



Software Requirements Specification *for* TalkTionary: A Talking Urban Dictionary

PREPARED BY:
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TalkTionary

A Talking Urban Dictionary

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Christian Dale Siron and Daniel Eric Talplacido

1. INTRODUCTION

Welcome to the Talking Dictionary! This user-friendly desktop application, written in Python, brings a fresh approach to language exploration, offering a vibrant journey into the world of contemporary expressions and enhancing your vocabulary through dynamic definitions and lively pronunciations.

2. PURPOSE

The purpose of a talking dictionary is to transform language learning by providing an engaging, accessible, and user-friendly platform tailored to the dynamic and ever-evolving slang used by millennials and Gen Z on social media, especially for those who may face challenges with traditional written dictionaries.

2.1 DESCRIPTION

Talktionary is a desktop application designed to function as a talking dictionary. It allows users to enter a word and receive an audio

explanation of its meaning, pronunciation, and usage. The application's goal is to provide a user-friendly interface that includes accurate and authoritative definitions from credible dictionaries and linguistic resources.

- **Decode Slang Meanings:** Seamlessly explore the meaning, part of speech, and illustrative examples of contemporary slang terms. Gain a crystal-clear understanding of how the word is used in various contexts.
- **Immerse Yourself in Pronunciation:** Each slang definition comes alive with high-quality audio pronunciations delivered in natural-sounding voices, assisting in comprehension and refining your knowledge of trendy expressions.

2.2 FEATURES

- **Comprehensive Slang Definitions:** Gain in-depth understanding with detailed definitions, parts of speech, and illustrative example sentences for each slang you look up.

- High-Fidelity Audio Pronunciations:** Immerse yourself in natural-sounding pronunciations spoken by high-quality text-to-speech engines, enhancing pronunciation and listening comprehension.
- Efficient Search Functionality:** Effortlessly navigate the extensive dictionary database with a powerful search function, enabling you to quickly find the slang words you seek.
- User-Friendly Interface:** Navigate effortlessly with a clean, intuitive, and visually appealing interface designed for a smooth and enjoyable user experience.
- Offline Functionality:** Access the dictionary even without an internet connection, empowering you to learn on the go, anytime, anywhere.

2.3 BENEFITS

- Effortlessly Enhance Vocabulary on Trendy Expressions and Communication Skills:** Equip yourself with a wider range of slangs and the confidence to express yourself clearly and effectively in various contexts.
- Dive into Modern Language Trends:** Delve into the intricacies of current slangs.

and their usage, fostering a profound appreciation for the power of modern language.

- Refine Pronunciation and Listening Comprehension:** Master the art of pronunciation and hone your listening skills through exposure to high-quality audio pronunciations.
- Unleash the Power of Offline Learning:** Take your learning beyond the limitations of internet connectivity with the app's offline functionality, allowing you to learn anytime, anywhere.

3. FUNCTIONAL REQUIREMENT

3.1 USER INPUT

- The application shall allow users to input slang terms they wish to look up in the talking dictionary. This functionality serves as the primary means for users to interact with the application and retrieve information about specific slang expressions.

3.2 DEFINITION RETRIVAL

- Once a user inputs a slang term for lookup, the application shall retrieve and present the definition of the input slang term in audio format. This functionality is crucial for providing users with accurate and comprehensive information about the meaning, usage, and pronunciation of the slang term they are interested in.

3.3 PRONOUNCEIATION GUIDEDANCE

- Pronunciation guidance is a crucial aspect of the TalkTionary application, aiming to assist users in accurately pronouncing slang terms by providing high-quality audio pronunciations. This functionality enhances users' comprehension of slang expressions and helps them confidently incorporate these terms into their vocabulary.

3.4 CUSTOMIZED OPTION

- Customization options allow users to personalize their experience within the TalkTionary application by selecting preferred voices and language settings for audio pronunciations. This functionality enhances user satisfaction and accommodates diverse preferences

and needs.

3.5 SEARCH FUNCTIONALITY

- Search functionality is a fundamental aspect of the TalkTionary application, enabling users to efficiently find and explore slang terms of interest. This functionality should be intuitive, responsive, and capable of handling a wide range of user queries.

3.6 OFFLINE FUNCTIONALITY

- Offline functionality is a key feature of the TalkTionary application, allowing users to access the dictionary even when they do not have an internet connection. This functionality ensures that users can continue learning and exploring slang terms anytime, anywhere, without being dependent on internet connectivity.

4. NON-FUNCTIONAL REQUIREMENTS

4.1 RESPONSE TIME

- The application shall aim to provide responses to user queries within a maximum acceptable time frame, typically measured in milliseconds or seconds.

4.2 RELIABILITY

- Reliability refers to the ability of the TalkTionary application to consistently retrieve accurate definitions from trusted sources and provide a reliable user experience without unexpected failures or errors.

4.3 ACCESSABILITY

- Accessibility ensures that the TalkTionary application is usable by all users, including those with disabilities, by adhering to accessibility standards and providing features that facilitate access and usability.

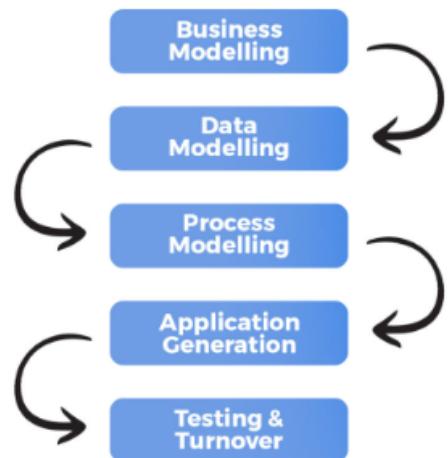
4.4 SCALABILITY

- Scalability refers to the ability of the TalkTionary application to accommodate potential future updates and expansions, such as adding support for additional languages or integrating new features, without significant performance degradation or architectural constraints.

5. SOFTWARE DEVELOPMENT MODEL

Rapid Application Development (RAD) is chosen as the software project model for TalkTionary due to its iterative and flexible nature, allowing for quick prototyping and continuous feedback from users. This model emphasizes active user involvement, rapid iterations, and incremental development, which aligns well with the dynamic and evolving nature of the language landscape targeted by TalkTionary.

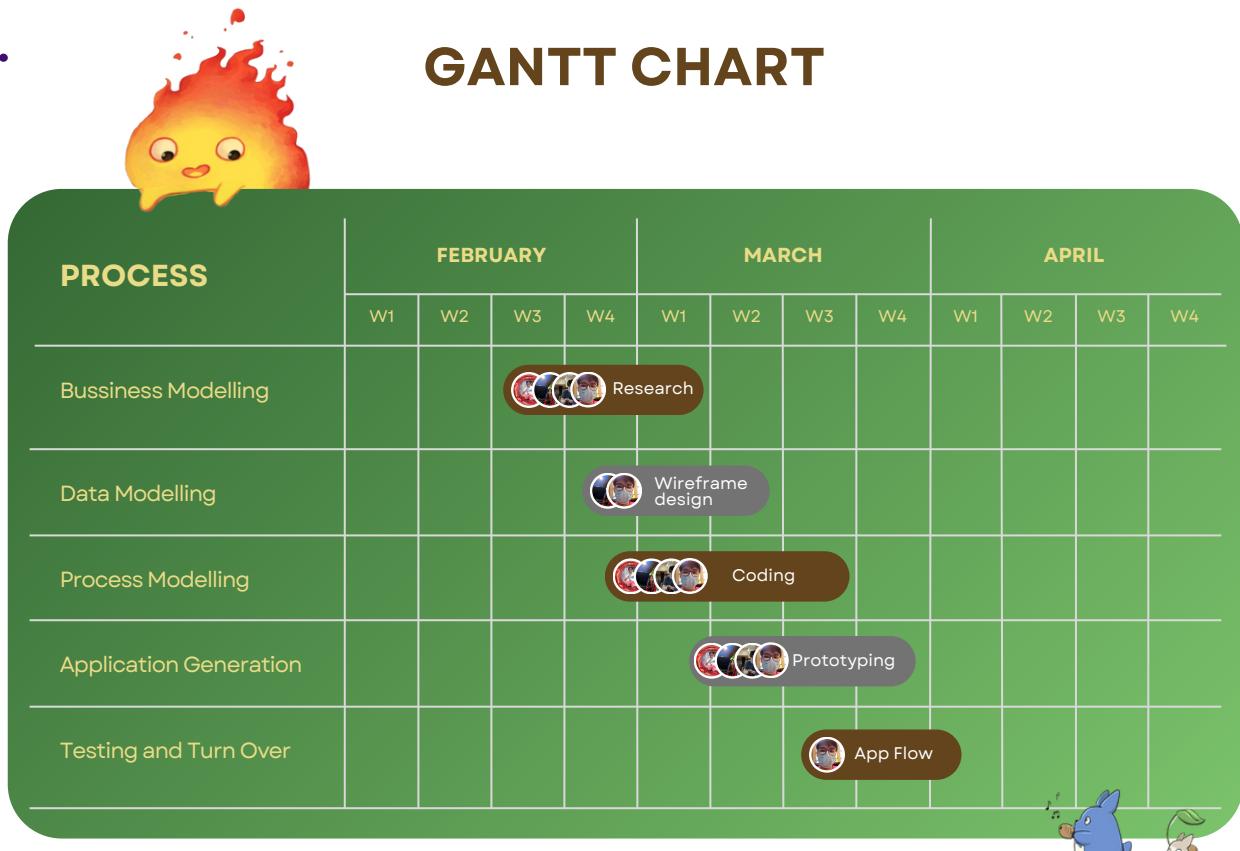
RAD Model Diagram



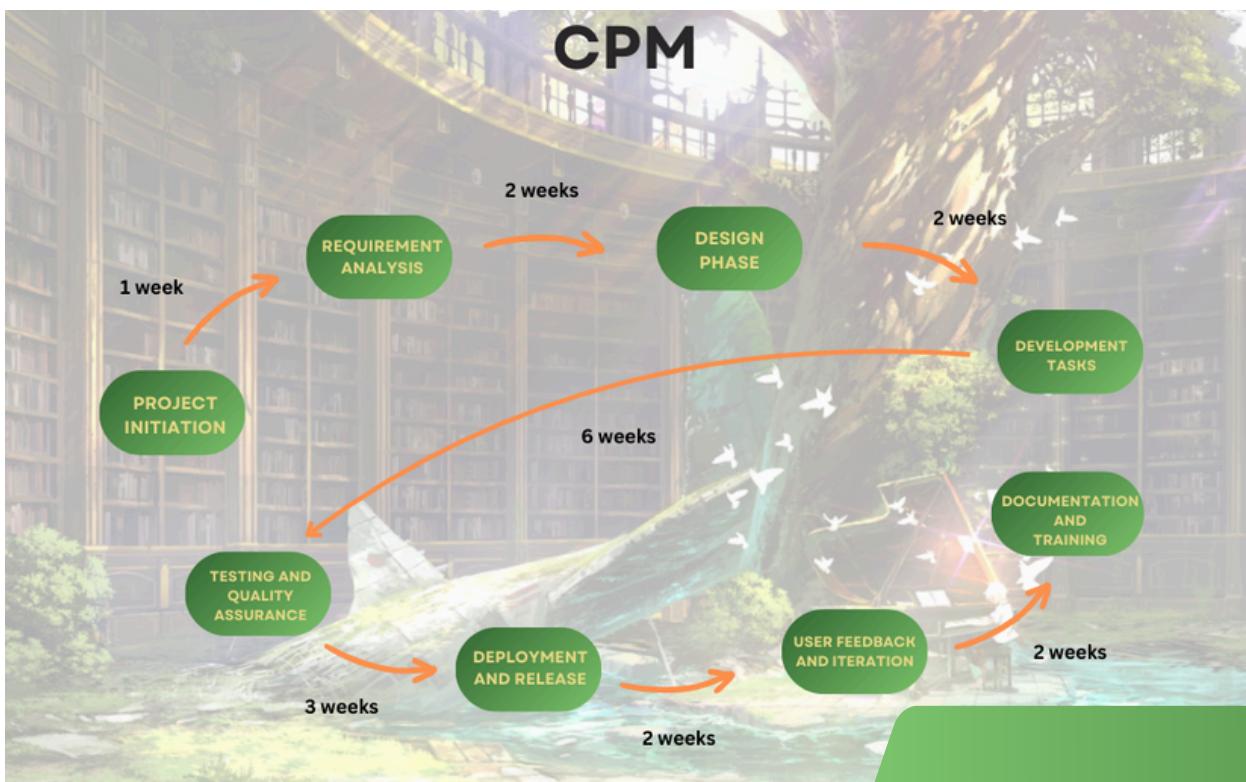
- **Requirements Planning:** Gather initial requirements from stakeholders, define the scope of the project, and establish the overall vision for TalkTionary.
- **User Feedback and Prototyping:** Develop prototypes of the application quickly, incorporating core features such as word lookup and audio pronunciation. Gather feedback from users to refine and enhance the application iteratively.
- **Iterative Development:** Develop the application in small, incremental cycles, focusing on delivering functionality rapidly while maintaining flexibility to accommodate changes based on user feedback.
- **Testing and Quality Assurance:** Conduct thorough testing at each iteration to ensure the application meets quality standards and functions as intended. Automated testing tools may be employed to streamline the testing process.
- **Deployment and Feedback Incorporation:** Deploy each iteration of the application to users for real-world testing and feedback collection. Incorporate user feedback into subsequent iterations to continuously improve the application.
- **Maintenance and Updates:** Provide ongoing maintenance and support for the application, addressing any issues that arise and implementing updates and enhancements based on user feedback and emerging trends in language usage.

6. PROJECT SCHEDULING & MANAGEMENT

A.



B.



C. Risk Information Sheets

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RISK INFORMATION SHEET			
RISK ID: TD-001	DATE: 03/04/2024	PROB: 40%	IMPACT: 80%
DESCRIPTION: THE APPLICATION'S PERFORMANCE MAY NOT MEET USER EXPECTATIONS, LEADING TO SLOW RESPONSE TIMES OR RESOURCE-INTENSIVE OPERATIONS, ESPECIALLY AS THE SIZE OF THE DICTIONARY OR THE COMPLEXITY OF AUDIO PROCESSING INCREASES.			
REFINEMENT/CONTEXT: <ul style="list-style-type: none">DEFINE PERFORMANCE BENCHMARKS AND CRITERIA TO OBJECTIVELY ASSESS THE APPLICATION'S PERFORMANCE AGAINST USER EXPECTATIONS.			
MITIGATION/MONITORING: <ul style="list-style-type: none">IMPLEMENT CONTINUOUS PERFORMANCE MONITORING TOOLS TO TRACK SYSTEM RESOURCE USAGE, RESPONSE TIMES, AND OTHER RELEVANT METRICS. REGULARLY CONDUCT PERFORMANCE AUDITS AND OPTIMIZATIONS BASED ON MONITORING DATA.			
MANAGEMENT/CONTINGENCY PLAN/TRIGGER: <ul style="list-style-type: none">ALLOCATE RESOURCES FOR DEDICATED PERFORMANCE TESTING AND OPTIMIZATION EFFORTS, INCLUDING THE INVOLVEMENT OF EXPERIENCED DEVELOPERS AND SYSTEM ADMINISTRATORS. TRIGGER: IF PERFORMANCE METRICS FALL BELOW PREDEFINED THRESHOLDS DURING TESTING OR PRODUCTION, ESCALATE THE ISSUE TO SENIOR MANAGEMENT FOR IMMEDIATE ACTION AND RESOURCE ALLOCATION.			
CURRENT STATUS: 03/07/2024: PERFORMANCE TESTING AND OPTIMIZATION EFFORTS COMMENCED			
ORIGINATOR: E. TALPLACIDO	ASSIGNED: C. SIBUGAL		



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RISK INFORMATION SHEET

RISK ID:	DATE:	PROB:	IMPACT:
TD-002	03/07/2024	20%	50%
DESCRIPTION: <p>THE APPLICATION RELIES ON AN EXTERNAL JSON FILE (DATA.JSON) FOR WORD DEFINITIONS, WHICH MAY BE PRONE TO CORRUPTION OR DATA INCONSISTENCY.</p>			
REFINEMENT/CONTEXT: <ul style="list-style-type: none">DEFINE SPECIFIC DATA VALIDATION CRITERIA TO ENSURE THE ACCURACY AND CONSISTENCY OF INFORMATION STORED IN THE JSON FILE.			
MITIGATION/MONITORING: <ul style="list-style-type: none">REGULARLY CONDUCT INTEGRITY CHECKS ON THE JSON FILE TO IDENTIFY ANY ANOMALIES OR INCONSISTENCIES. MONITOR BACKUP PROCESSES TO ENSURE THE TIMELY AND ACCURATE STORAGE OF DATA BACKUPS.			
MANAGEMENT/CONTINGENCY PLAN/TRIGGER: <ul style="list-style-type: none">IMPLEMENT AUTOMATED BACKUP PROCEDURES FOR THE JSON FILE, WITH SCHEDULED BACKUPS STORED IN SECURE LOCATIONS. DOCUMENT DATA RECOVERY PROCEDURES AND DESIGNATE RESPONSIBLE PERSONNEL TO EXECUTE THEM IF NECESSARY. <p>TRIGGER: IF ANOMALIES OR INCONSISTENCIES ARE DETECTED DURING ROUTINE DATA VALIDATION CHECKS, INITIATE THE PREDEFINED DATA RECOVERY PROCEDURES AND INVESTIGATE THE ROOT CAUSE OF THE ISSUE.</p>			
CURRENT STATUS: 03/10/2024: DATA VALIDATION CHECKS AND AUTOMATED BACKUP PROCEDURES IMPLEMENTED			
ORIGINATOR:	C. SIBUGAL	ASSIGNED:	C. SIRON



RISK INFORMATION SHEET

RISK ID:	DATE:	PROB:	IMPACT:
TD-003	03/07/2024	20%	50%
DESCRIPTION: <p>The application relies on an external JSON file (data.json) for word definitions, which may be prone to corruption or data inconsistency.</p>			
REFINEMENT/CONTEXT: <ul style="list-style-type: none">Define specific data validation criteria to ensure the accuracy and consistency of information stored in the JSON file.			
MITIGATION/MONITORING: <ul style="list-style-type: none">Regularly conduct integrity checks on the JSON file to identify any anomalies or inconsistencies. Monitor backup processes to ensure the timely and accurate storage of data backups.			
MANAGEMENT/CONTINGENCY PLAN/TRIGGER: <ul style="list-style-type: none">Implement automated backup procedures for the JSON file, with scheduled backups stored in secure locations. Document data recovery procedures and designate responsible personnel to execute them if necessary. <p>TRIGGER: If anomalies or inconsistencies are detected during routine data validation checks, initiate the predefined data recovery procedures and investigate the root cause of the issue.</p>			
CURRENT STATUS: 03/10/2024: Data validation checks and automated backup procedures implemented			
ORIGINATOR: C. SIBUGAL	ASSIGNED: C. SIRON		

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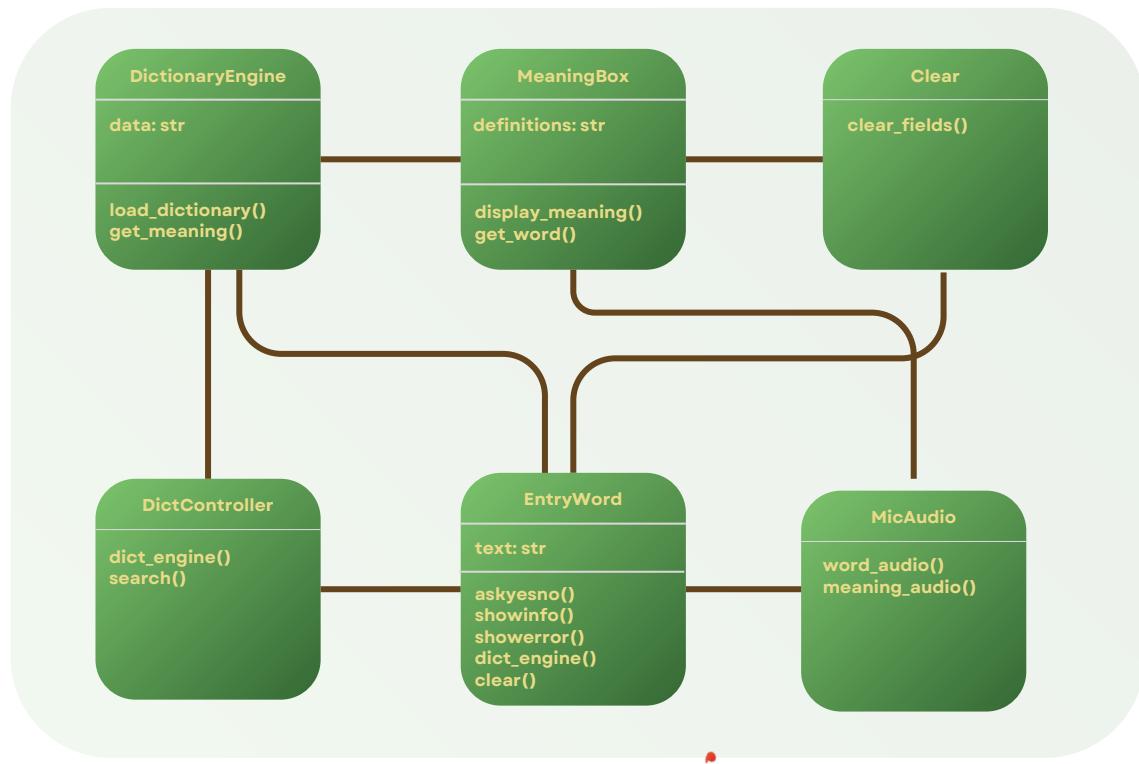
RISK INFORMATION SHEET

RISK ID:	DATE:	PROB:	IMPACT:
TD-004	03/14/2024	50%	60%
DESCRIPTION: <p>The application may lack certain features or functionalities that users expect from a comprehensive dictionary application, leading to reduced user satisfaction.</p>			
REFINEMENT/CONTEXT: <ul style="list-style-type: none">Conduct regular surveys or feedback sessions to gauge user satisfaction and identify areas for feature enhancement.			
MITIGATION/MONITORING: <ul style="list-style-type: none">Establish a feedback mechanism within the application to collect user suggestions and feature requests. Monitor user engagement metrics and feedback channels to identify emerging trends and prioritize feature development accordingly.			
MANAGEMENT/CONTINGENCY PLAN/trigger: <ul style="list-style-type: none">Maintain a product roadmap outlining planned feature releases and updates based on user feedback and market trends. Allocate resources for ongoing feature development and refinement. <p>Trigger: If user feedback consistently highlights specific feature requests or dissatisfaction with existing functionalities, prioritize the development and implementation of those features to address user concerns effectively.</p>			
CURRENT STATUS: 03/16/2024: User feedback mechanisms established			
ORIGINATOR: C. SIRON	ASSIGNED: M. FLORES		

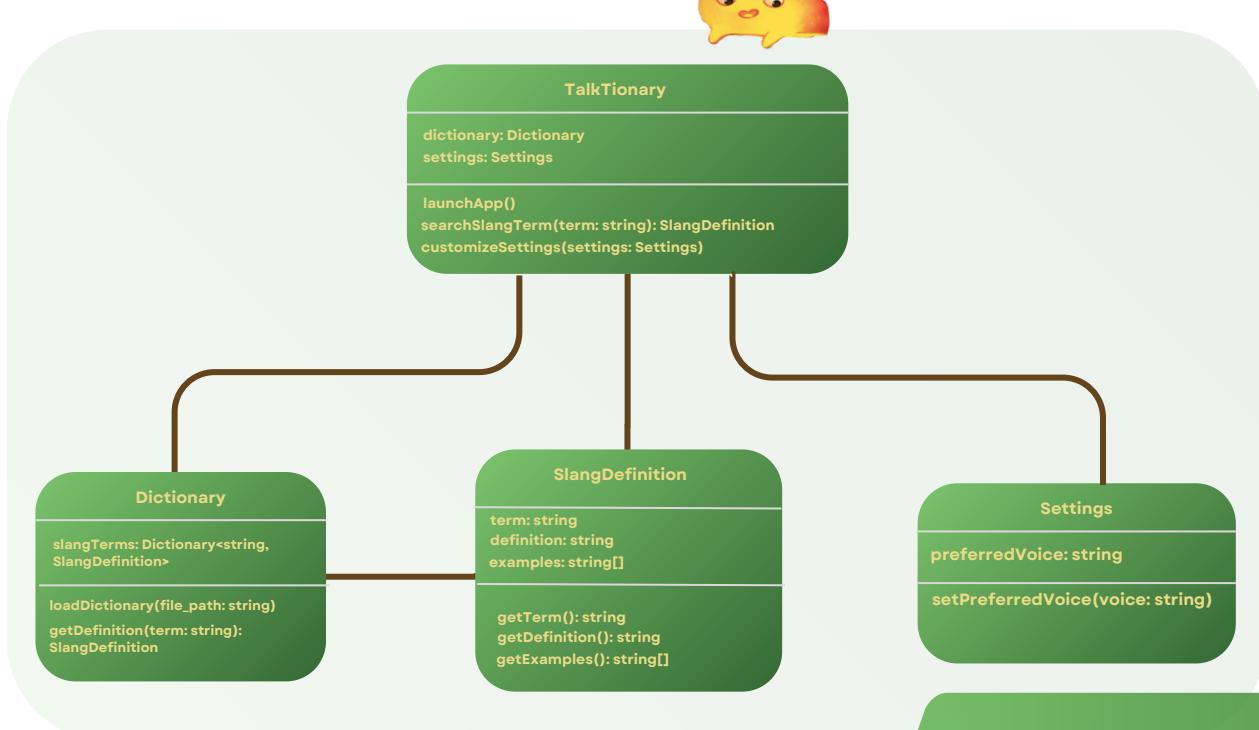


D. UML Diagrams

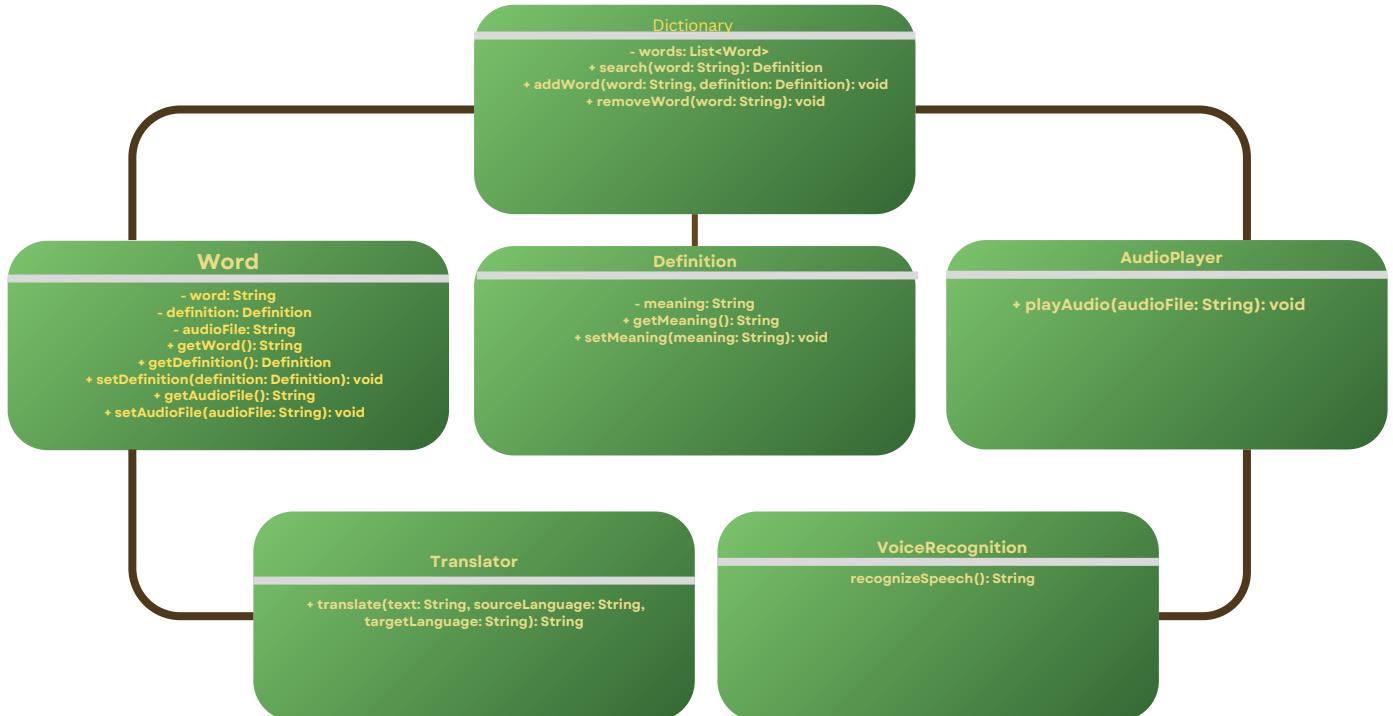
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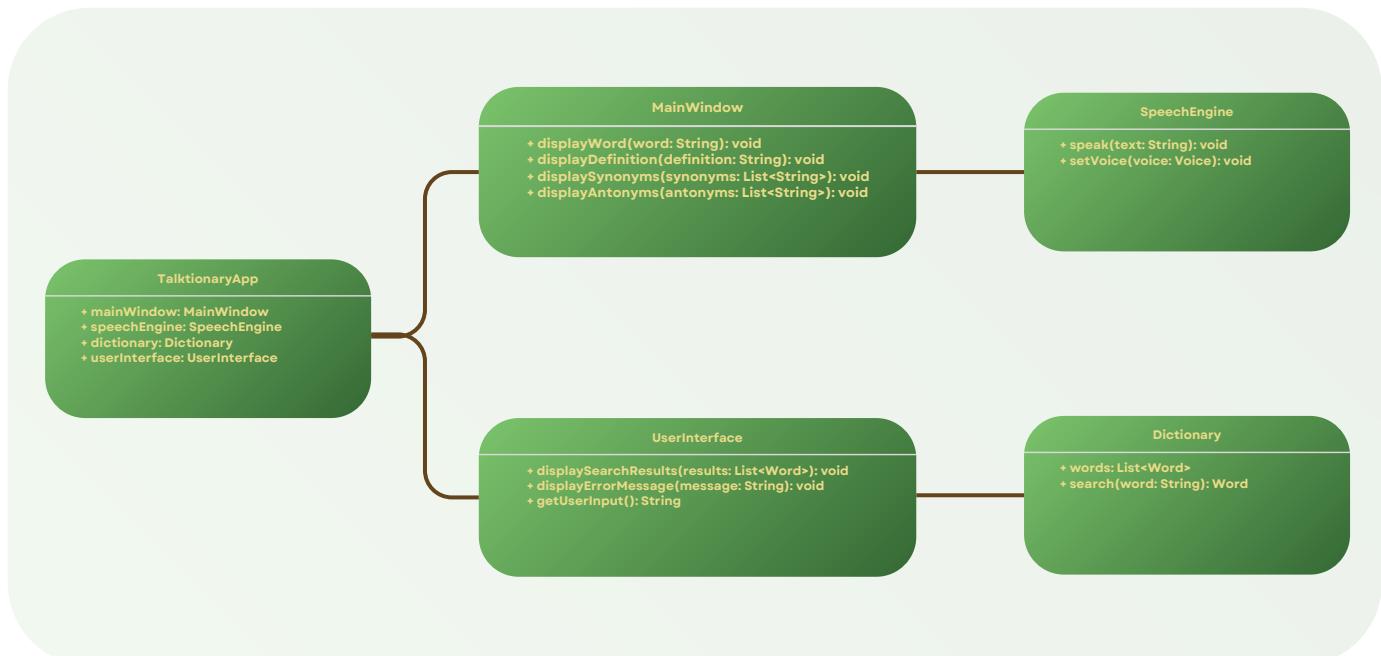
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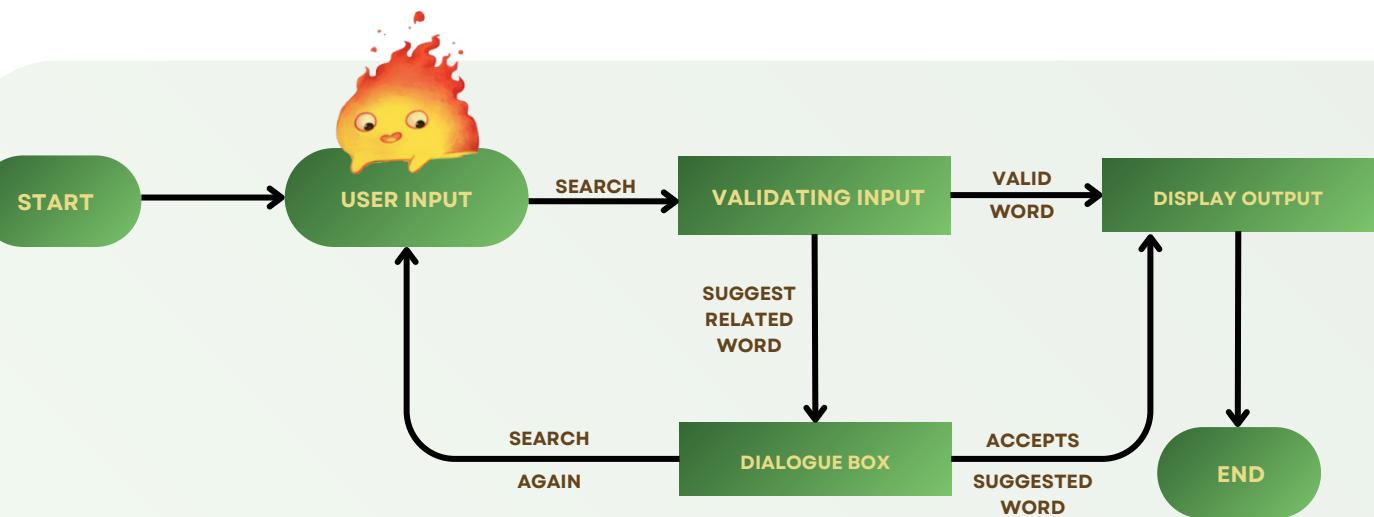


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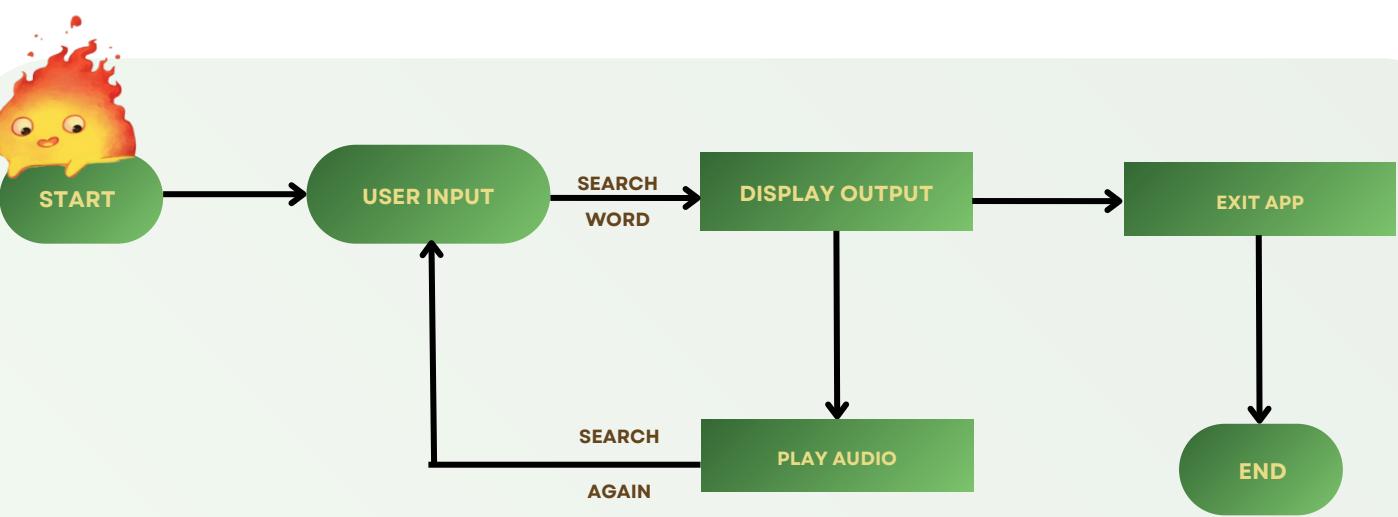


D. Dataflow Diagrams

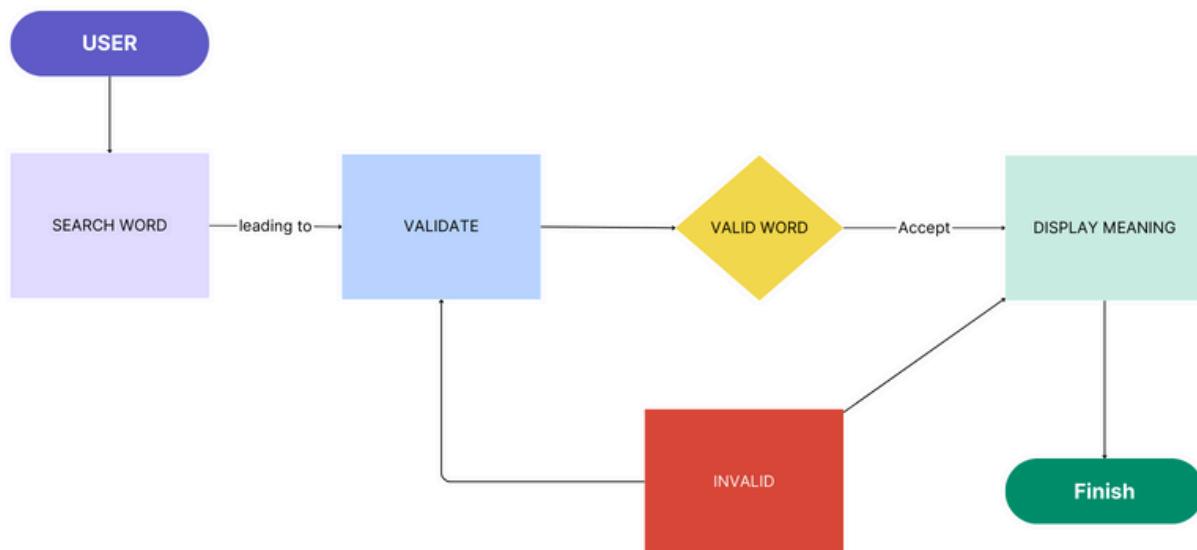
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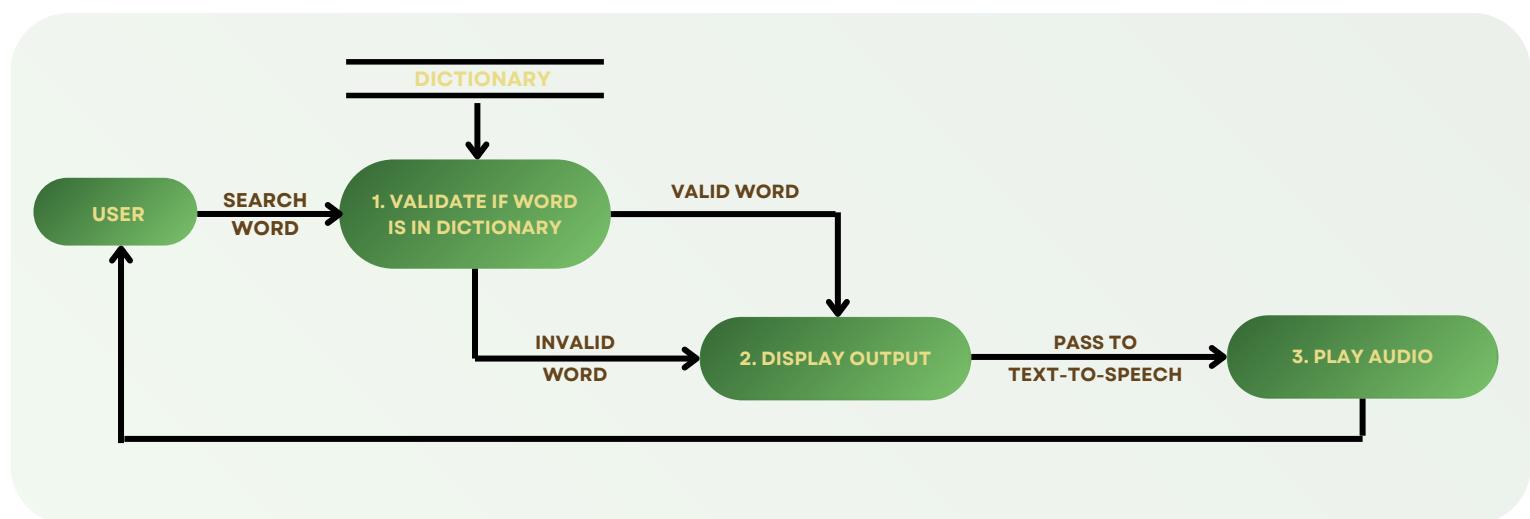
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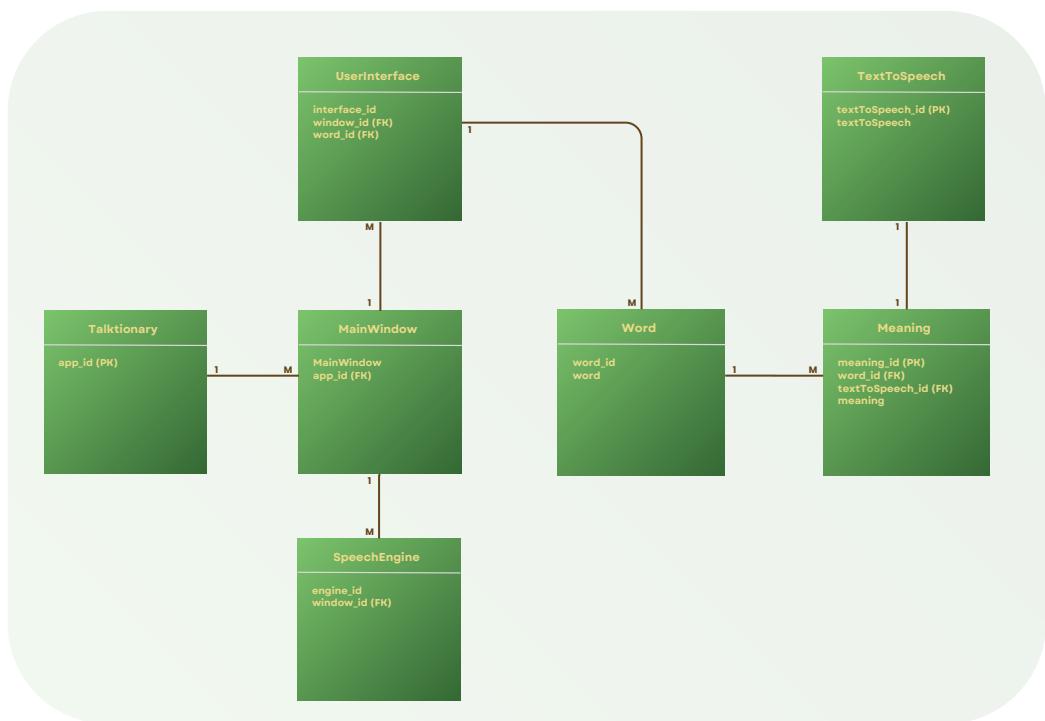


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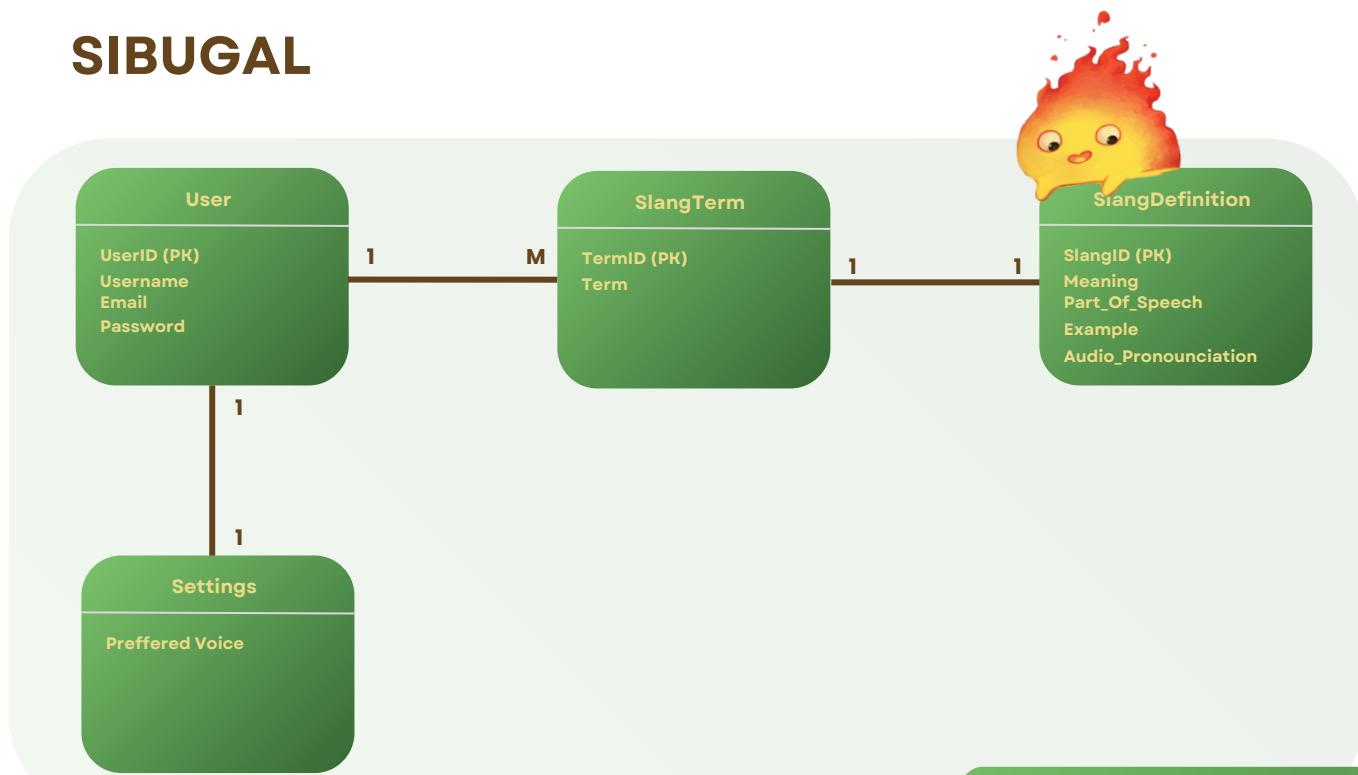


E. Entity Relationship Diagrams

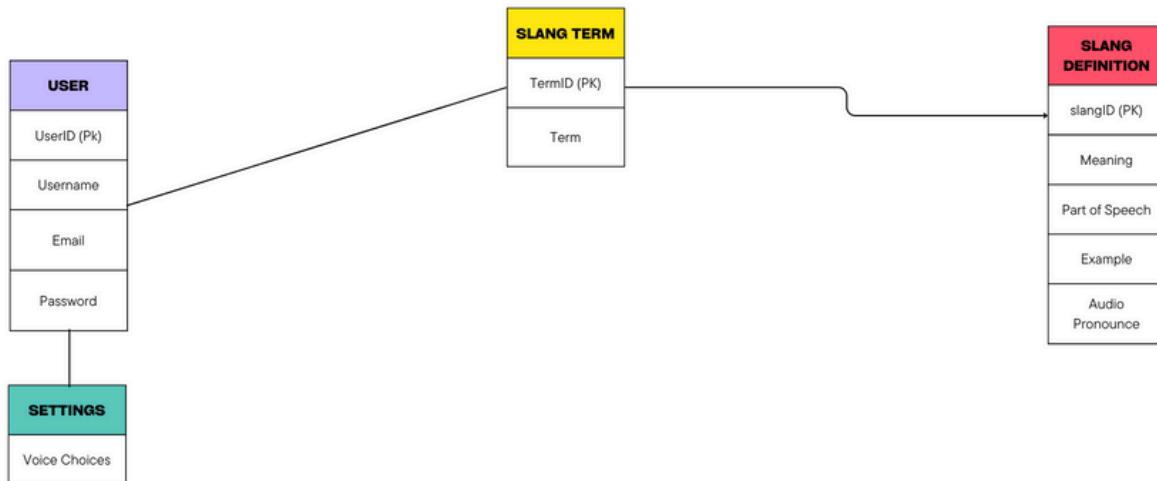
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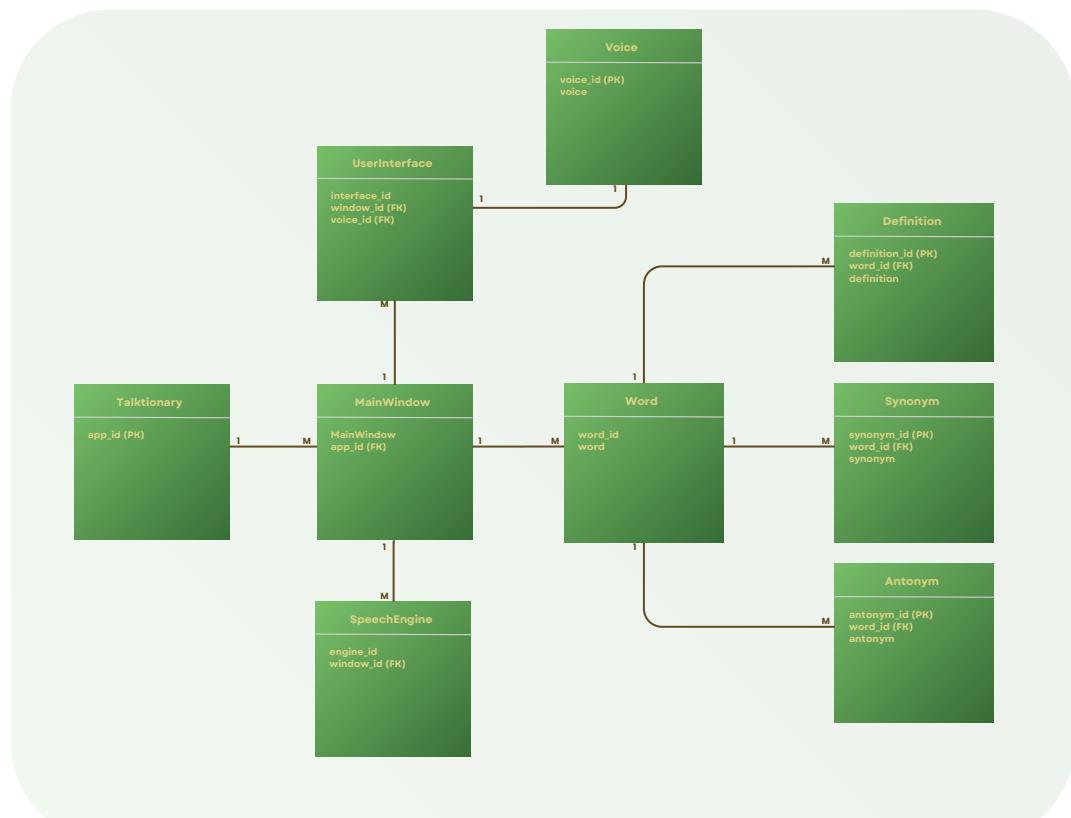
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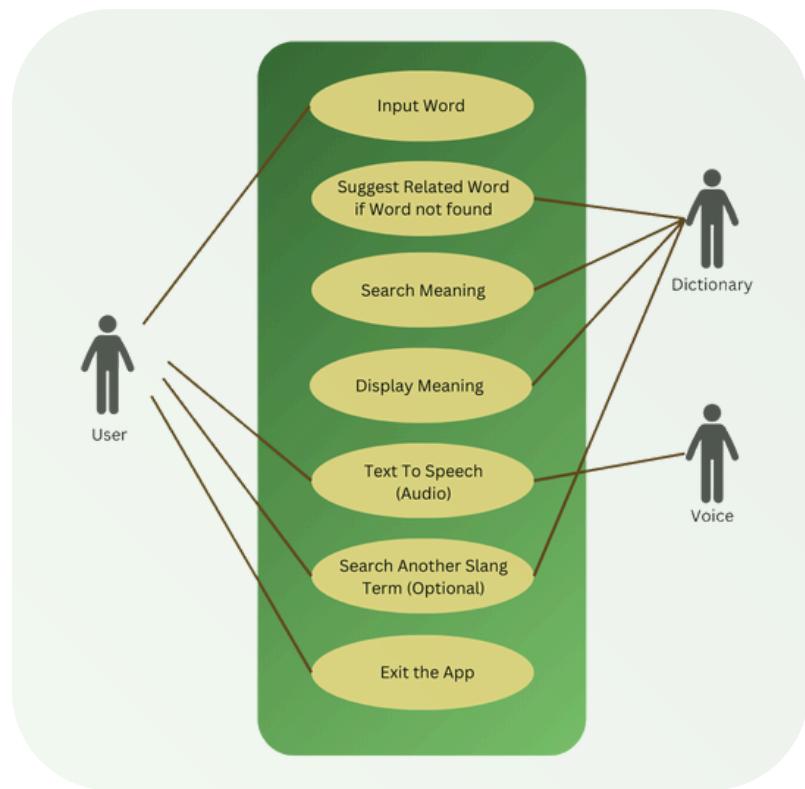


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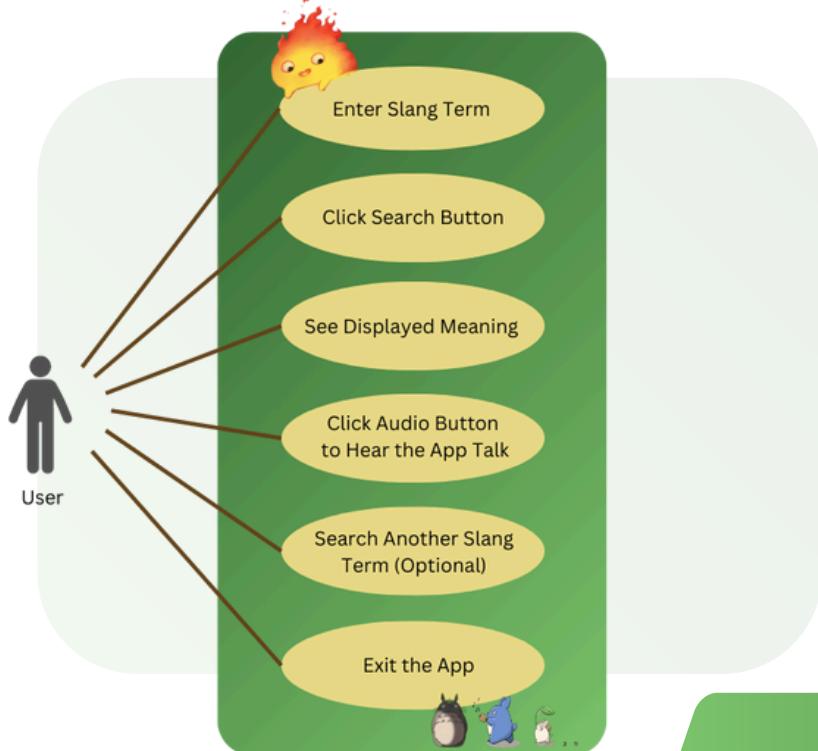


F. Use Case Diagrams

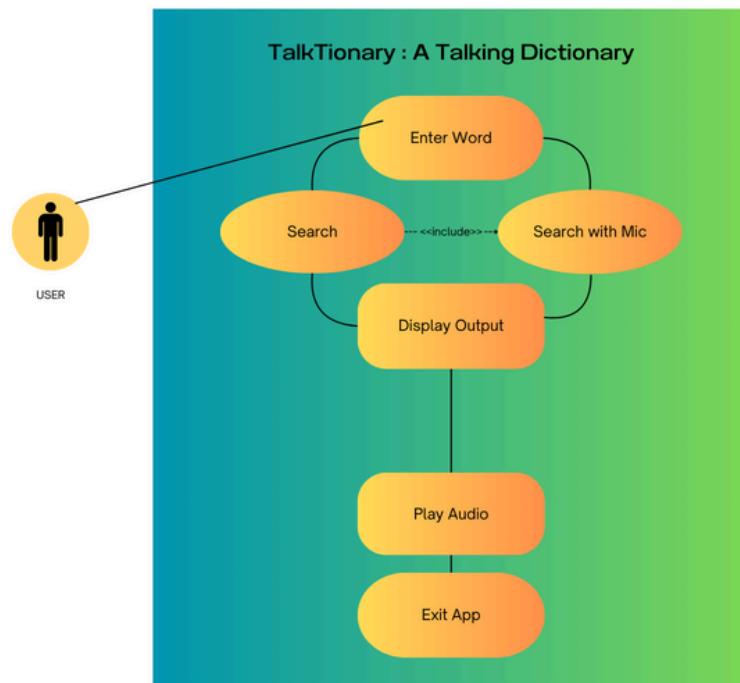
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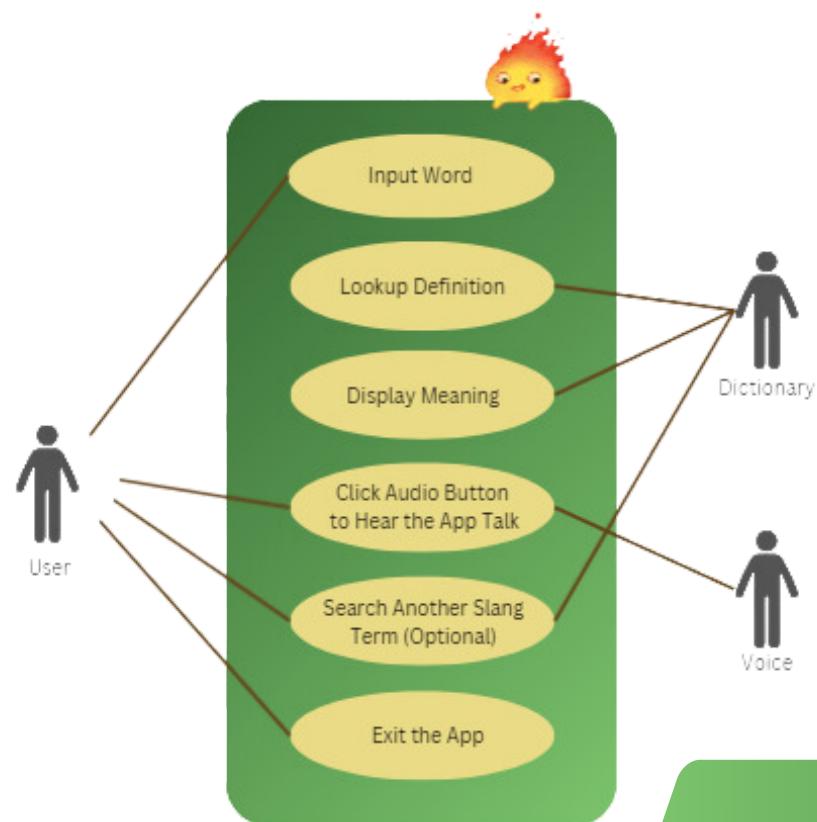
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7. GLOSSARY

- **Slang:** Informal language typically used in casual settings or among specific groups, often characterized by unconventional or newly coined words and expressions.
- **User Input:** The action of entering slang terms or queries into the TalkTionary application for lookup.
- **Iterative Development:** A software development approach characterized by incremental improvements and continuous feedback loops, allowing for flexibility and adaptation to evolving user needs.
- **Rapid Application Development (RAD):** A software development model emphasizing quick prototyping, iterative development, and active user involvement to deliver functional software rapidly.
- **Text-to-Speech (TTS) Engine:** Software component that converts text input into spoken audio output, used in TalkTionary to generate high-quality pronunciations of slang terms.
- **Machine Learning (ML):** A technology that enables TalkTionary to improve its accuracy and relevance over time by analyzing user interactions, feedback, and data patterns.
- **Customization Options:** Features that allow users to personalize their experience by selecting preferred voices, language settings, and other display preferences.
- **Scalability:** The capability of the application to accommodate future updates, expansions, increased user load, or additional features without significant performance degradation or architectural constraints.
- **Response Time:** The duration within which the application aims to respond to user queries, typically measured in milliseconds or seconds.

8. CONTRIBUTIONS

The successful completion of this Software Requirements Specification (SRS) document was made possible through collaborative efforts of the members listed below. Each member made a significant impact to sections of the document.

February 29, 2024 - April 12, 2024

FLORES

- Planned and ideated the creation of the software and provided the foundation & design of the document
- Provided insights and ideas and designs throughout the drafting.
- Developed, Designed, & Tested the Software
- Optimized the entire document (proofread & correcting errors)

Sibugal

- Co-authored the ideation of the software
- Handled the diagrams effectively & proficiently
- Successfully created the CPM chart & Gantt chart
- Optimized the entire document (proofread & correcting errors)

Siron

- Co-authored the ideation of the software
- Fine-tuned the document & risk assessment sheets
- Optimized the entire document (proofread & correcting errors)

Talplacido

- Assisted in brainstorming of the software creation
- Provided significant impact in making the document better
- Led the creation of the software development model

9. Application Link

https://drive.google.com/drive/folders/1HkABN-H2LBkqS-BZiQUADAcjGcMvTKLZ?fbclid=IwZXh0bgNhZW0CMTAAAR15xq0Ye85Vi_MG20NU7AaAJzCDjeJULxMtyUm8_W_3MyPWt0ecb45ofAE_aem_AXzqnR5cvi-nFmF4gdIV9zlOM5fnpSCmQIMfv5smuwbW2GPiz2C_WfUTCNm847c_mFxzdi6xMs07sbLwsrfHm4Pp

Github Link:

https://github.com/CDN2003/Sen02_Midterm/tree/master?fbclid=IwZXh0bgNhZW0CMTAAAR21EAegbVUmDG0RUDdIQK-XIGzuCzUDl0GnnPK3J86eivaDw8vYUqQP1ZI_aem_AXyRCxF4x_nbMTI4ubdeQXzs2s0rhZphMi0KoonJQkxBTQ2LZVZnB0MB0MGEepk1Ls19GuZTebI0J8bS1c5ld5_W