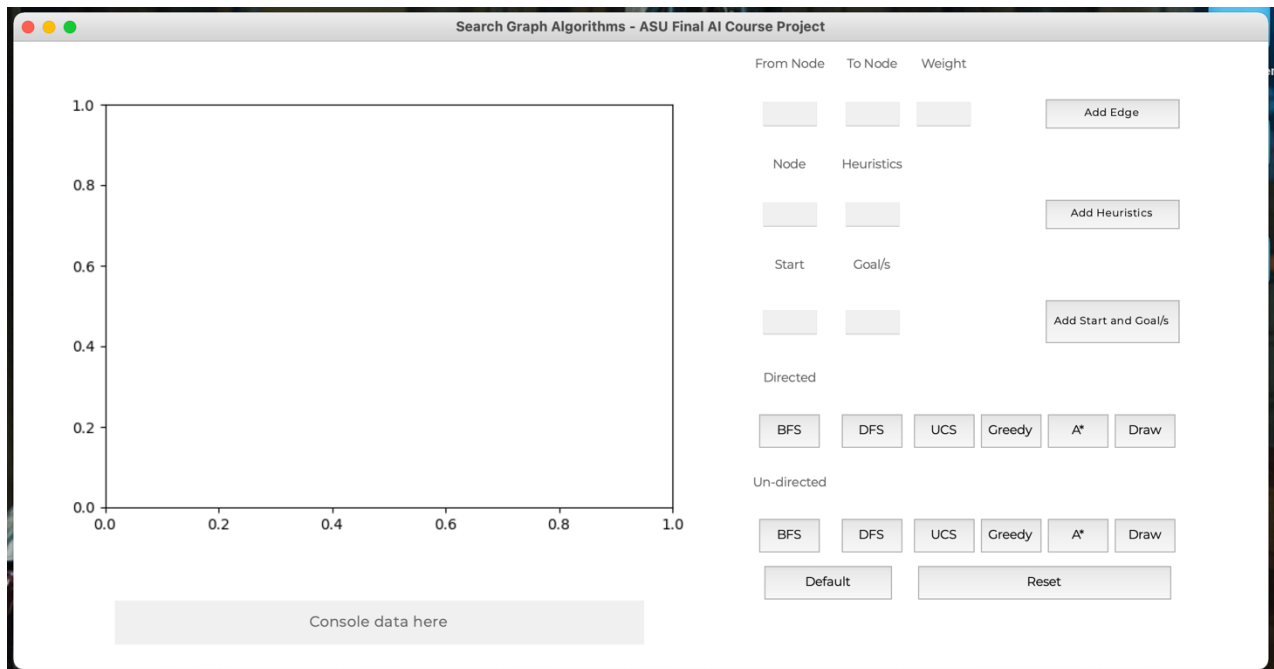


1. Layout Introduction:

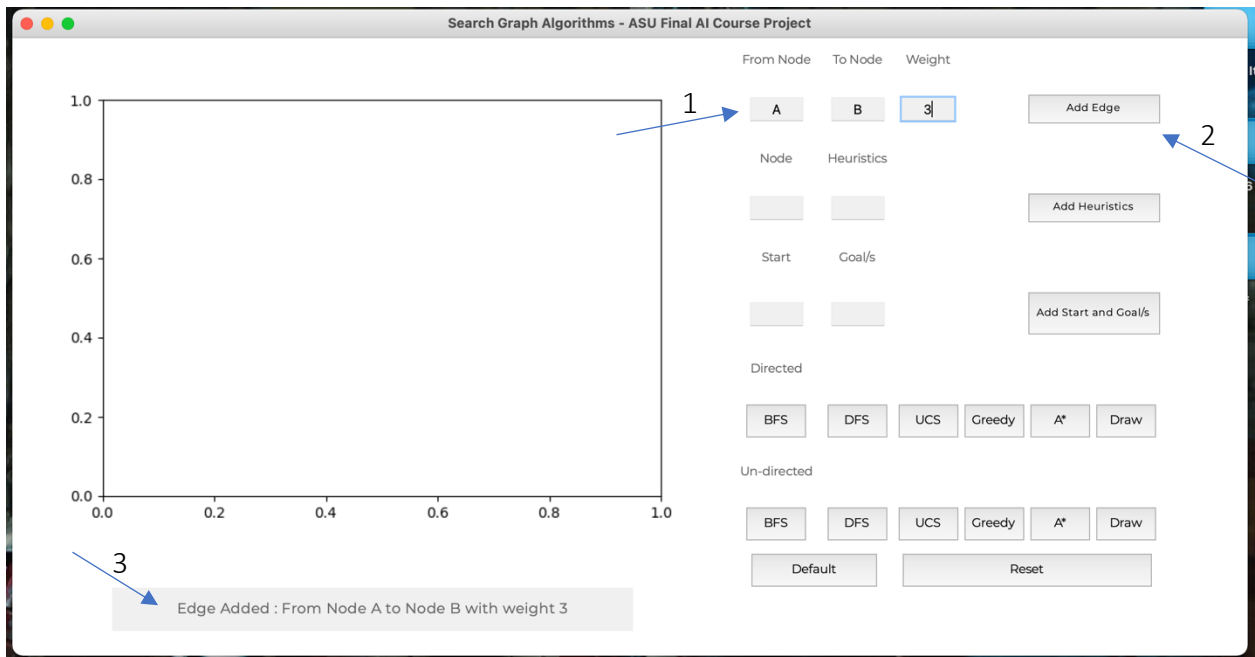
Here is the basic layout of the project implemented, the right side for the graph and visualizations steps to be drawn and a console for input and output updates just under it. And all the way to the left side is the Graph Input section with the search algorithms for both directed and undirected graphs.



2. Graph Input Section:

Note : All inputs should be entered first before performing any search algorithms or drawing in the order specified next to avoid any running complications.

2.1 Adding Edges:

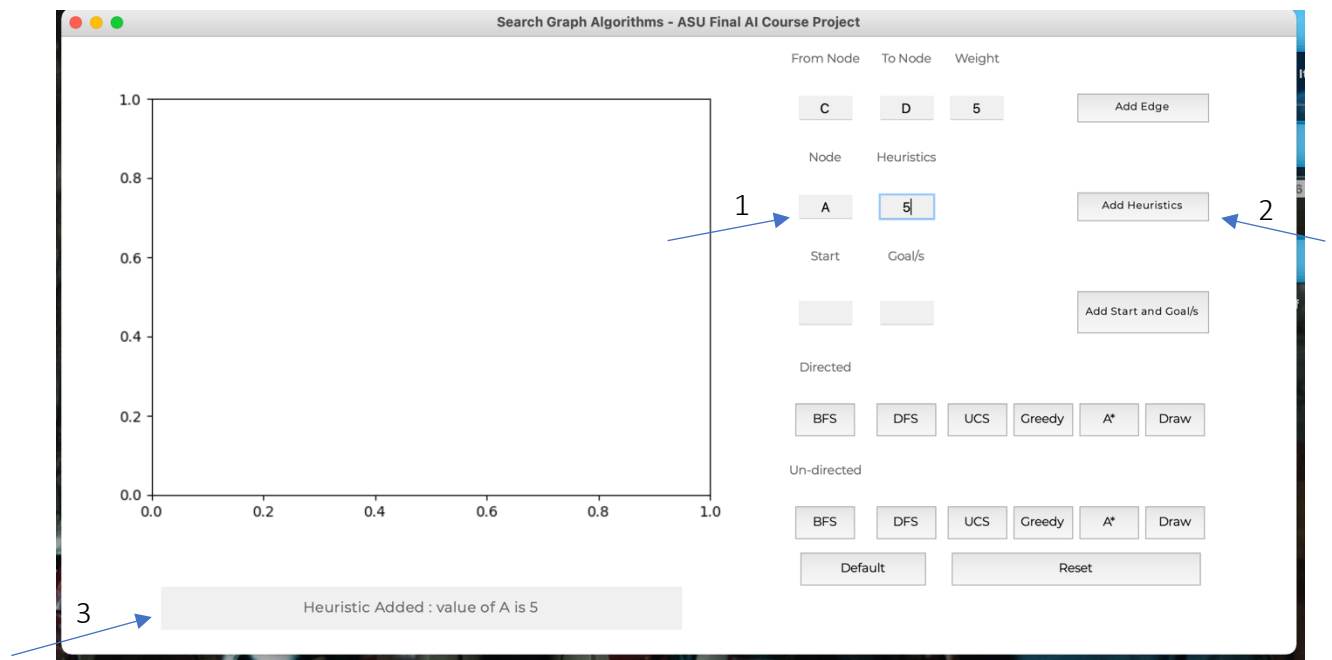


Step #1 : Add from edge node, to edge node and the edge weight in their input fields.

Step #2 : Press add edge button to save these inputs.

Step #3 : Notice in the console data the entered values for feedback.

2.2 Adding Heuristics:

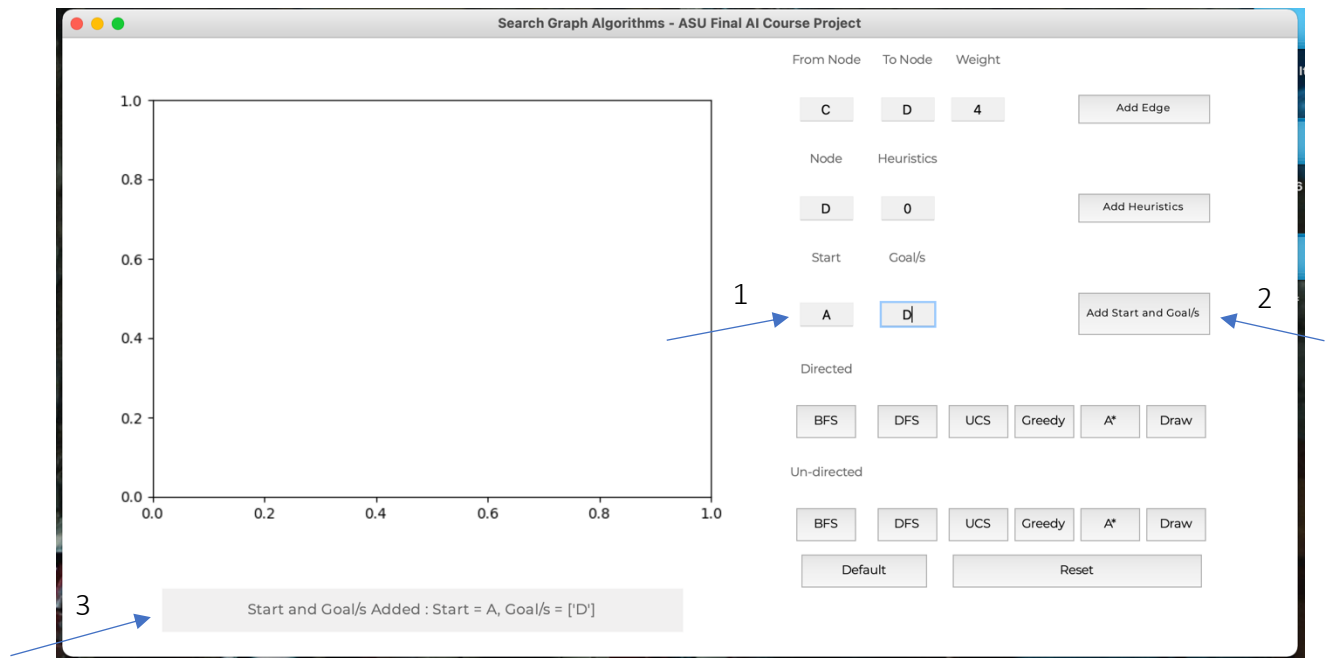


Step #1 : Add node and its corresponding heuristic value in their input fields.

Step #2 : Press add heuristics button to save these inputs.

Step #3 : Notice in the console data the entered values for feedback.

2.3 Add Start and Goal/s Nodes:

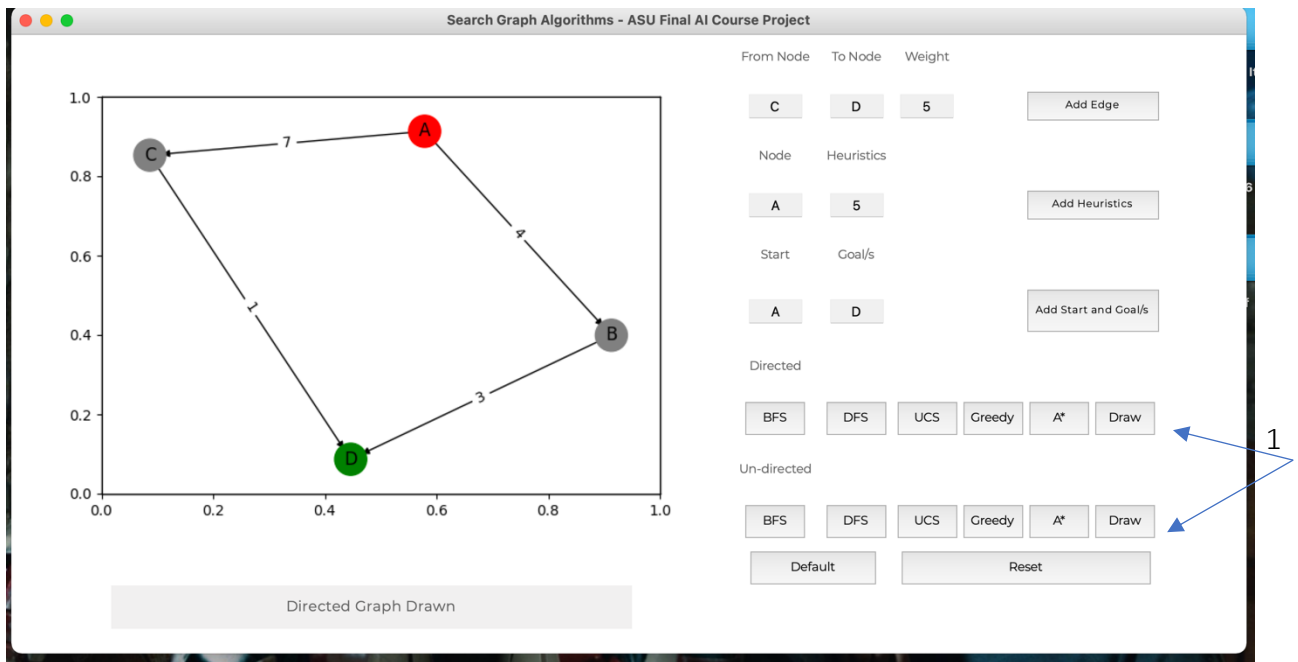


Step #1 : Add a single start node and one or more goal nodes (if more than one goal node is entered separate them with "," ex: G1,G2,G3) in their input fields.

Step #2 : Press add start and goal/s button to save these inputs.

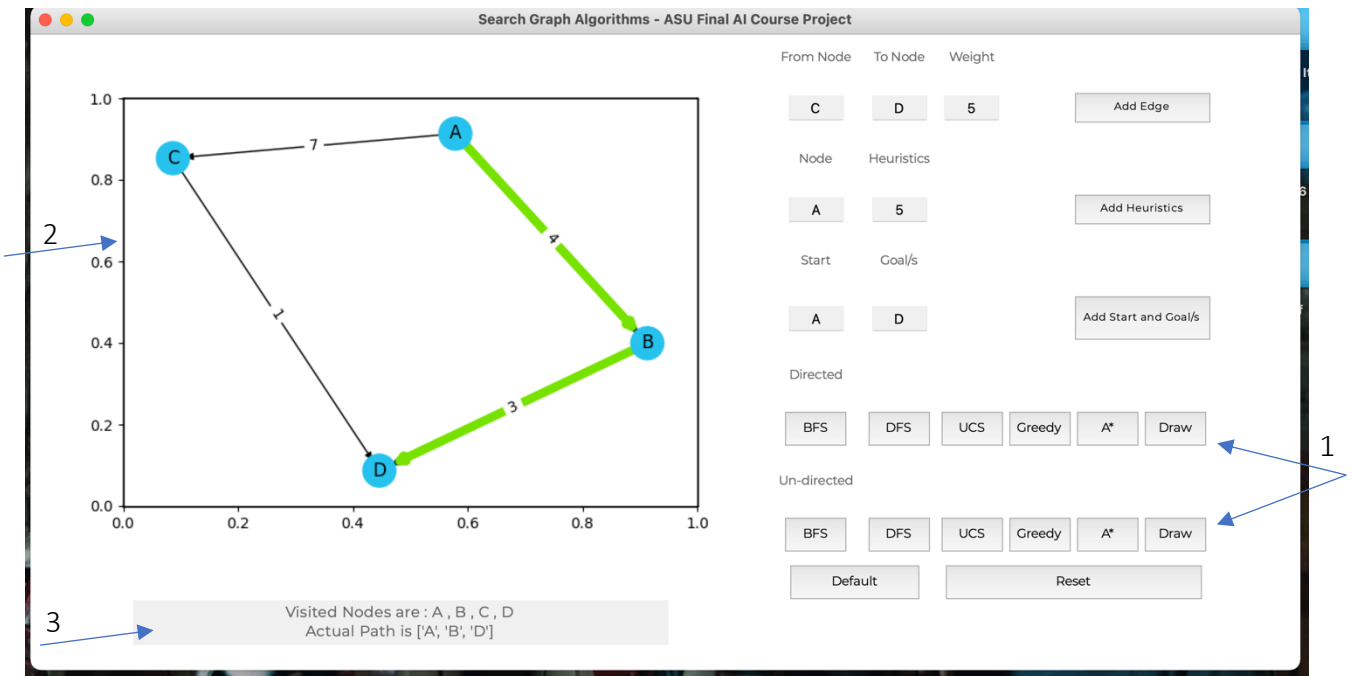
Step #3 : Notice in the console data the entered values for feedback.

2.4 Draw the Graph:



Step #1 : Choose either directed or undirected graph and press the draw button.
 Note : The graph must be drawn before performing any search algorithms.

2.5 Perform Search Algorithms with Visualizations:

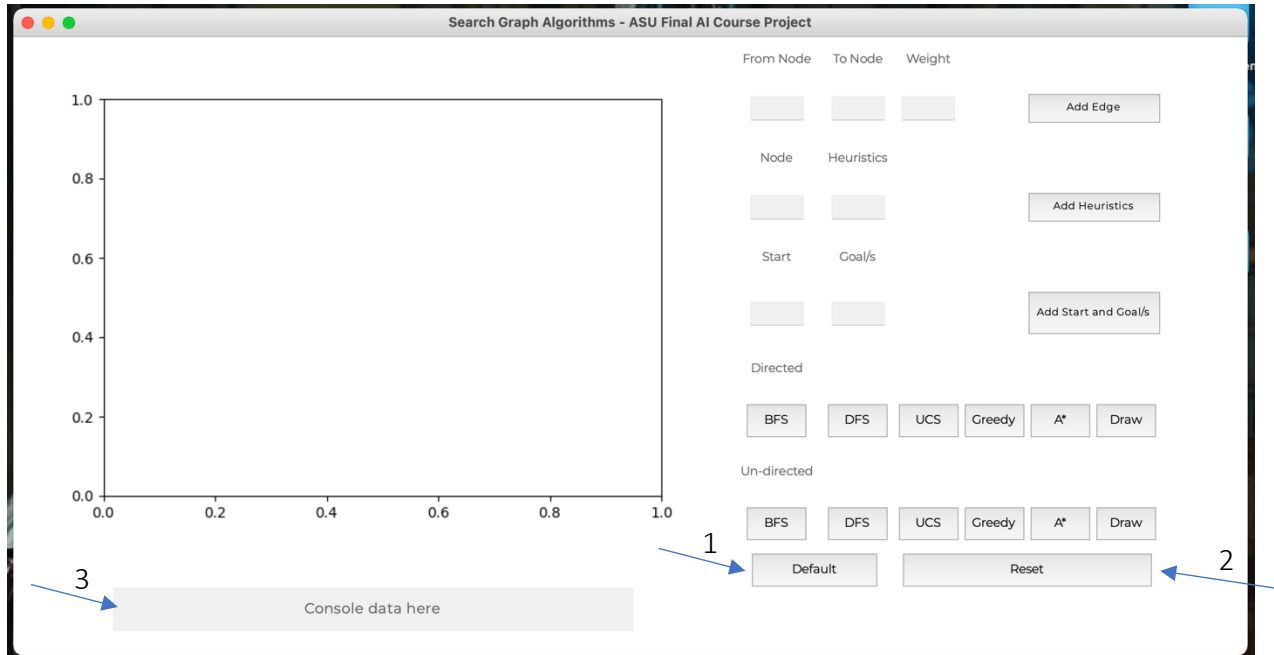


Step #1 : Choose the desired search algorithm from the directed and undirected buttons lists.
 Step #2 : Track step by step search visualization shown in the graph section.

Step #3 : See the console after the algorithms execution for output details.

Note : Visited nodes are animated one by one with the color blue and The path is displayed with the green edges as shown.

2.6 Extras:



Step #1 : You can press default button to automatically inserted hard coded input values for faster tests.

Step #2 : To reset all inputs and re-enter all values, you can press the reset button.

Step #3 : When pressing either buttons a feedback is shown in the console section.