Path Finding

# Object: PathNode

## Description

Stores a pathfinding path node. Use to construct paths throughout the map using the A\* algorithm. The node keeps track of its position, state, and cost.

## Enums

### NodeState

|  |  |  |
| --- | --- | --- |
| Integer Value | Name | Descritption |
| 1 | OPEN | A node that exist but has not been searched yet or needs to be searched again |
| 2 | CLOSED | A node that has been found and already searched for |
| 3 | RESTRICTED | A node that is restricted |
| 4 | PATH |  |

## Fields

|  |  |  |  |
| --- | --- | --- | --- |
| Accessibility | Type | Name | Descritption |
| Public | Vector2Int | position | Position of the node on the map |
| Public | Float | g\_cost | Distance from starting node |
| Public | Float | h\_cost | Distance from end node |
| Public | NodeState | state | The current state of the node |
| Public | PathNode | previous | The node in the path previous to this one |

## Properties

|  |  |  |  |
| --- | --- | --- | --- |
| Accessibility | Type | Name | Descritption |
| Public Read-only | Float | Total\_Cost | The total cost of the node. (g\_cost + h\_cost) |

## Functions

|  |  |  |  |
| --- | --- | --- | --- |
| Accessibility | Type | Name | Descritption |
| Public | Vector2Int | position | Position of the node on the map |
| Public | Float | g\_cost | Distance from starting node |
| Public | Float | h\_cost | Distance from end node |
| Public | NodeState | state | The current state of the node |
| Public | PathNode | previous | The node in the path previous to this one |