



Living Lexicon

Project Overview

Problem: Do you ever come across an unfamiliar word, look up its definition, and then forget it when it comes up again? What if you could create a custom dictionary—a way to store and track the words that keep cropping up across your life, work, and hobbies?

Solution: Living Lexicon helps you stay on top of your vocabulary learning and dynamically expand your personal lexicon. While standard dictionary apps stop at definitions, this app helps users save words, track their usage, and revisit them through flashcards and history—like having a personal vocabulary notebook.

What is Living Lexicon?

An app that makes discovering, saving, and reviewing words a simple and natural task. Key features:

- A “Search” page to define words quickly.
- A “My Dictionary” page to explore searched words, including:
 - + Three display options:
 - List view — see words and definitions side by side.
 - Compressed view — scan through words in plain columns.
 - Flash cards view — tap on words to flip cards and reveal definitions.
 - + Six sorting options:
 - Alphabetical (A → Z, Z → A) — organize words like a standard dictionary.
 - Date-based (oldest → newest, newest → oldest) — follow search history chronologically.
 - Frequency-based (least → most, most → least) — prioritize words based on how often they have been searched.

Who is it for?

- Readers who look up words often and want to remember them.
- Writers keeping track of striking and/or unfamiliar words.
- Language learners building vocabulary in context.
- Students studying for exams or building glossaries.

App Demo

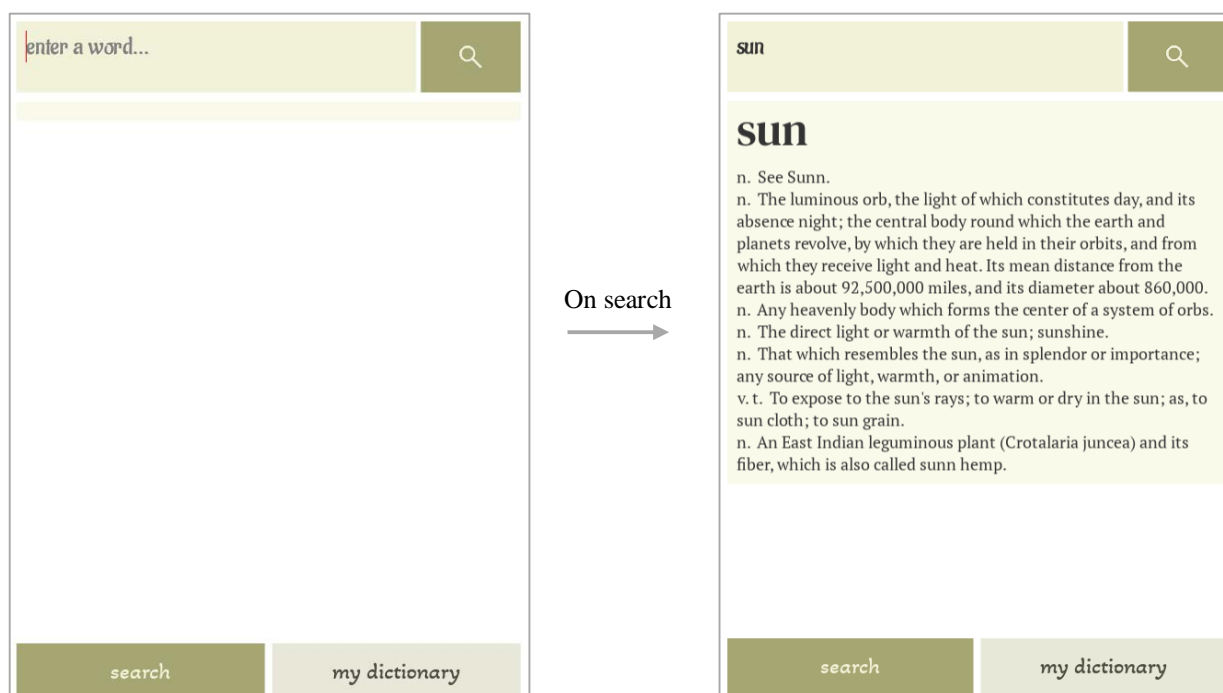
The Basic Form prototype for Living Lexicon was developed for Android devices using the following technologies:

- Python (Kivy framework)
- SQLite for local database management
- Web scraping (BeautifulSoup and Requests libraries) to retrieve definitions

A demo of the app's functionalities is as follows.

1. Search words

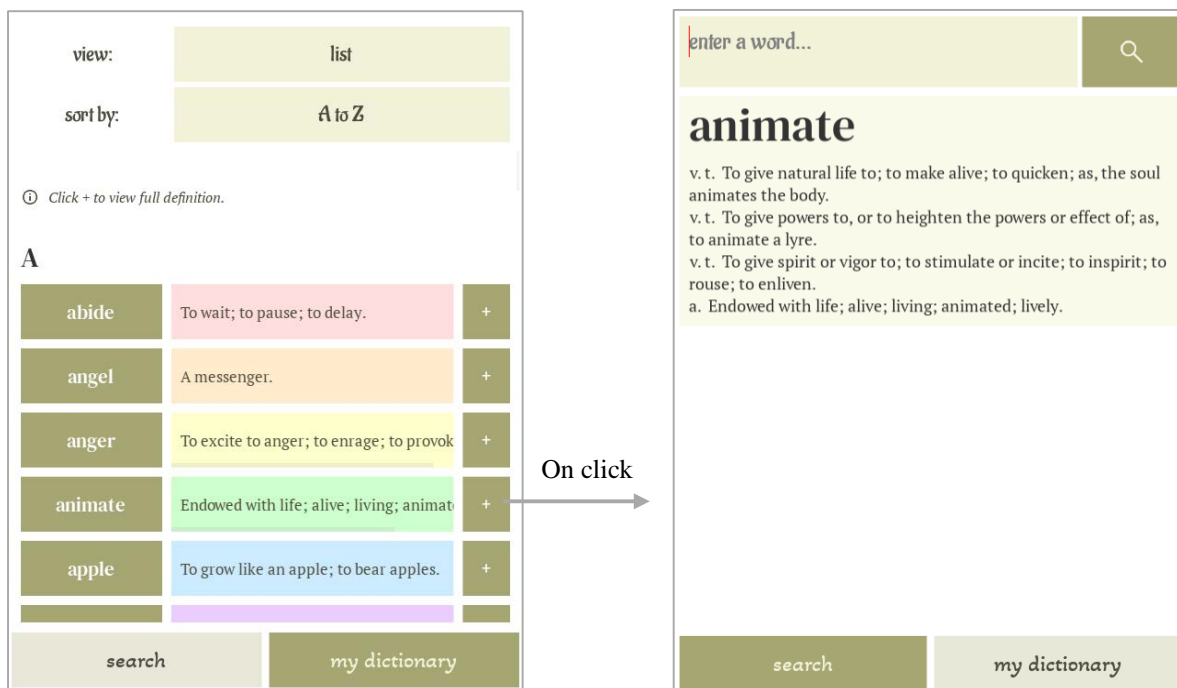
- Enter a word on the search screen to fetch definitions and parts of speech from the web.
 - Press the button with the search icon or hit enter.
- The searched word and its definitions are automatically saved to a local database.
 - If the word had been searched previously, definitions are fetched from the local database rather than scraped from the web.



2. Review words

- Switch to “My Dictionary” to view all searched words.
- Choose from three view modes:
 - List View
 - Word and shortest definition displayed side-by-side

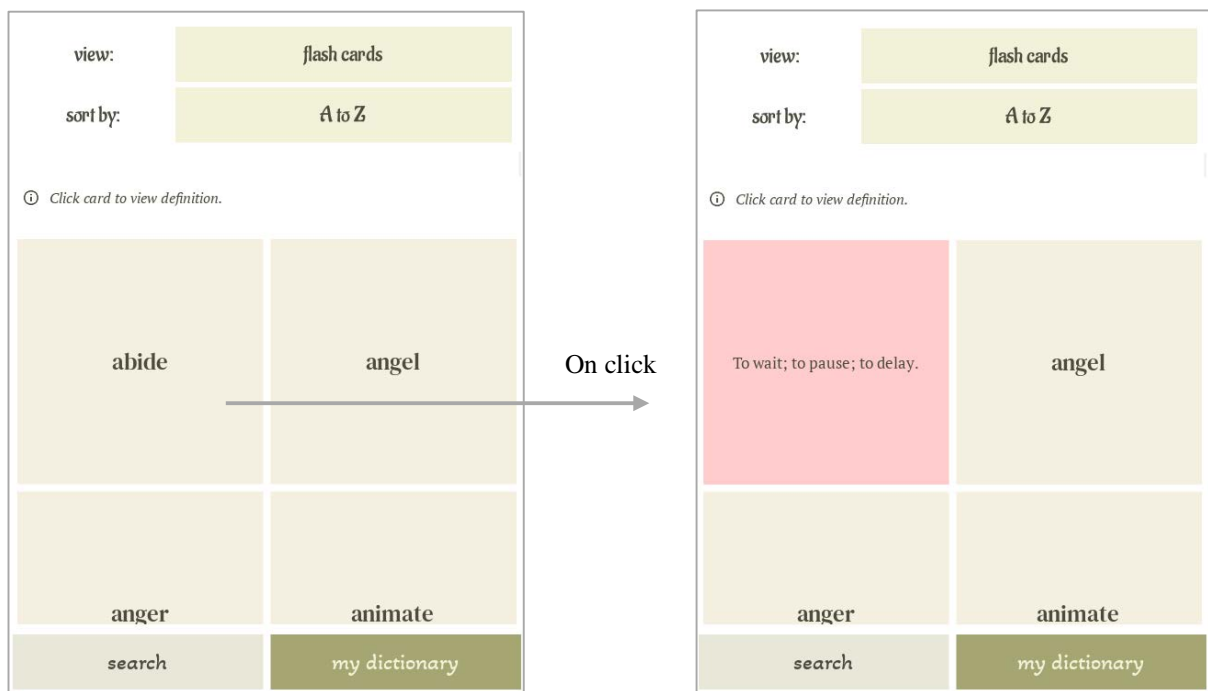
- Scroll definition horizontally
- Press ‘+’ button beside definition to switch to search screen and view all the definitions of that word



- Compressed View – Simple word grid to scan through

view:	compressed	
sort by:	A to Z	
abide	angel	anger
animate	apple	ascend
bombard	boot	case
cheese	chirp	compress
corrupt	cross	cry
diction	draw	earth
end	enrich	enter
search	my dictionary	

- Flashcard View – Review words by tapping on a card to reveal its shortest definition



- Choose from six sorting modes:
 - Alphabetical (A→Z, Z→A)

view:	list		
sort by:	A to Z		
① Click + to view full definition.			
A			
abide	To wait; to pause; to delay.	+	
angel	A messenger.	+	
anger	To excite to anger; to enrage; to provok	+	
animate	Endowed with life; alive; living; animat	+	
apple	To grow like an apple; to bear apples.	+	
search	my dictionary		

view:	list		
sort by:	Z to A		
 Click + to view full definition.			
Z			
zap	to bomb with an atomic bomb.	+	
Y			
young	Having little experience; inexperienced	+	
yellow	A yellow pigment.	+	
W			
work	Break; twist.	+	
search		my dictionary	

- By Search Date (newest/oldest)

view:

list

sort by:

date (oldest to newest)

Click + to view full definition.

December 17, 2024

apple	To grow like an apple; to bear apples.	+
update	To inform (a person) of the most recent	+
umbrella	The umbrellalike disk, or swimming bel	+
taunt	Very high or tall; as, a ship with taunt n	+
trouble	Troubled; dark; gloomy.	+

search

my dictionary

view:

list

sort by:

date (newest to oldest)

Click + to view full definition.

April 10, 2025

sun	The direct light or warmth of the sun; s	+
moon	To expose to the rays of the moon.	+

March 14, 2025

work	Break; twist.	+
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March 13, 2025

woman	A female attendant or servant.	+
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search

my dictionary

- By Search Frequency (most/least often searched) – Frequency appears as a numerical label to the left of the word.

view:

list

sort by:

frequency (least to most)

Click + to view full definition.

1	abide	To wait; to pause; to delay.	+
1	angel	A messenger.	+
1	ascend	To move upward; to mount; to go up	+
1	boot	Booty; spoil.	+
1	chirp	A short, sharp note, as of a bird or in	+
1	corrupt	To waste, spoil, or consume; to mak	+

search

my dictionary

view:

list

sort by:

frequency (most to least)

Click + to view full definition.

9	umbrella	The umbrellalike disk, or swimming	+
5	update	To inform (a person) of the most rec	+
3	apple	To grow like an apple; to bear apple	+
2	anger	To excite to anger; to enrage; to pro	+
2	animate	Endowed with life; alive; living; ani	+
2	bombard	A bombardment.	+

search

my dictionary

- Default mode is list view with A→Z sorting
- Switching back to search and then back to dictionary retains the previous sort/view settings

Credits: Definitions provided by the GNU Collaborative International Dictionary of English.

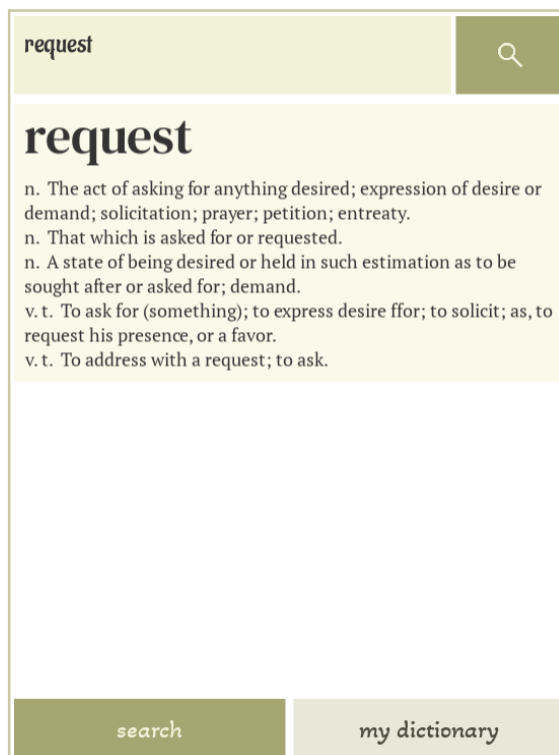
Future Plans

What's next for Living Lexicon?

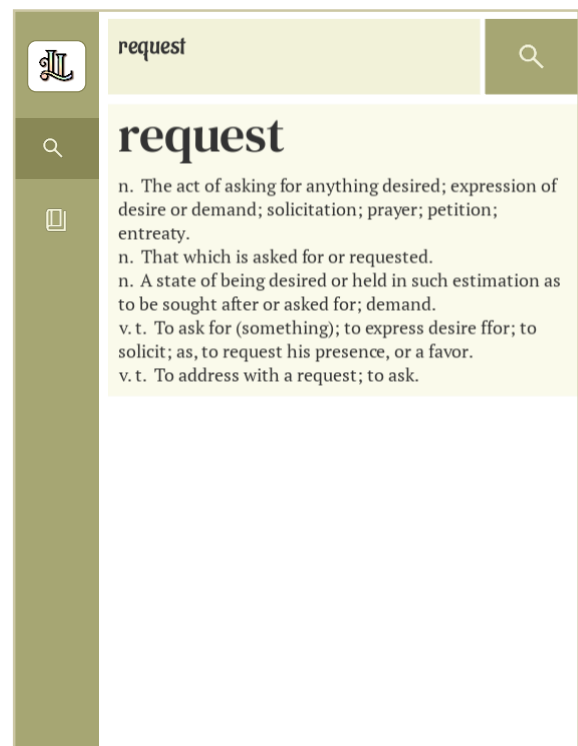
The Basic Form prototype lays the foundation for an interactive dictionary experience. Future versions may refine and expand the app in these key areas:

1. Core expansion: **personalized vocabulary lists**

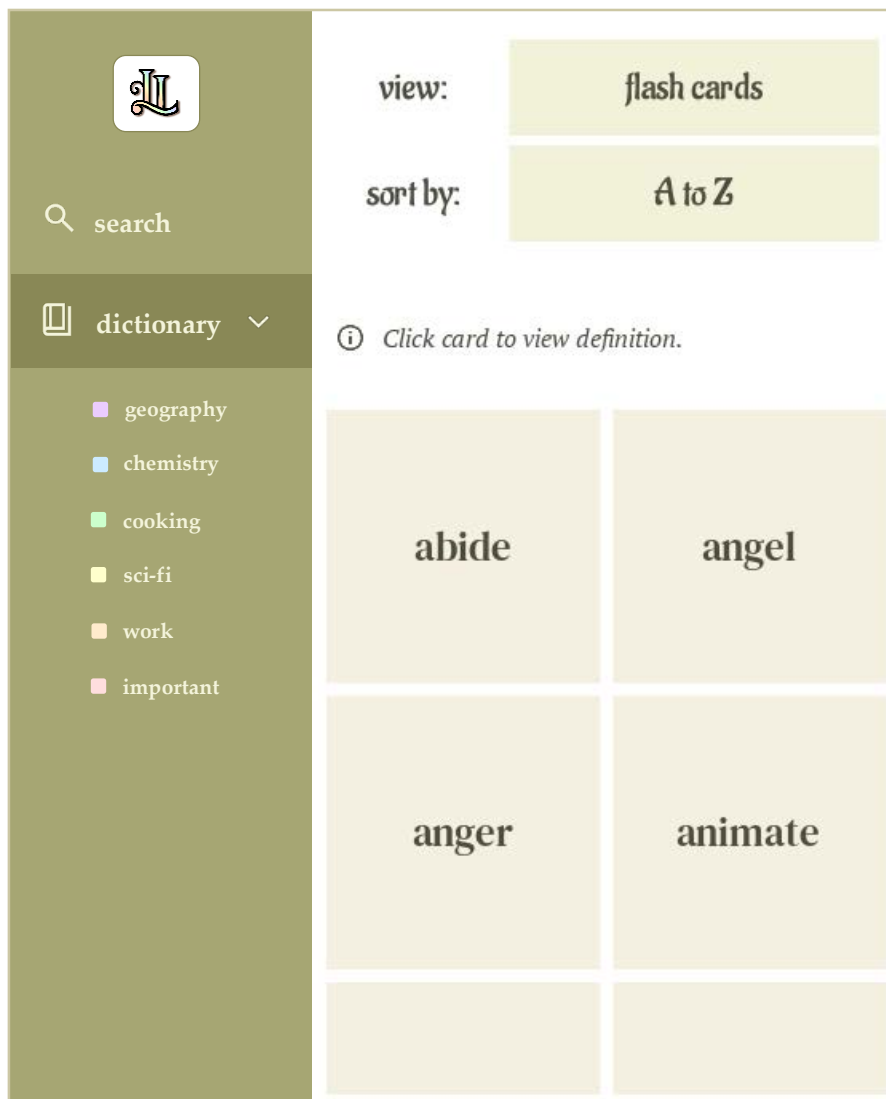
- Organize saved words into categories or “lessons” related to work, school, interests, media titles, etc. (e.g., Chemistry, Geography, Cooking)
- Drag and drop words into different lists
- Visual indicators showing which words belong to which categories
- Custom order lessons and words within them
- Quick-add option to save searches directly to a chosen list



A) Current UI



B) Mockup: Updated UI with sidebar to replace bottom buttons



C) Mockup: Sidebar expands/collapses based on navigation. Double-tap to expand sidebar, and under “dictionary” tab all categories are visible

2. Enhanced visuals

- List view: Collapsible sections (e.g., hide/show words under each letter)
- Flashcard view:
 - Horizontal flip animation
 - “Flip all” option
 - Lined paper design on definition side
 - Swipe sideways to preview parts of definition

3. Improved learning experience

- Quickly generate review lists for recently added words (e.g., past day, week, month, or five most recent words)

- Create randomized word lists with a set number of words
- Move mastered words into an “already learned” category to de-clutter active lists
- Toggle on/off whether searched words are automatically committed to My Dictionary
- Sort lists by shuffling them
- Flexible definition navigation:
 - In list view, scroll up and down to cycle through multiple definitions or expand to view all
 - In flashcard view, swipe through multiple definitions for a word or set a preferred one to display

4. **Expanded functionality**

- Export/copy/print dictionary as a list
- Search within saved words
- Example sentences for each definition (sourced from integrated dictionaries, dynamic web retrieval, or manual user input)
- Expanded entries: Support for phrases, idioms, and expressions
- Word management: Delete words individually or in bulk

5. **Account system and sharing features**

- User login: Create accounts to sync words across devices
- Community learning: Allow users to share specialized word lists—e.g., a teacher sharing curated lists with students—based on subjects, interests, or classes

6. **Advanced features** for long-term expansion

- Aesthetic options: Themes, dark mode
- Integrations: Save words directly from eBooks, web articles, and apps
- Multilingual support: Define English words in the user’s chosen language and allow switching between language modes
- Voice features: Word pronunciation playback and voice search
- Statistics and insights: Visual graphs showing vocabulary growth, category usage, search trends, and learning streaks
- AI-powered enhancements:
 - AI-generated example sentences
 - Word predictions while typing
 - Category detection and tagging — Suggest categories for newly added words and automatically organize words by topic
 - Smart word suggestions — Recommend related words to add to categories