

# HelloWorld

## Project Summary:

With HelloWorld, we aim to equip travelers with all they need to know to visit their dream country and communicate effortlessly. Learning a language can be quite time-consuming and challenging, especially if it is self-paced and users are not self-motivated. With HelloWorld, we target travelers who might be more interested in being able to sustain themselves in a foreign country rather than mastering a language entirely. By offering a selection of popular languages, including English, French, Spanish, German, and Portuguese, HelloWorld empowers users to choose the languages that best suit their travel plans. Along with that, users also have the opportunity to personalize their learning experience and set a target for their expected learning time, allowing them to further optimize their learning experience with our priority ranking system. With HelloWorld, we embrace the attitude of doing the bare minimum to achieve targets and enable travelers to maximize their experience of new cultures.

## Description of an application

We intend to solve a problem faced by most tourists: the inability to communicate in a foreign language. With this project, our goal is to teach only the fundamentals while minimizing the amount of time needed. For instance, Travelers would only need to know how to communicate phrases such as “Where is the Palacio Real?”, “What time is it?”, “Are there any restaurants nearby?”, “How much do you charge?”, etc. rather than learning an entirely new language.

One creative component we are considering, though not finalized yet, is an intelligent speech recognition and pronunciation analysis feature. This would allow users to practice speaking phrases and get real-time feedback on their pronunciation. By using machine learning models for speech recognition with a phonetic analysis API to

compare the user's pronunciation with native speaker audio, we could offer suggestions on how to improve. While this would be technically challenging, involving audio processing and integration of phonetic analysis, it would enhance the user experience and make HelloWorld more than just a flashcard app - helping users confidently speak the phrases they learn.

### **Usefulness:**

We believe that this project has a real-life application as using an app such as Duolingo focuses on teaching the language in its entirety which may require a lot of time and effort. The casual traveler never really learns the language before leaving on vacation because it's just too difficult for them and takes more time. What if there was a way to quickly pick up the fundamentals—let's say two weeks—before the traveler's trip? This is where **HelloWorld** enters the picture. In order to help visitors get around the country, HelloWorld aims to teach them the fundamentals of a language. Instead of teaching an entire language like Duolingo, HelloWorld focuses on teaching 250 common phrases that tourists are most likely to use during their trip. This makes it ideal for users who want practical language knowledge without spending months on language courses. The basic functions of HelloWorld revolve around helping users memorize and test themselves on these essential phrases. It includes flashcards for memorizing the 250 phrases, as well as three types of examinations: A fill-in-the-blank quiz for testing knowledge of the phrases, a multiple-choice quiz where users choose the correct phrase based on their primary language selected, and provide users with a pronunciation audio clip where users can click a button to hear the pronunciation and learn the correct pronunciation of the phrase. To make the experience more interactive and engaging, HelloWorld also plans to incorporate a user database where users can compete with friends and family to see who can memorize the most phrases. The simpler features of the application include flashcards and fill-in-the-blank quizzes, while a more complex feature is the integration of audio and, potentially, transliteration of the phrases. Compared to similar applications like Duolingo, which aims to teach an entire language, HelloWorld stands out by focusing specifically on the needs of travelers,

offering a faster and more targeted learning experience with features designed to enhance both usability and engagement.

### **Realness:**

For our datasets, we will rely on the website [wikivoyage.org](http://wikivoyage.org), which has phrase lists for multiple languages such as [Spanish](#), [Portuguese](#), and [French](#) as well as other languages. These phrase lists contain common or useful phrases to use when visiting a foreign country such as phrases for telling time, restaurants, taxis, and emergencies. We will transform the website phrase lists into a csv file dataset through some processing of the text on the websites. The data sets will have degree 2 for the English and foreign language. The cardinality of the Spanish phrase list is 469. The other datasets will be in a similar range. This matches the use case of our apps as we only want to teach the useful phrases in a short period of time and not the whole language. We plan on using the French, German, Spanish, and Portuguese datasets for our application.

### **Functionality:**

Users create an account when they visit our page and specify the language they want to learn, as well as the time frame they have available for learning. The website will then assign tasks in the selected language, prioritizing key phrases that can be learned within that time frame.

We aim to support users' learning through three distinct tabs, each offering a unique experience accessible from the homepage.

1. **First Tab:** Users are provided with a list of popular phrases in both English and the target language. They can listen to the correct pronunciation of each phrase by clicking on it, helping them memorize it. Users can scroll through the page to access approximately 250 phrases.

2. **Second Tab:** Users are shown an English phrase and must choose the correct translation in the target language from four options. Their score is displayed in the top right corner, and they receive credit if they score above 70% on the quiz. Users can navigate to the next question by clicking the arrow in the bottom left and will be redirected to the homepage after completing the quiz.
3. **Third Tab:** Users are given sentences with missing nouns and must select the correct noun from four provided options to complete the sentence. Scores are shown in the top right, and users receive credit if they score above 70%. Like in the second tab, they can proceed to the next question via the arrow in the bottom left and will return to the homepage upon finishing the quiz.

Additionally, users can add friends to track progress together by clicking the top right corner and searching for their friends' names. Once added, they can view a leaderboard displaying each user's score, reflecting the number of completed assignments.

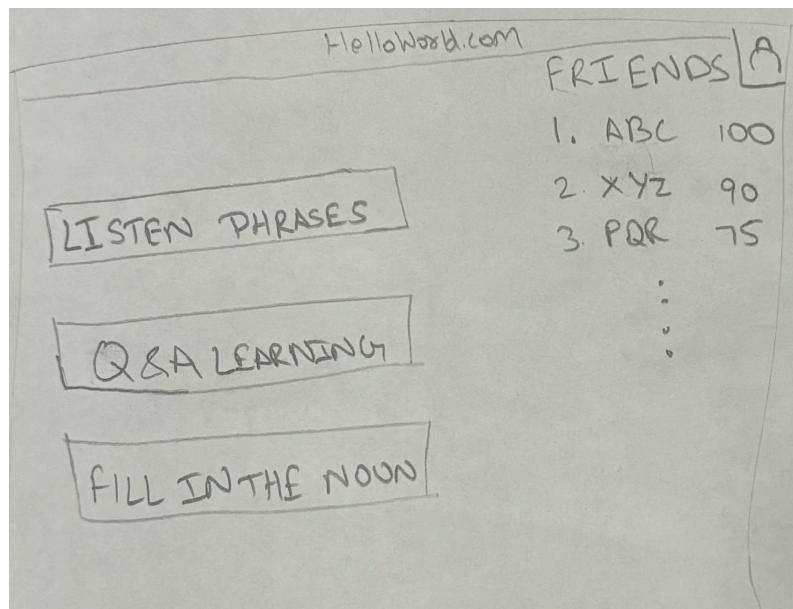


Image 1: Mock up of landing page

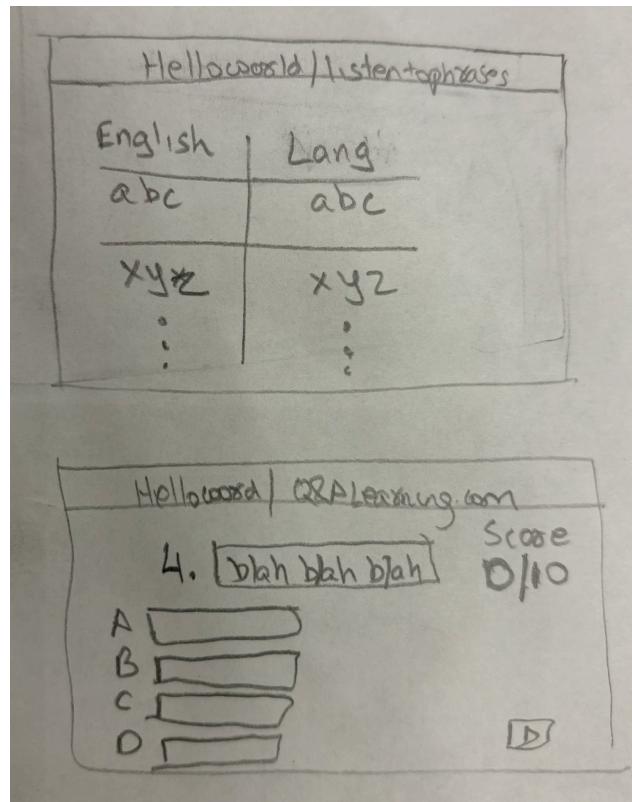


Image 2: Mock-up of the quiz and phonetics tab

### Division of Labor:

- Brendan Deleon : Language dataset cleaning
- Pranav Rajkumar: Language dataset conversion & integration
- Rutva Pandya: User ranking & database creation
- Syed Ahmed Raza : User registration and database management