

# SkillSwap Project Documentation

Business Professionals of America (BPA)

Project: Student Talent Exchange Platform

Prepared for BPA competitive submission

This document includes the project description, lifecycle and methodology, system/application diagram, database conceptual model, works cited, and BPA release forms required for submission.

## Project Description

SkillSwap is a student talent exchange platform that connects learners with peers who can teach in-demand academic or technical skills. The web application supports secure registration, profile-based skill listings, session requests, messaging, ratings, and administrative oversight to ensure a safe and accountable experience.

- " Student dashboard with skill search, session scheduling, messaging, and rating workflows.
- " Role-based authentication via Firebase Auth to separate student and admin experiences.
- " Firestore data model for users, sessions, messages, ratings, and audit logs.
- " Administrative analytics with session status tracking and user management.

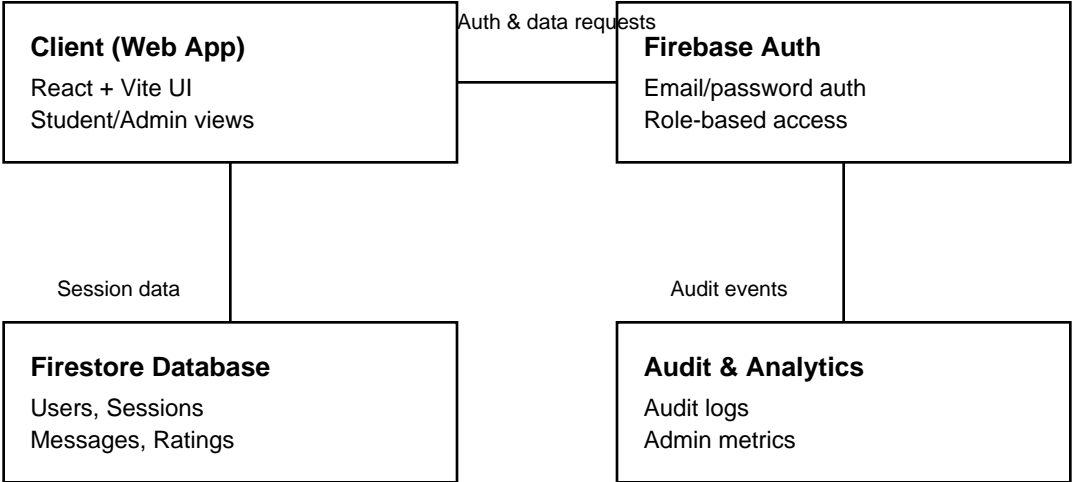
## Document Development Lifecycle & Methodology

The documentation follows an iterative lifecycle aligned to the application build. The team used a lightweight Agile approach with weekly checkpoints to validate requirements, design, and implementation.

- " Discovery: captured user stories for students, mentors, and administrators.
- " Design: produced UI flows, system architecture, and data model diagrams.
- " Implementation: built React components, integrated Firebase Auth/Firestore, and logged admin analytics.
- " Testing: performed manual acceptance tests for authentication, session scheduling, and messaging workflows.
- " Deployment & maintenance: validated build outputs, documented operations, and prepared BPA submission asse

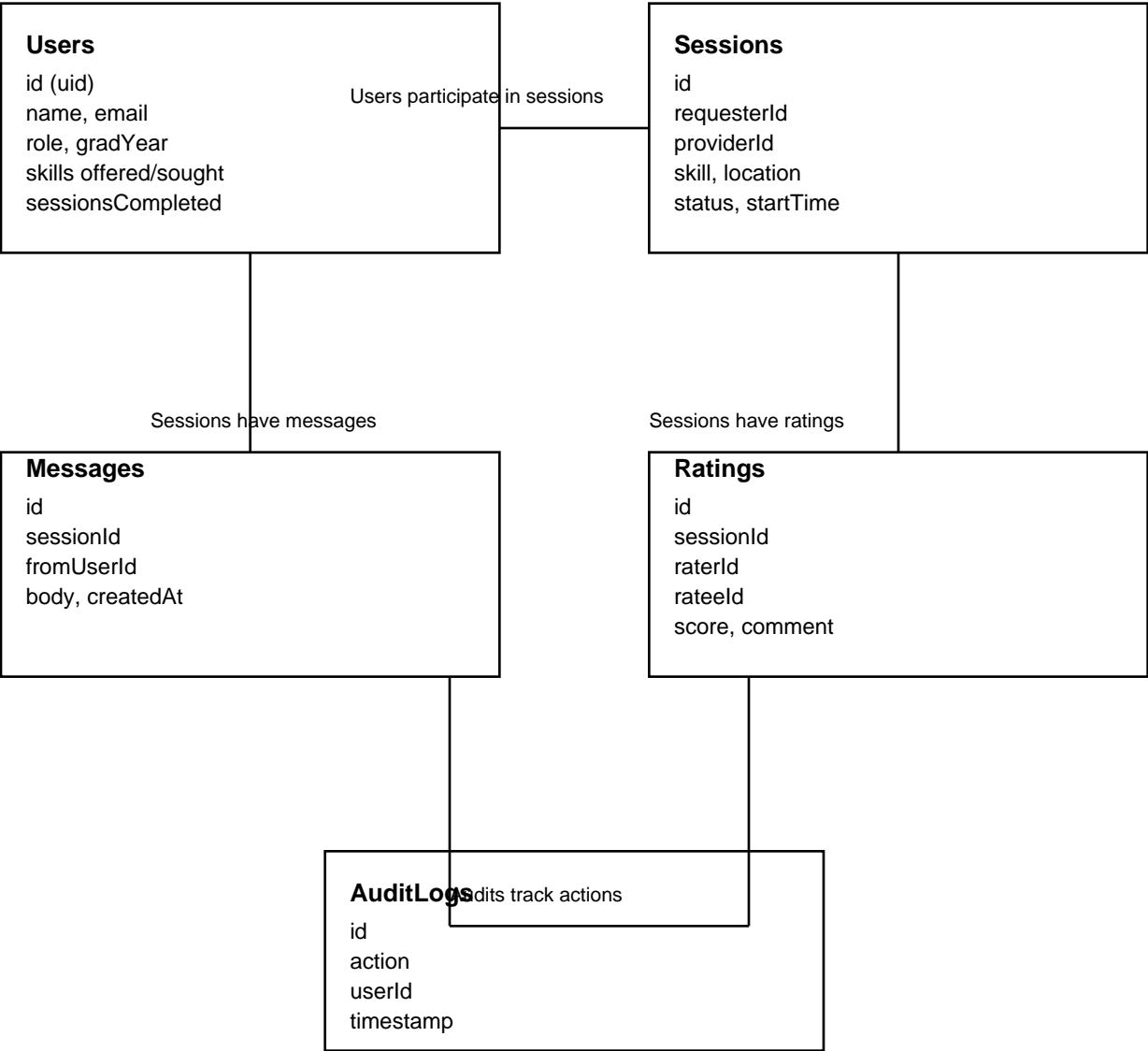
# System / Application Diagram

The SkillSwap system centers on a React web application hosted with Vite and backed by Firebase services for authentication, real-time data storage, and auditing.



# Database Conceptual Model

The conceptual model captures the core entities and relationships that support matchmaking, communication, feedback, and administrative monitoring.



## Works Cited

- " Firebase Documentation. <https://firebase.google.com/docs> (accessed 2024-01-15).
- " React Documentation. <https://react.dev> (accessed 2024-01-15).
- " Vite Documentation. <https://vitejs.dev/guide> (accessed 2024-01-15).
- " Lucide React Icons. <https://lucide.dev> (accessed 2024-01-15).

# BPA Release Forms

## Media Release Form

I grant permission for BPA and SkillSwap project staff to use photographs, video, and project materials for competition, promotion, and educational purposes. I understand no compensation is provided.

Participant Name \_\_\_\_\_

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## Project Use & Distribution Release Form

I authorize BPA and SkillSwap project staff to reproduce and distribute the project documentation and related materials for judging, archival, or educational use.

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