

Your Key to Talking Around the World

Software Requirements Specification



CSCE 247: Software Engineering

Gracie Driggers, Grace Gustafson,

Zaniah Kirkpatrick, Sri Satishkumar, and Hardik Marlapudi

Date: September 29th, 2024

Version 2.0

Table Of Contents

Your Key to Talking Around the World	1
Authors	1
Purpose	3
Stakeholders	3-6
Constraints	7
Overall Description	7
Business Use Case	8
Functional Requirements	9
Non-Functional Requirements	9
Competitive Analysis	10-14

Purpose:

This app aims to help users learn or deepen their knowledge of the Spanish language. Anyone can use it. We are trying to solve the difficulty of other apps by making this as user-friendly as possible while still providing the best learning experience.

Stakeholders:

- A 42-year-old Teacher
- A 19-year-old Student at the University of South Carolina
- A 35-year-old Researcher



Kristin Jones

Age: 42

Education: Master Degree

Gender: Female

Occupation: Teacher

DESCRIPTION

Kristin Jones is a teacher native to Columbia, South Carolina. She has recently moved to Texas and now teaches at Eastlake High School, a public high school in El Paso, Texas. She is a graduate of the University of South Carolina and has a Masters Degree in Teaching.

QUOTE

"I believe that investing in students is one of the best decisions a teacher can make. Taking the time to learn more about my students is an investment that I hope will ensure their success!"

GOALS AND OBJECTIVES

Kristin's goal is to broaden her understanding of the Spanish language to be able to communicate better with her Spanish-speaking students and incorporate Spanish into her lesson plans. She hopes to become semi-fluent to be able to assist her students.

HOBBIES

Kristin Jones enjoys crocheting clothing for her family and friends. She also enjoys decorating and organizing her house. She also enjoys listening to science fiction audiobooks and watching science fiction movies after she gets home from work.

TECHNOLOGY USAGE

Kristin Jones has some experience with educational programs and technology that is used in schools. However, she is unfamiliar with most language learning apps that exist.

NEEDS

Kristin needs the app to be user friendly for her limited experience with the technology. She also needs the app to have auditory elements, as she listens to things while doing activities like her hobbies or driving. She needs to learn more about the vocabulary, as well as more commonly used statements.



Isabella Murphy

Age: 19

Education: Still in College

Gender: Female

Occupation: Average Student

DESCRIPTION

Isabella goes to the University of South Carolina. She is a 19-year-old sophomore who, while still in college, needs a language translator app. Isabella is a Biology major and she must take one foreign language in order to receive her degree. She aspires to become a veterinary assistant.

QUOTE

"I can't believe I have so many assignments due tonight. WAIT... Did I complete that assignment that was due yesterday?!?! "

GOALS AND OBJECTIVES

Isabella hopes that the use of a translator app will strengthen her understanding of basic Spanish and equip her with the skills she needs when learning it. Since she needs one foreign language class, she needs a translator app to quickly and easily help her learn.

HOBBIES

Isabella Murphy enjoys reading thriller books during her free time. Growing up in Miami Beach, she also enjoys any activity that involves water. Especially kayaking. Isabella is incredibly creative, which caused her to find a passion for painting and art making.

TECHNOLOGY USAGE

Isabella uses technology frequently. Being a sophomore in college, she uses multiple websites and apps to assist her in assignments and classwork.

NEEDS

She needs the app to be user-friendly. She needs it to enhance her Spanish vocabulary. To prevent confusion, she needs the translator app to be easily accessible and easy to work with.



Robert Brown

Age: 35

Education: PhD

Gender: Male

Occupation: Researcher

DESCRIPTION

Robert is the Director of Clinical Research at a private hospital in Los Angeles, California. He moved to the city to acquire his PhD and has lived here ever since. On the weekends, he enjoys exploring new culinary experiences from Spanish establishments.

QUOTE

"I don't like coming home from work just to do more work," he said. "But this app genuinely feels like I'm playing another game, and I can tell that I'm actually learning from it!"

GOALS AND OBJECTIVES

Robert is looking for an app to help him learn Spanish to better communicate with his patients of Spanish origin and waiters at the restaurants he frequents. He aspires to become fluent in the language and hopes to one day visit Ecuador, Columbia and Mexico.

HOBBIES

Robert loves surfing and can be found at Venice Beach on a sunny afternoon. He delights in Spanish cuisine and supports small businesses by trying new dishes. He also enjoys playing video games from time to time.

TECHNOLOGY USAGE

Robert is quite tech-savvy. He initially pursued a Bachelor's in Computer Science before switching his major to Biology and entering the health field. He plays video games occasionally and has used language apps before, but none that implemented methods that best suited his learning style.

NEEDS

Robert would classify himself as a visual learner. He needs an app that uses pictures next to the foreign words to fully comprehend their definitions. Robert also excels with active recall and requires an app that incorporates this method through regular weekly quizzes and assessments.

Constraints:

Time Constraints:

- This project has to be completed in 15 weeks.

Technical Constraints:

- This code must be done in Java.
- The website must be compatible with multiple devices.

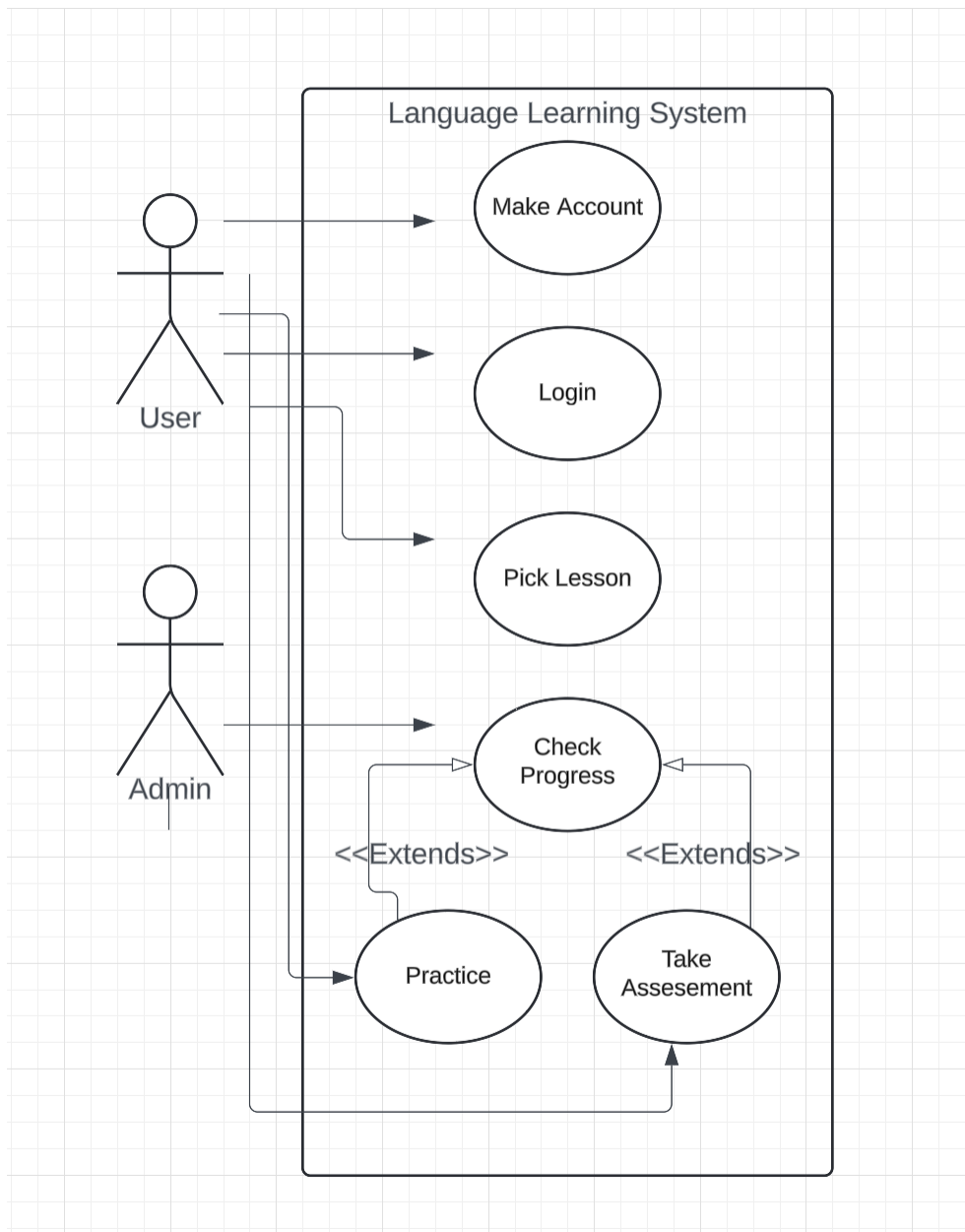
Partner Apps:

- This app cannot be comparable to other apps.

Overall Description:

This app must be accessible on both mobile and laptop devices. Users should be able to save their data within the app to continue their progress. This app will be able to be compatible with all styles of learning. Depending on how fast they want to learn the language, users should be able to pick the speed at which they learn and test. Before you can download the app, users will be able to see reviews on how others have benefited from it.

Business Use Cases



Functional Requirements

[Pixel Sheets - Requirements.xlsx](#)

Non-Functional Requirements

Look and Feel Requirements

- All ages shall understand the system.

Usability Requirements

- All ages shall be able to use the system to learn a language.

Security Requirements

- The user's information will not be sold.
- The user's information shall be filed securely.

Performance Requirements

- The system shall be able to be used on any device.

Legal Requirements

- The system shall not break any laws.

Maintainability and Support Requirements

- This system shall be supported by Linux, Mac, Window and any mobile device with a stable connection to the internet.

Competitive Analysis:

App #1 - Mondly

Strengths	Some of the strengths of this app include 33 languages and different levels: beginner, intermediate, or advanced. Depending on what you choose the program will change the layout of each of the activities. The website has a statistics page that shows you the days you have been studying, how many words you have learned as well as phrases. They store this information even if you don't pay.
Weaknesses	The only downside to having all those languages is that you have to pay to get access to all of them. I wish you were able to choose the voice of the person talking to you because it gets annoying quickly. You cant get access to any of the lessons unless you pay for it.
Audience/focus	I would say that the audience can be used by anyone. It's tech-friendly, reads the words, and is relatively painless to use.

App#2 - Mango Languages

Strengths	This app has over 70 languages for a user to choose to learn. It explains grammar and sentence structure of the language compared to how it would be said in English. It includes mock conversation which increases fluency and understanding of the language. This app blends cultural understanding along with the study of the language.
Weaknesses	While the app focuses on repetition to improve the understanding of the content, some may find it too repetitive and feel as if they are limited in what they are learning. Unlike some other apps, this app is not the best for visual learners and does not include games to help the user learn.
Audience/focus	The target audience of this app are beginners looking to learn a language for fun, individuals who wish to improve in conversational skills and travelers visiting new countries and hope to interact with locals to learn more about their customs. Students also find this app helpful when taking a foreign language at school.

App#3 - Duolingo

Strengths	Duolingo is engaging by using game-like lessons to learn languages. It has levels to help build on what a user already knows, and it is free to use. It can help with learning more well-known languages, but it also has languages that are not as mainstream, like Irish. They also have math and music lessons.
Weaknesses	The lessons are repetitive, which helps with memorization, but can stall learning. There is a lack of grammatical or sentence structure taught in the lessons. This affects the teaching of vocabulary, leading to a shallow knowledge of the language.
Audience/focus	The target audience is beginners who want to learn a new language. It is also helpful to travelers or those who want to review their understanding of a language, either for educational or recreational purposes.

App #4 - Babbel

Strengths	Babbel is great for beginners who want to learn fundamental language skills. It has a variety of learning exercises and has built in voice recognition tools that allow users to practice skills out loud. Babbel offers personalized “lesson plans” based on your level of knowledge and learning goals.
Weaknesses	Babbel doesn’t offer much material for advanced learners who want to learn more. Many suggest that other outside resources may be needed to achieve fluency.
Audience/focus	The target audience are beginners who are looking for an engaging way to learn a new language.

Summary:

Through our competitive analysis, we were able to learn more about the strengths and weaknesses of competitor language learning apps. We have found that our app will need to cater to different experience levels and languages. A feature that Mango languages lacked was utilizing games and it did not incorporate many visual learning methods. Many people learn through different styles and visual learning is one of them. Implementing games could increase engagement and help learners understand the language better. One of Duolingo's weaknesses was its lack of grammar and syntax focused lessons. It relied more on memorization than learning how to construct sentences, which will limit the user's understanding of the language. One of Babbel's key strengths is its feature that creates personalized lessons for users. Depending on the user's level of knowledge, Babbel will provide a learning environment aimed at enhancing those specific skills, thus providing the user with a more effective way to learn. One feature of the Mondly app that we would want to consider implementing into our app is a statistics page. The app keeps track of all the words/phrases you have aced so they don't keep testing you on them. It included this feature whether or not you had paid for more for the pro version.