

Building a Graph for A Pathfinding with Waypoints*

We extend our **waypoint** setup by creating a **graph** data structure. The graph will allow us to run the **A*** algorithm—enabling our tank to automatically calculate routes between waypoints. Specifically, we'll create three C# classes:

1. **Edge**: Represents a connection (path) between two nodes.
2. **Node**: Represents a single waypoint, including its position and outgoing edges
3. **Graph**: Manages all nodes and edges, preparing for pathfinding.

Now that you have a **Node**, **Edge**, and **Graph** structure:

Use the waypoint scene, and build a UI, so the tank will drive to a specific palm tree with the A* algorithm.



1. **Populate the Graph**

- In your **WPManager** assign waypoints and links.

2. **Drive the Tank**

- Make a script so you have all the waypoints.
 1. Get the dropdown change event, to get your start and end node for the A* algorithm

- In the update method you have the pathlist from the A* algorithm so you know how to drive. The AI tank can iterate through the pathList nodes, moving from one waypoint to the next.
 1. Write code so the tank drives from startnode to endnode.