Lexis User Guide:

Important Notes

Before using Lexis, keep these key points in mind:

- Commands are case-insensitive: START, start, and Start all work
- Always use <u>start</u> before playing: You must start a game session before using word or guess
- Quotation marks are optional: Use quotes only when values contain spaces (e.g., "Red Delicious")
- File type auto-detection: Lexis automatically detects whether your file is letters, hints, or categories mode
- Mode indicator: The prompt shows current mode and loaded file: [Play] [myfile] >>>
- File location: All word banks are stored in the WordBanks/ directory

Getting Started

Your First Game (5 Minutes)

Step 1: Launch the interpreter

```
PS C:\Users\Gerald Santiago\Desktop\Lexis> py repl.py
Welcome to Lexis DSL Interpreter!
Type 'help' for available commands, 'quit' to exit.

[Play] >>> []
```

Step 2: Switch to edit mode to create a word bank

```
[Play] >>> edit
Switched to edit mode. Type 'help' for edit commands.
[Edit] >>> █
```

Step 3: Create your first word bank

```
[Edit] >>> create myfirstgame.txt
Created 'myfirstgame.txt' in letters mode (default).
[Edit] [myfirstgame.txt] >>> []
```

Step 4: Add some words

```
[Edit] [myfirstgame.txt] >>> add cat
Saved to 'myfirstgame.txt'
[Edit] [myfirstgame.txt] >>> add dog
Saved to 'myfirstgame.txt'
[Edit] [myfirstgame.txt] >>> add bird
Saved to 'myfirstgame.txt'
```

Step 5: View your words

```
[Edit] [myfirstgame.txt] >>> list
cat
dog
bird
[Edit] [myfirstgame.txt] >>> done
Exiting edit mode, back to play mode.
[Play] [myfirstgame.txt] >>> start
Game started in LETTERS mode. Use 'word' or 'word <word>' to choose a secret word.
[Play] [myfirstgame.txt] >>> word
Secret word has been set. Use 'guess <word>' to start guessing.
```

Step 6: Return to play mode

```
[Edit] [myfirstgame.txt] >>> list
cat
dog
bird
[Edit] [myfirstgame.txt] >>> done
Exiting edit mode, back to play mode.
[Play] [myfirstgame.txt] >>> start
Game started in LETTERS mode. Use 'word' or 'word <word>' to choose a secret word.
[Play] [myfirstgame.txt] >>> word
Secret word has been set. Use 'guess <word>' to start guessing.
```

Step 7: Start the game

```
[Edit] [myfirstgame.txt] >>> list
cat
dog
bird
[Edit] [myfirstgame.txt] >>> done
Exiting edit mode, back to play mode.
[Play] [myfirstgame.txt] >>> start
Game started in LETTERS mode. Use 'word' or 'word <word>' to choose a secret word.
[Play] [myfirstgame.txt] >>> word
Secret word has been set. Use 'guess <word>' to start guessing.
```

Step 8: Select a secret word (randomly)

```
[Edit] [myfirstgame.txt] >>> list
cat
dog
bird
[Edit] [myfirstgame.txt] >>> done
Exiting edit mode, back to play mode.
[Play] [myfirstgame.txt] >>> start
Game started in LETTERS mode. Use 'word' or 'word <word>' to choose a secret word.
[Play] [myfirstgame.txt] >>> word
Secret word has been set. Use 'guess <word>' to start guessing.
```

Step 9: Make a guess

```
[Play] [myfirstgame.txt] >>> guess cat
⬜⬜⬜
Guesses left: 5
[Play] [myfirstgame.txt] >>> guess dog
🟧⬜⬜
Guesses left: 4
[Play] [myfirstgame.txt] >>> guess bird
🟩🟩🟩🟩
🎉 You guessed it!
```

Understanding Game Modes

Mode Comparison Table

Mode	Description	Feedback Type	Best For
Letters	Letter-by-letter word guessing (like Wordle)	🟩 🟧 ⬜ per letter	Word games, vocabulary
Hints	Progressive clues revealed after each wrong guess	Text correctness messages + hints	Trivia, knowledge games
Categories	Multi-attribute comparison across categories	☑ / ✖ per category	Comparison, deduction games

Letters Mode Feedback

After each guess in letters mode, you'll see emoji feedback:

- 🟩 Green Square: Letter is correct and in the correct position
- 🟧 Yellow Square: Letter exists in the word but in wrong position
- ⬜ Gray Square: Letter does not exist in the word

Example:

Secret word: "APPLE"

Your guess: "APPLY"

Feedback: 🟩 🟩 🟩 🟩 🟧

        A P P L Y

- A, P, P, L are all correct (🟩)
- Y exists but wrong position (🟧)

Important Note on Duplicate Letters: The feedback system properly handles duplicate letters. If the secret word has only one 'P' but you guess two 'P's, only one will be marked as correct.

Hints Mode Feedback

In hints mode:

- First hint shows immediately when you select a word
- Each incorrect guess reveals the next hint
- Correct guess shows any remaining hints

Feedback Messages:

- ☑ Correct! The word was 'WordName'. - You guessed correctly
- ✖ Incorrect guess. - Wrong guess, next hint revealed

Categories Mode Feedback

In categories mode, each guess is compared across all defined categories:

- ☑ With value: Category matches (e.g., color: ☑ (red))
- ✖ With value: Category differs (e.g., type: ✖ (tree))

Example:

Categories: type | color | size

Secret: rose | flower | red | medium

Guess: oak | tree | brown | large

Output:

type: ✖ (tree)

color: ✖ (brown)

size: ✖ (large)

Creating Word Banks

Letters Mode (Simple Word Lists)

Purpose: Basic word guessing with letter-by-letter feedback

How to Create:

[Edit] >>> create simple_words

Created 'simple_words' in letters mode (default).

[Edit] [simple_words] >>> add hello

Saved to 'simple_words'

[Edit] [simple_words] >>> add world

Saved to 'simple_words'

[Edit] [simple_words] >>> add apple

Saved to 'simple_words'

[Edit] [simple_words] >>> list

hello

world

apple

[Edit] [simple_words] >>> done

Exiting edit mode, back to play mode.

File Format (in WordBanks/simple_words):

hello

world

apple

Gameplay Example:

[Play] >>> file simple_words

Loaded file 'simple_words' (letters mode, 3 entries)

[Play] [simple_words] >>> start

Game started in LETTERS mode. Use 'word' or 'word <word>' to choose a secret word.

[Play] [simple_words] >>> word hello

Secret word has been set. Use 'guess <word>' to start guessing.

[Play] [simple_words] >>> guess world

■ □ ■ ■ □

Guesses left: 5

Hints Mode (Progressive Clues)

Purpose: Word guessing with hints revealed after each incorrect guess

How to Create:

[Edit] >>> create movies
Created 'movies' in letters mode (default).

[Edit] [movies] >>> add Titanic | Set on a ship | Directed by James Cameron | Jack and Rose
Saved to 'movies'

[Edit] [movies] >>> add Frozen | Ice powers | Let it go | Disney princess
Saved to 'movies'

[Edit] [movies] >>> list
Titanic | Set on a ship | Directed by James Cameron | Jack and Rose
Frozen | Ice powers | Let it go | Disney princess

[Edit] [movies] >>> done

File Format (in WordBanks/movies):

Titanic | Set on a ship | Directed by James Cameron | Jack and Rose
Frozen | Ice powers | Let it go | Disney princess

Gameplay Example:

[Play] >>> file movies
Loaded file 'movies' (hints mode, 2 entries)

[Play] [movies] >>> start
Game started in HINTS mode. Use 'word' or 'word <word>' to select a secret word.

[Play] [movies] >>> word

Secret word has been set. Use 'guess <word>' to start guessing.

Hint: Set on a ship

[Play] [movies] >>> guess Frozen

✖ Incorrect guess.

Hint: Directed by James Cameron

Guesses left: 5

[Play] [movies] >>> guess Titanic

☑ Correct! The word was 'Titanic'.

Remaining hints: Jack and Rose

Note: The first hint is shown when you select the word. Each incorrect guess reveals the next hint in sequence.

Categories Mode (Multi-Attribute Comparison)

Purpose: Guess based on matching attributes across multiple categories

How to Create:

[Edit] >>> create flowers
Created 'flowers' in letters mode (default).

[Edit] [flowers] >>> categories type | color | season
Saved to 'flowers'

[Edit] [flowers] >>> add rose | perennial | red | summer
Saved to 'flowers'

[Edit] [flowers] >>> add tulip | bulb | yellow | spring
Saved to 'flowers'

[Edit] [flowers] >>> add daisy | perennial | white | summer

Saved to 'flowers'

[Edit] [flowers] >>> list
word | type | color | season

----

rose | perennial | red | summer

tulip | bulb | yellow | spring

daisy | perennial | white | summer

[Edit] [flowers] >>> done

File Format (in WordBanks/flowers):

word | type | color | season

rose | perennial | red | summer

tulip | bulb | yellow | spring

daisy | perennial | white | summer

Important:

- First line MUST start with word | followed by category names
- All subsequent lines must have the same number of values
- Use categories command before adding words

Gameplay Example:

[Play] >>> file flowers

Loaded file 'flowers' (categories mode, 3 entries)

[Play] [flowers] >>> start

Game started in CATEGORIES mode. Use 'word' or 'word <word>' to select a secret word.

[Play] [flowers] >>> word rose

Secret word has been set. Use 'guess <word>' to start guessing.

[Play] [flowers] >>> guess tulip

type: ✖ (bulb)

color: ✘ (yellow)

season: ✘ (spring)

Guesses left: 5

[Play] [flowers] >>> guess daisy

type: ☑ (perennial)

color: ✘ (white)

season: ☑ (summer)

Guesses left: 4

[Play] [flowers] >>> guess rose

type: ☑ (perennial)

color: ☑ (red)

season: ☑ (summer)

🎉 You guessed it!

Playing Games

Loading a Word Bank

Before you can play, you must load a word bank:

[Play] >>> file mywordbank
Loaded file 'mywordbank' (letters mode, 25 entries)

If the file doesn't exist:

[Play] >>> file nonexistent
Error: file 'nonexistent' not found

Tip: You can load files without the .txt extension if they exist.

Starting a Game Session

After loading a file, start a game session:

[Play] [mywordbank] >>> start
Game started in LETTERS mode. Use 'word' or 'word <word>' to choose a secret word.

Important: You MUST use start before selecting a word or guessing.

Selecting a Secret Word

Random Selection:

[Play] [mywordbank] >>> word
Secret word has been set. Use 'guess <word>' to start guessing.

Specific Word:

[Play] [mywordbank] >>> word elephant
Secret word has been set. Use 'guess <word>' to start guessing.

If the word doesn't exist in the bank:

[Play] [mywordbank] >>> word xyz
Error: Word 'xyz' not in bank.

Making Guesses

Submit your guess:

[Play] [mywordbank] >>> guess tiger

🟧 ⬜ 🟩 ⬜ ⬜

Guesses left: 5

Rules:

- Guess must be a word from the current word bank
- Each guess decrements your remaining guesses
- Game ends when you guess correctly or run out of guesses

Setting Maximum Guesses

Change the guess limit (default is 6):

[Play] >>> max_guesses 10
Max guesses set to 10

Note: This resets your remaining guesses to the new value.

Viewing Available Words

See all words in the current bank:

[Play] [mywordbank] >>> words
Words: lion, tiger, bear, elephant, zebra

This is helpful when you forget what words are available.

Revealing the Secret Word

For testing or debugging:

[Play] [mywordbank] >>> show
The secret word is: elephant

Warning: This reveals the answer and is intended for development/testing purposes only.

Managing Word Banks

Viewing All Entries

Use the list command to see all entries in your word bank:

Letters Mode:

[Edit] [simple] >>> list
cat
dog
bird
fish

Hints Mode:

[Edit] [movies] >>> list
Titanic | ship | James Cameron
Frozen | ice powers | Disney

Categories Mode:

[Edit] [flowers] >>> list
word | type | color | season
----
rose | perennial | red | summer

tulip | bulb | yellow | spring

Editing an Entry

Entries are numbered starting from 1. Use the index to edit:

[Edit] [flowers] >>> list
word | type | color | season

----

rose | perennial | red | summer
tulip | bulb | yellow | spring

[Edit] [flowers] >>> edit 2 | tulip | bulb | pink | spring
Saved to 'flowers'

[Edit] [flowers] >>> list
word | type | color | season

----

rose | perennial | red | summer
tulip | bulb | pink | spring

Note: You must provide all values when editing (word + all categories).

Deleting an Entry

Remove entries by index:

[Edit] [flowers] >>> delete 1
Deleted word 'rose'
Saved to 'flowers'

Deleting a Word Bank File

Remove an entire word bank:

[Edit] >>> deletefile oldgame
Deleted file 'oldgame'

Warning: This permanently deletes the file and cannot be undone.

Complete Command Reference

Play Mode Commands

Command	Arguments	Example	Description
file	<filename>	file fruits	Load word bank for gameplay
start	none	start	Begin game session (required before playing)
word	[word]	word or word apple	Select secret word (random or specific)
guess	<word>	guess banana	Submit a guess
show	none	show	Reveal secret word (for testing)
words	none	words	List all words in bank
max_guesses	<number>	max_guesses 10	Set guess limit (default: 6)
edit	none	edit	Switch to edit mode
help	none	help	Show all play commands
quit	none	quit	Exit the interpreter

Edit Mode Commands

Command	Arguments	Example	Description

create	<filename>	create animals	Create new word bank file
file	<filename>	file animals	Load existing word bank
deletefile	<filename>	deletefile old	Delete word bank file
categories	cat1 | cat2 | ...	categories type | color	Define category headers
add	word [| values]	add rose | red	Add word (with optional values)
list	none	list	Display all entries
edit	index | values	edit 1 | new | values	Modify entry by index
delete	<index>	delete 3	Remove entry by index
done	none	done	Return to play mode
help	none	help	Show all edit commands

Tips and Best Practices

For Letters Mode

- Consistent word length: Keep words similar in length (5-7 letters ideal)
- Avoid extremes: Very short (< 4) or very long (> 8) words can be frustrating
- Test your bank: Play through it yourself before sharing
- Common words: Use familiar vocabulary unless making an expert-level game

For Hints Mode

- Order hints strategically: Start broad, end specific
  - ✖ Bad: "Jack and Rose" → "Set on a ship" → "1912"
  - ☑ Good: "Set on a ship" → "1912" → "Jack and Rose"
- Optimal hint count: 2-4 hints per word works best

- First hint importance: Should narrow possibilities significantly
- Last hint: Should make the answer obvious if still unknown

For Categories Mode

- Category count: 3-5 categories provide a good balance
  - Too few (1-2): Too easy
  - Too many (6+): Overwhelming
- Value consistency: Use consistent formatting
  - All lowercase OR all titlecase
  - Consistent terminology (don't mix "big"/"large")
- Strategic overlap: Include some words sharing categories
  - Makes guessing require strategy, not just luck
- Clear categories: Use unambiguous category names

General Tips

- Descriptive filenames: Use clear names like countries_capitals, not game1
- Regular backups: Word banks are just text files - copy them!
- Start small: Test with 10-20 words before building huge banks
- Development workflow: Use show command when testing
- Mode switching: Use edit and done to modify banks while playing
- File organization: Keep related word banks grouped (fruits, animals, etc.)

Common Workflows

Creating a Quiz Game (Hints Mode)

[Edit] >>> create history_quiz

[Edit] [history_quiz] >>> add Constantinople | Ancient city | Now Istanbul | Byzantine capital

[Edit] [history_quiz] >>> add Colosseum | Roman amphitheater | Gladiator battles | Still stands today

[Edit] [history_quiz] >>> add GreatWall | Longest structure | China | Visible from space myth

[Edit] [history_quiz] >>> done

[Play] [history_quiz] >>> start

[Play] [history_quiz] >>> word

[Play] [history_quiz] >>> guess Colosseum

Building a Learning Tool (Categories Mode)

[Edit] >>> create spanish_vocab

[Edit] [spanish_vocab] >>> categories english | spanish | type | difficulty

[Edit] [spanish_vocab] >>> add hello | hola | greeting | easy

[Edit] [spanish_vocab] >>> add goodbye | adios | farewell | easy

[Edit] [spanish_vocab] >>> add beautiful | hermoso | adjective | medium

[Edit] [spanish_vocab] >>> done

Making a Classic Word Game (Letters Mode)

[Edit] >>> create five_letters

[Edit] [five_letters] >>> add apple

[Edit] [five_letters] >>> add crane

[Edit] [five_letters] >>> add table

[Edit] [five_letters] >>> add storm

[Edit] [five_letters] >>> done

[Play] [five_letters] >>> max_guesses 6

[Play] [five_letters] >>> start

[Play] [five_letters] >>> word

Troubleshooting Common Issues

"Error: No word bank loaded"

Problem: Trying to start or play without loading a file
Solution: Use file <filename> first

"Error: No secret word chosen"

Problem: Trying to guess without selecting a word
Solution: Use word or word <specific> after start

"Error: Word 'xyz' not in bank"

Problem: Guessing a word that doesn't exist in the current word bank
Solution: Use words command to see available words

"Error: Expected X values, got Y"

Problem: Adding wrong number of values in categories mode
Solution: Match the number of categories you defined

Categories not working correctly

Problem: File loads as hints mode instead of categories
Solution: Ensure first line starts with word | (lowercase)

File not found

Problem: Cannot load file
Solution:

- Check file exists in WordBanks/ directory
- Verify spelling and extension

- Create the file first with create command