

## Team

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- QOD - “Where is Alpha 1?”

## Section 1 – Overview

We will create a mobile app that facilitates the educational exchange between language learners and language experts. Our app will allow learners to build face-to-face, personalized listening and speaking skills and hopefully make a few friends along the way! In addition, our app has the potential to integrate into existing ‘individual session’ (student-teacher speaking and listening practice) and ‘language table’ programs used by Princeton’s numerous language departments.

**Section 2 – Requirements & Target Audiences** - Currently, there are dozens of different iOS, Android apps, and web apps that offer similar services of language exchange (i.e., HelloTalk, iTalki, even DuoLingo to some extent). The problem with these existing apps is that they match learners and experts across the world and so limit these language-exchange opportunities to an exchange of messages similar to those found in some of the biggest social media platforms, such as WhatsApp, GroupMe, WeChat. Though these apps have attempted to encourage people to speak with each other through the new features of sending audio, most interactions continue to take place in the written language. Since this app is specifically designed for college campuses, environments that tend to be more densely diverse in languages, we will attempt to stray from these existing models. We do this by matching people on the same campus, so that their language-based interactions take place in-person, in the hopes that that they can practice speaking their new language instead. Through our unique design, we hope that we can limit the frequency of interactions that take place through messaging, and instead encourage people to build meaningful relationships based off these common learning interests.

## Section 3 – Functionality: User Scenario

Alice and Bob are both students at Princeton University, a university with a diverse student body with people from all sorts of cultural and ethnic backgrounds. Alice grew up speaking Spanish at home, making her bilingual with English and Spanish. Bob on the other hand grew up speaking Icelandic. After coming to Princeton, Alice decided to expand her horizons and try to learn a new language that just seemed cool to her, Icelandic. Her friends recommended that she try some apps that could connect her with people from around the world to talk with on the phone to improve her skills and to learn more. She tried using HelloTalk, iTalki. However, after going on the app she found it very hard to learn just by texting or occasionally calling someone. Sometimes she does not even hear back from the people she

connects with. If Alice was able to connect with and meet someone on campus that would be happy to talk to her, she would surely be able to practice her Icelandic skills more often and in person.

Back to Bob. He decided that he really wanted to brush up on his Spanish on campus, but he finds it really difficult to practice using online resources and apps like Duolingo. He really wishes that he could just meet up with someone on campus to just chat and practice Spanish with. Surely there are many people on campus, but he wonders how he can just miraculously find someone.

Now imagine if Alice and Bob had access to a local application on campus that lets them post their preferences and availabilities and find people to meet up with people to practice their respective languages. Alice & Bob, who each has no idea who the other is, could meet up at Frist Campus Center, sit down and practice Spanish and Icelandic! Students who are interested could more easily keep track of which language tables are happening on campus, and soon we can have a multilingual utopia at Princeton!

**Section 4 - Design- should describe your major components. Each piece should have outlined what it does, how it connects and interacts with the other pieces, and their most likely implementation(s).**

#### **Database – SQL/MySQL/SQLite**

- Users
  - Languages known, languages being learned
  - Location (iOS GPS API?)
  - Schedule
  - Type of account (student, instructor/department) [optional]
  - Private info (email, etc)
  - Language course enrollment [optional]
- ‘Matches’ between users
  - Users involved
  - Time, location
  - Vocabulary prompts [optional]
  - Chat [limited]
- Vocabulary/flashcards
  - Quizlet API?

#### **Logic – PHP or Python**

- Matching functionality
- Geolocation functionality
- Vocab/flashcard functionality

#### **Interface – Swift 3.0**

- Profiles (yours and other users’)
- Search functionality (For specific users)

- Schedule (Time & Location available)
- Matching interface (Random based on preferences)
- Send Push Notifications - i.e. "Still meeting?" "Wherefore art thou: Romeo~~!"
- Core communication (confirming meeting time/location)
- Extension: Tab for language tables / 1-on-1 for lang depts

**Section 5 - Timeline -should list significant milestones that you plan to achieve every week or so.**

*Our group will meet weekly on Thursdays (8-10pm) and Fridays (3-6pm), and work additionally on weekends and on an individual basis as possible.*

By Sunday April 2nd:

- Discuss UI, make sketches of the screens needed,
- What information is needed from the users and what information is generated
- Group exploration of Swift
- Have ORMs designed
- Figure out details for app release / user testing

By Sunday April 9th

- Create tables
- Web services (GET)
- Study API's i.e, Location Services, Push Notifications

By Sunday April 16th

- Web services (POST & PUT / DELETE)
- Testing of HTTP calls
- Complete prototype/experiment (end-to-end implementation of a simplified app)

By Sunday April 23rd

- Construct basic UI
- Connect web services to front-end
- Figure out device testing

By Sunday April 30th

- Finish the core (key features)
- Testing
- User Beta

By Sunday May 7th

- Compile user feedback and modify UI based off that feedback
- Add features
- Debug

By Sunday May 14th  
- Polish Product

**Section 6 - Risks & Outcomes -what might go wrong or cause delay; learning new languages, tools, and systems; dependence on data or software or hardware acquisition.**

Some of the risks we may encounter include:

- iOS mobile app approval- we may have to consider finishing the project a few weeks before the deadline to be able to test its functionality
- No team member has any experience with iOS app development, so learning a language like Swift may delay the time it takes to create any working prototype of the app
- Possible difficulties in connecting web services end-to-end