

Program installation

For the program to run pygame must be installed. Other submissions contain file that is in an executable format, however, this did not allow you to download this file.

```
pip install pygame
```

Node Placement

Left click – If you left click a node, depending on what you have selected before a node will be placed. First grid node click will be the start node, second press will be the end node, after that will be obstacle nodes.

Right click – If you right click a node that node will be removed. This can be done for the start, end, and obstacle nodes.

Visualizer Key Binds

Spacebar – The space bar will be used to begin the test. So once the visualizer appears and the nodes are selected you press “space”.

C – Used to clear the grid if you generate and create a map that you do not want press “c” to reset all nodes.

R – Used to generate a random map. The map that will generate will be covered in obstacles once the obstacles have been placed you will need to select a start and end node.

M – Will return you to the main menu.

Pip installation

If pip is not installed, in the command line:

```
py get-pip.py
```