



# Wordle Python

A Desktop Implementation of the Classic Word-Guessing Game

# Project Overview

Wordle Python brings the addictive word-guessing experience to your desktop. Built entirely with Python and Tkinter, this game challenges players to deduce a mystery 5-letter word within six attempts.

Each guess receives instant visual feedback through a sophisticated color-coded tile system, making the gameplay intuitive and engaging. The clean interface and responsive design ensure an authentic Wordle experience right on your computer.





## How to Play



### The Challenge

Guess the hidden **5-letter word** in just **6 attempts**. Each guess must be a valid English word.



### Green Tiles

Letter is **correct** and in the **right position**. You've nailed it!



### Yellow Tiles



### Grey Tiles

# Keyboard Controls



## Type Your Guess

Use either the on-screen Wordle keyboard or your physical keyboard to enter letters.

## Submit with ENTER

Press **ENTER** to submit your completed 5-letter guess and receive instant feedback.

## Delete with BACKSPACE

Made a mistake? Hit **BACKSPACE** to remove the last letter and make corrections.

# Key Features

<b>Intuitive Interface</b>	<b>Interactive Keyboard</b>	<b>Built-in Rules</b>	<b>Quick Reset</b>
Clean, user-friendly UI that makes gameplay smooth and provides visual feedback, enjoyable from the first guess.	On-screen Wordle keyboard showing which letters you've already used.	Helpful rules popup ensures beginners understand the game mechanics instantly.	New Game button lets you start fresh with a different word whenever you're ready for another challenge.
<b>Smart Feedback System</b>		<b>Six Chances</b>	
Advanced tile coloring with position numbers on yellow tiles guides you toward the solution efficiently.		Traditional 6-attempt limit maintains the perfect balance between challenge and achievability.	

# Technology Stack



## Python 3

Core programming language providing robust logic and efficient game state management for seamless gameplay.



## Tkinter GUI Framework

Native Python library delivering cross-platform desktop interface with responsive design and smooth user interactions.



## Requests Library

HTTP library enabling real-time fetching of comprehensive 5-letter word lists from online sources for endless variety.

# Implementation Highlights



## Word Selection Engine

Fetches and filters 5-letter words from online database, randomly selecting each game's mystery word to ensure variety.



## Intelligent Feedback Logic

Sophisticated algorithm evaluates each guess, applying precise color-coding rules and calculating correct position numbers for yellow tiles.



## Dual Input System

Seamlessly handles both on-screen clicks and physical keyboard events, providing flexible input options for all players.



## Game State Manager

Tracks current row, column position, remaining attempts, and game outcome to maintain consistent gameplay flow.

# Challenges & Solutions



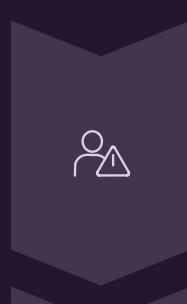
## Challenge: Yellow Tile Positioning

Displaying correct position numbers on yellow tiles required careful coordinate calculations and dynamic text placement.



## Solution: Smart Overlay System

Implemented overlay labels with automatic positioning that adapts to tile size, ensuring numbers always appear clearly in the top-right corner.



## Challenge: State Management

Coordinating keyboard input, current position tracking, and game flow across multiple components proved complex.



## Solution: Centralized Controller

Created unified game controller class managing all state



# Future Enhancements

- **Animated Tile Flips**

Add smooth flip animations when revealing tile colors, mimicking the original web version's satisfying visual feedback.

- **Theme Customization**

Implement dark mode and light mode options, plus customizable color schemes for personalized gameplay experience.

- **Statistics Dashboard**

Track win streaks, guess distribution, and success rates with visual charts showing your Wordle mastery over time.

- **Word Definitions**

Display popup with definition and pronunciation after each



# Project Success

## 7 Authentic Recreation

Successfully replicated the addictive Wordle experience on desktop with faithful gameplay mechanics and visual design.

## 7 Technical Excellence

Demonstrates proficiency in GUI development, event-driven programming, API integration, and complex game logic implementation.

## 7 Engaging Experience

Delivers an interactive, visually appealing game that's both fun to play and impressive to showcase in your portfolio.

**Wordle Python** proves that classic games can be brilliantly reimagined with modern programming skills and thoughtful design.

