

Year 3 - Games Development – 2022/23 Academic Year

Web Development and Databases

Assignment #2 – Building Word Game 4 with Python 3, Flask, and Jinja2.

Due:	5:00pm, Friday November 4 th , 2023
Worth:	30% of total CA allocation.
Requirement:	To develop a Flask-based webapp which combines a web front-end with sophisticated game logic.

Assignment Description:

Surf over to <https://barryp.pythonanywhere.com/> and learn to play Word Game 4, concentrating on all the functionality implemented by the game.

You are required to build a functionally equivalent version of Word Game 4 hosted on your PC, running Python 3, Flask, and Jinja2. There are two parts to this development activity:

Part A: Implement Word Game 4's game logic in Python 3. You are to create and test the Python 3 code you need to implement the game's logic in a Jupyter Notebook, which is to be called `logic.ipynb`. Your Python 3 code needs to demonstrate the functionality of your code's logic.

Part B: Integrate the game logic from Part A into a Flask webapp, creating your own version of Word Game 4. The developed webapp, to be called `app.py`, must implement all of the functionality of the online version of the game, as well as support an additional URL, which provides this behaviour:

`/top10` – displays the top ten leaderboard (note: you do not need to play the game to use and see the output from this URL).

Your developed system needs to exploit Jinja2 templates, reusing your HTML as much as is practical.

The 30% for this CA is split evenly between Part A and Part B.

How to Submit:

All your materials are to be submitted as a ZIP (via OneDrive) which is to be named so as to clearly identify you as its author using your University ID (e.g., C00123456.zip). Email a link to the ZIP archive on your OneDrive to the paul.barry@setu.ie email address by the due date/time.

It is assumed your submitted ZIP is all your own work, and that there has been no conferring.

When your submission is received, it will be unzipped. The `logic.ipynb` notebook will be executed, top to bottom. I'll then execute the `app.py` webapp via Python/Flask to assess your conformance to the Word Game 4 requirements.