**USER GUIDE FOR SEQUENTIAL SEARCH ALGORITHM VISUALIZATION**

1. There is a status bar at the top of the pane to show information about the step and execution

2. First, you initialize a random array by clicking the button “initialize”

3. Then, you can enter the value you want to find in the input box

4. Next, click “start” button to start the algorithms

5. After the algorithm finish, you can repeat from step 2 to test in another array

**USER GUIDE FOR BINARY SEARCH ALGORITHM VISUALIZATION**

1. There is a status bar at the top of the pane to show information about the step and execution

2. First, you initialize a sorted array by clicking the button “initialize”

3. Then, you can enter the value you want to find in the input box

4. Next, click “start” button to start the algorithms

5. After the algorithm finish, you can repeat from step 2 to test in another array

**USER GUIDE FOR A\* ALGORITHM VISUALIZATION**

1. By default, the start node is fixed at the top-left corner, and the end node is at the bottom-right corner.
2. Click on squares on the grid to add obstacles to the map.
3. When finishing adding, click Play to start running.
4. During the run, you can click Pause to pause the animation and resume by clicking on Play.
5. The f-cost of the each discovered node is displayed.
6. When the search is finished, if there is a path, it will be highlighted by yellow color.
7. You can stop the run by click Stop. When Stop button is clicked, all data of the current running session is deleted, but the map is kept the same.
8. You can reset everything including the map by click Reset button and then create a new map from beginning.