Let’s start with a grid.

Each node has a Starting Cost (G cost), End Cost (H cost), and Total cost (F cost = G cost + H cost).

Heuristic must be admissible; it must not be lower than the actual cost.

## Algorithm

Node class priority – lower F cost better, if same then use lower H cost.

PriorityQueue openNodes;

PriorityQueue closedNodes;

Node startingNode;

Node endNode;

Put starting node to openNodes

While openNodes.Count > 0

currentNode = openNodes.Deque()

Add currentNode to closed

if (currentNode is endNode)

Retrace path

Return;

Foreach neighbour

If (neighbour is in closedNodes or not traversable) continue;

Calculate G cost (current node G cost + heuristic)

Calculate H cost (how far from target)

If (neighbour is not in open or new path is shorter)

Set parent to current node

Add node to openNodes;