

Forum:[Hack Forums](#)

Thread: [Maze Generator Revamped \[Backtrack Maze Algorithm & A* Pathfinding\]](#)

Barret - February 6, 2018, 7:10 pm

In the past i made a maze generator that wasn't quite the result i always wanted but since i'm doing a lot of path finding projects i started to make another maze generator from the ground up that supports a node framework that makes life easy for path finding code to adapt and implement.

This version performs quite a bit faster and has nodes that have a somewhat richer functions set attached to them.

Setting up

```
Code Dim maze = New Maze.Generator(NodesX, NodesY, Bounds)
Making new mazes
```

```
Code Maze.Randomize()
```

Functions

All Nodes have their own pencils (color, size, style)

All Nodes have an 'Access' field that can be set (Start, End, Solid, Open, etc)

All nodes have fields that can identify them by row, column, index

From each node you can test if the next node is accessible, ie no walls.

```
Code Public Function IsAccessible(target As Node) As Boolean
```

You can also test if a position is within a certain node

```
Code Public Function IsInside(point As Point) As Boolean
```

Fetch a neighbour node from either index or direction (north, south, etc)

```
Code Public Function GetNeighbourAt(direction As Direction) As Node
```

```
Public Function GetNeighbourAt(index As Integer) As Node
```

Fetch all neighbours

```
Code Public Function GetNeighbours() As Node()
```

Test if the node has a neighbour on given parameter

```
Code Public Function HasNeighbourAt(direction As Direction) As Boolean
```

```
Public Function HasNeighbourAt(index As Integer) As Boolean
```

Get the pixel distance between two nodes

```
Code Public Function GetDistance(target As Node) As Double
```

Get the center of a node

```
Code Public ReadOnly Property Center As Point
```

Small example

```
Code Dim start As Node = Me.Maze.Nodes(0, 0)
```

```
If (start.HasNeighbourAt(Direction.East)) Then
    If (start.IsAccessible(start.GetNeighbourAt(Direction.East))) Then
        '//...we can move east
    End If
End If
```

Update: Added a build-in solver, example is included inside the source files

Github: <https://github.com/TheBarret/Maze-Generator-Framework>

have fun!

- B

sh@rp - February 7, 2018, 1:46 am

Hey thank you mate I will generate few one and print them for my children.

You are my idol bro

?

0xDEAD10CC - February 7, 2018, 11:22 pm

This is pretty cool, I remember seeing someone else post a maze generating algorithm here a long while back but I can't remember who it was. :)

Why did you use a scrollbar for the tracker though?

<https://msdn.microsoft.com/en-us/library/system.windows.forms.trackbar%28v=vs.110%29.aspx?f=255&MSPPErr=-2147217396>

HFDone - February 8, 2018, 2:14 am

(Feb 8, 2018 12:22 AM)0xDEAD10CC Wrote: [\[CITE\]](#) This is pretty cool, I remember seeing someone else post a maze generating algorithm here a long while back but I can't remember who it was. :)

Why did you use a scrollbar for the tracker though?

<https://msdn.microsoft.com/en-us/library/system.windows.forms.trackbar%28v=vs.110%29.aspx?f=255&MSPPErr=-2147217396>

op <https://hackforums.net/showthread.php?tid=5546640>

0xDEAD10CC - February 8, 2018, 11:26 am

(Feb 8, 2018 03:14 AM)HFDone Wrote: [\[CITE\]](#) op <https://hackforums.net/showthread.php?tid=5546640>

No I mean back in probably 2011. I've been on this forum a long time.

Barret - February 8, 2018, 11:39 am

Updated the project with an A* solver build-in.

VmX5 - February 10, 2018, 9:05 pm

Woah this looks pretty cool too! Love how it shows the solution instantly when it generates the

maze.