NEA – Code Explanation

**main.py**   
Creates the GUI (through tkinter) and controls every other script apart from Window.py.

**MazeDatabase.py**   
Script for interaction with the maze.db for storing users and completed levels, uses SQL.

**MazeGenerationNew.py**   
Uses Kruskal’s algorithm paired with a generated weight array to create the maze.

**MazeRendererNew.py**  
Used when actually playing a maze, mainly used to implement the Window.py script to correctly draw the maze but also handles collision detection and a check to see if the player has won.

**Window.py**   
Uses tkinter, NumPy and pillow (a fork of PIL (Python Imaging Library)) to create layered editable images on screen. Using tkinter it also handles input, unfortunately the window needs to be clicked on for input to be registered.

Control Scheme:

Arrows/WASD – Movement

Esc – To quit

Pillow is the only non-pre-installed library in my code, hence in needs to be installed. To install pillow, pip (a python package manager) is also required.

To install both, commands

**python3 -m pip install --upgrade pip**

**python3 -m pip install --upgrade Pillow**

must be run in the command line, as specified on the pillow website; (<https://pillow.readthedocs.io/en/stable/installation.html>)