 1. Socrative

Strengths: Good for formative assessment, instant feedback, and multiple question types. Weaknesses: Teacher-centric, not very engaging for casual learning, limited gamification. Difference: Our app will emphasise game-like scoring, streak rewards, and leaderboards to make studying more engaging. Key Insights Existing apps are mainly education-institution focused (teachers ↔ students). Most apps are freemium with important features locked behind paywalls. They lack emphasis on casual, competitive, peer-to-peer learning. Our App’s Differentiation Free & Open: No hidden paywalls. Tailored for Study Groups: Designed for small groups of friends/classmates, not just classrooms. Engagement Through Gamification: Bonuses for streaks, fast responses, milestones. Personal Statistics: Users track improvement over time. Lightweight & Cross-Platform: Simple JavaFX desktop app (no need for heavy servers like Kahoot).

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