Write a code for running the Dijkstra algorithm.

The attached code contains the function structures and variable declarations with detailed explanations in the comments. Please complete the missing parts of the code inside the **controllers.py** file which contains all the Dijkstra methods. For clarity, the locations where you need to fill in missing code have been highlighted using **# TODO** comments that instruct you on how to complete the function.

You are allowed to modify the code as long as the core functionality is preserved. Feel free to make changes to improve clarity or efficiency.

**An example result of code**

A screenshot of a computer

Description automatically generated