

# LinguApp – Product Specification Document

## 1. Purpose

LinguApp is designed to help users learn new languages through a gamified, immersive, and structured approach. The app's primary purpose is to provide **deep language learning**, combining vocabulary acquisition, grammar understanding, speaking practice, and spaced repetition techniques. It aims to create an engaging learning experience while ensuring steady and measurable progress aligned with the CEFR framework (A1–C2).

## 2. Target Audience

- Language learners of all levels (beginners to advanced).
- Students preparing for CEFR certification.
- Casual learners seeking structured progression.
- Professionals requiring language skills for work or travel.

## 3. Core Features

### 3.1 Learning Progression

- Lessons organized according to CEFR levels (A1–C2).
- Vocabulary banks with predefined word sets for each level and language.
- Grammar explanations contextualized within lessons.
- XP-based progression: users earn points for each completed exercise.

### 3.2 Gamification

- **XP System:** Points awarded for every new word learned or reviewed.
- **Achievements:** Badges for milestones (e.g., first 100 words, completing a level).
- **Leaderboards:** Compare progress with other learners.

### 3.3 Spaced Repetition System (SRS)

- Automatic scheduling of word reviews.
- Adaptive repetition intervals based on user performance.
- Highlighting weak areas for focused practice.

### 3.4 Practice Modes

- **Vocabulary Drills:** Flashcards, multiple choice, typing.
- **Speaking Practice:** Pronunciation with speech recognition.
- **Listening Exercises:** Audio comprehension tasks.
- **Writing Prompts:** Open-ended responses with feedback.

### 3.5 Personalization

- Customizable word lists.
- Adaptive difficulty based on performance.
- Progress tracking with detailed statistics (words learned, hours studied, level mastery).

### 3.6 Data & Storage

- User progress stored in Firebase.
- Word databases for each language level saved in Google Drive.
- Offline learning mode with local storage synchronization.

## 4. Technical Requirements

- **Frontend:** React Native (Expo) for iOS and Android.
- **Backend:** Firebase for authentication, database, and cloud functions.
- **Storage:** Integration with Google Drive for user word lists and backup.
- **APIs:** Text-to-Speech (TTS) and Speech-to-Text (STT) for speaking practice.

## 5. User Flow

1. User signs up and selects a target language.
2. User chooses their current level or takes a placement test.
3. Lessons unlock progressively based on CEFR structure.
4. User earns XP by completing activities.
5. Spaced repetition ensures long-term retention.
6. Progress is tracked and can be compared socially.

## 6. Goals

- Create a **scalable system** that supports multiple languages.
- Provide **measurable progress** using XP and CEFR benchmarks.
- Keep users engaged with gamification while prioritizing **deep learning**.
- Build a **flexible platform** for future features like community learning and AI-driven tutoring.

---

Would you like me to expand this into a **pitch-style document** (for investors and collaborators) or keep it as a **technical specification** for developers?