COMP1002 – Advanced Python

- Word Guessing Game-

**Project Groups**

· Fadime Şevval GÜNİ

· Günseli ÇALLI

Responsibilities:

| **Member** | **Responsibility** |
| --- | --- |

Fadime Şevval GÜNİ Game logic, core Python OOP structure

Günseli ÇALLI GUI design with Tkinter, styling, documentation

**Project Title**  
 Word Guessing Game

**Project Objective**This project allows us to play our word guessing game using the Python programming language with a graphical user interface (GUI). The user is presented with a randomly selected word where all the letters are hidden. The player guesses one letter at a time, and if the guess is correct, the letter is revealed on the screen step by step. However, if the player makes 6 wrong guesses, the game is lost.

With this project, our goal is to improve both our Python skills and our ability to design simple user interfaces. The game interacts with the user in a fun way and is easy to learn and play.

**Project Scope**

·The game allows users to guess a randomly selected word one letter at a time.

·The game displays the current status of the word and remaining lives.  
 ·If the player correctly guesses all letters, they win; otherwise, the game ends after 6 wrong attempts.

Technologies & Libraries:

· Python 3.x

· Tkinter for GUI

· random for word selection

· messagebox for notifications

Target Users:

· Beginners who want to improve vocabulary

· Python learners who want to understand OOP and GUI basics

**Methodology**

Python Libraries & Tools:  
  
 · Tkinter: for graphical user interface  
 · random: to choose a word from a list

· messagebox: to display win/lose alertsBasic Flow:· Word is selected randomly   
 · User inputs a letter through the GUI· Game checks letter correctness· Updates word display and lives  
 · Game ends when word is fully guessed or no lives remain

**Expected Outcomes** Final Deliverables:· A fully functional Python GUI application (word\_guess\_game\_gui.py)

· Interactive and colorful interface with live feedback

· README.md and report\_template.md documentation

· ZIP folder ready for GitHub & UZEM submission

**Timeline**

|  |  |  |
| --- | --- | --- |
| **Phase** | **Description** | **Duration** |
| Analysis and Research | Define scope, search word lists, design | 2 days |
| Design | GUI wireframe, class structure design | 1–2 days |
| Coding | Implementation of logic and GUI | 3 days |
| Testing and Debugging | Fixing errors , UI polish , final touches | 2 days |

Estimated Total: 8–9 days

**Resources**

**<https://www.python.org/>**

**<https://www.udemy.com/course/sifirdan-ileri-seviyeye-python/learn/lecture/7585452?start=0#content>**

**[https://youtu.be/upZMNAk8FnA?si=xLyKRwipZRwsNTvF](https://www.udemy.com/course/sifirdan-ileri-seviyeye-python/learn/lecture/7585452?start=0#content)**

**[https://openai.com/](https://www.udemy.com/course/sifirdan-ileri-seviyeye-python/learn/lecture/7585452?start=0#content)**

**[https://youtu.be/AorGCX0SDsc?si=eTNOdMAH0NFD1AAt](https://www.udemy.com/course/sifirdan-ileri-seviyeye-python/learn/lecture/7585452?start=0#content)**

[Advanced Python Programming Course](https://www.udemy.com/course/sifirdan-ileri-seviyeye-python/learn/lecture/7585452?start=0#content)[Gıda ve Tarım University – UZEM Platform](https://online-learning2024-2025.gidatarim.edu.tr" \t "_new)

[https://docs.python.org/3/library/tkinter.html](https://www.udemy.com/course/sifirdan-ileri-seviyeye-python/learn/lecture/7585452?start=0#content)

[Visual Studio Code (VS Code) IDE](https://www.udemy.com/course/sifirdan-ileri-seviyeye-python/learn/lecture/7585452?start=0#content)

**Conclusion**

In this project, we combined the object-oriented features of the Python programming language with GUI development to enhance our technical skills while designing a functional and creative product. We developed a word guessing game using a graphical user interface (GUI) with Tkinter. This game provides a fun and engaging experience for users, and it offered us, as developers, an opportunity to practice Python and learn the fundamentals of GUI design.

Throughout the project, we collaborated as a team, shared responsibilities, and supported each other. We not only strengthened our coding skills but also gained experience in planning, implementing, and testing a complete application. This project allowed us to turn what we learned in theory into practice in a fun and educational way.

In the future, this application can be expanded with more advanced graphical elements, sound effects, or even transformed into a more complex word-based game. Overall, the process was enjoyable for us, and the result reflects both our teamwork and development.