A * PATHFINDING

How to use:

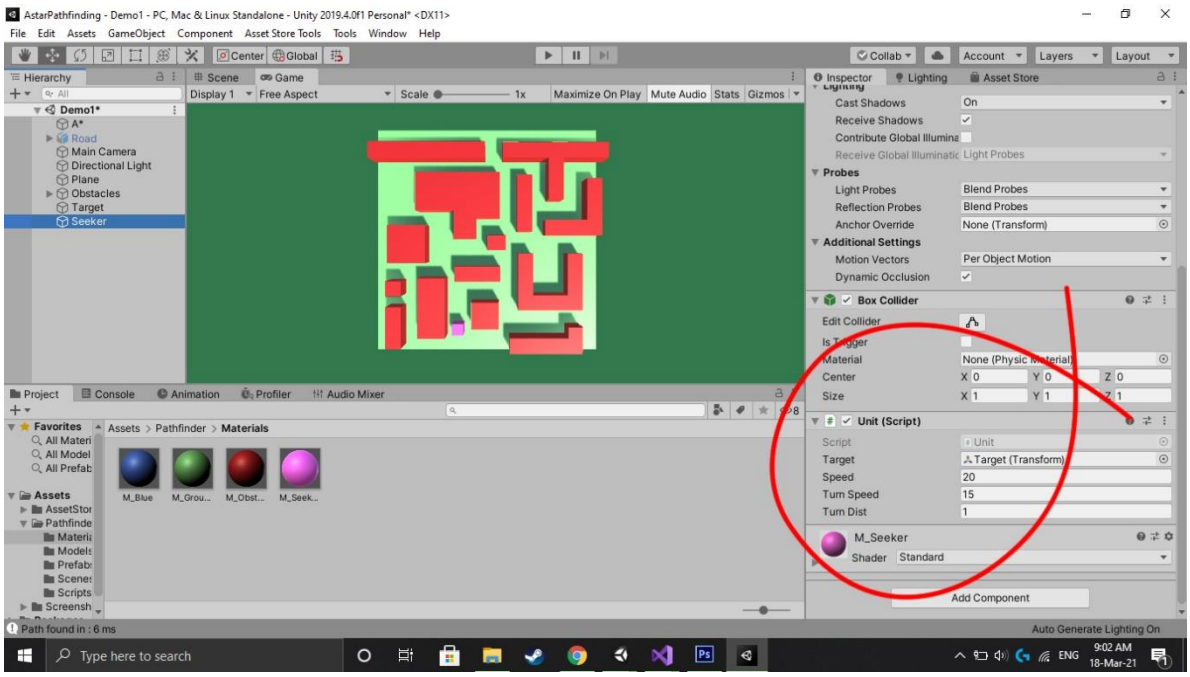
Step 1:

Create a seeker object (it could be a cube, sphere, cylinder or you can import any model of your choice).

Step 2:

Create a target object for the seeker object to find a path to.

Step 3 :



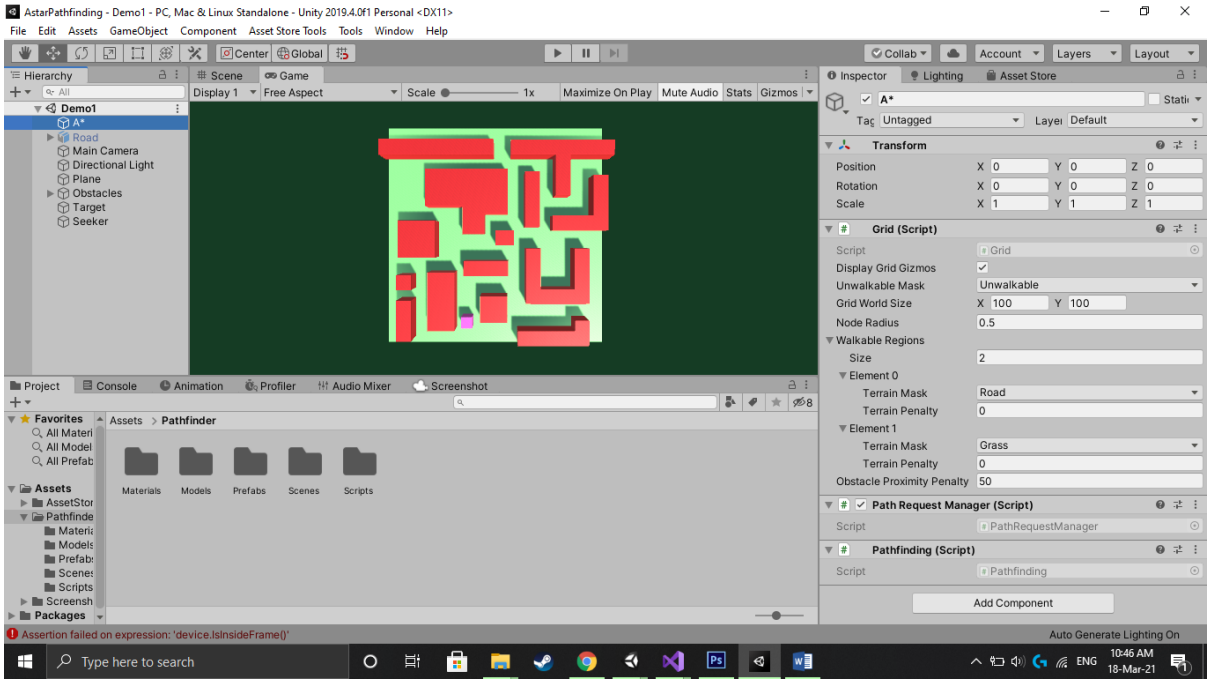
Add the “Unit” script to the seeker and set the speed, turn speed and turn distance. You may drag and drop the target or you may assign it on runtime.

Step 4:

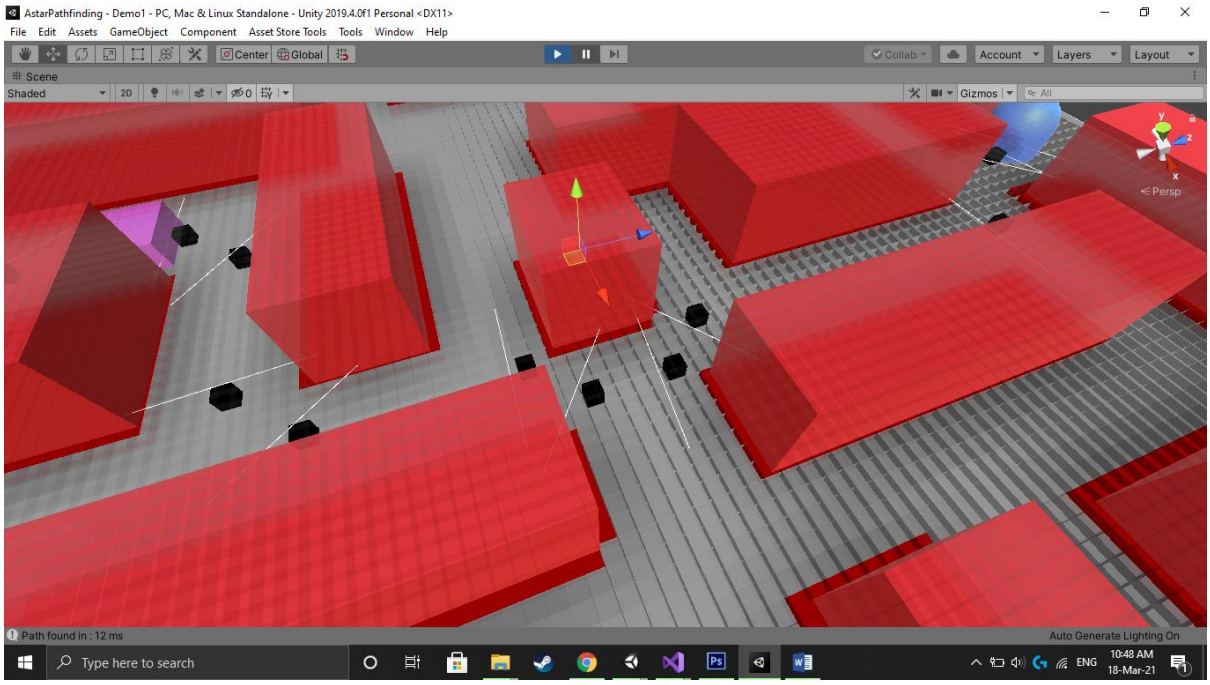
Create a layer “Unwalkable” (case - sensitive) and set all of your obstacle to that layer.

Step 5:

Create an empty Gameobject and add the scripts “Grid”, “PathRequestManager” and “Pathfinding” to it.

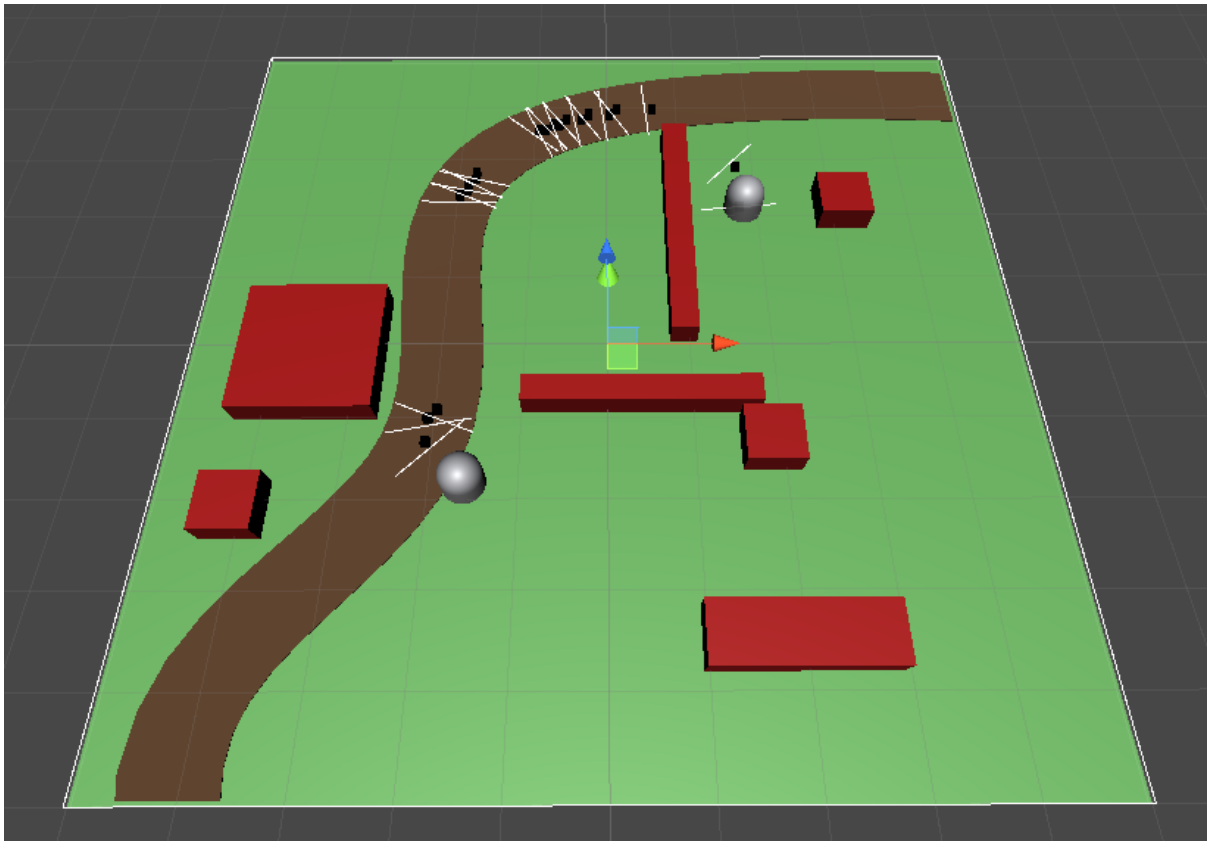


Enabling Grid gizmo will draw a grid while finding path on the entire ground but only in the scene view like shown below.

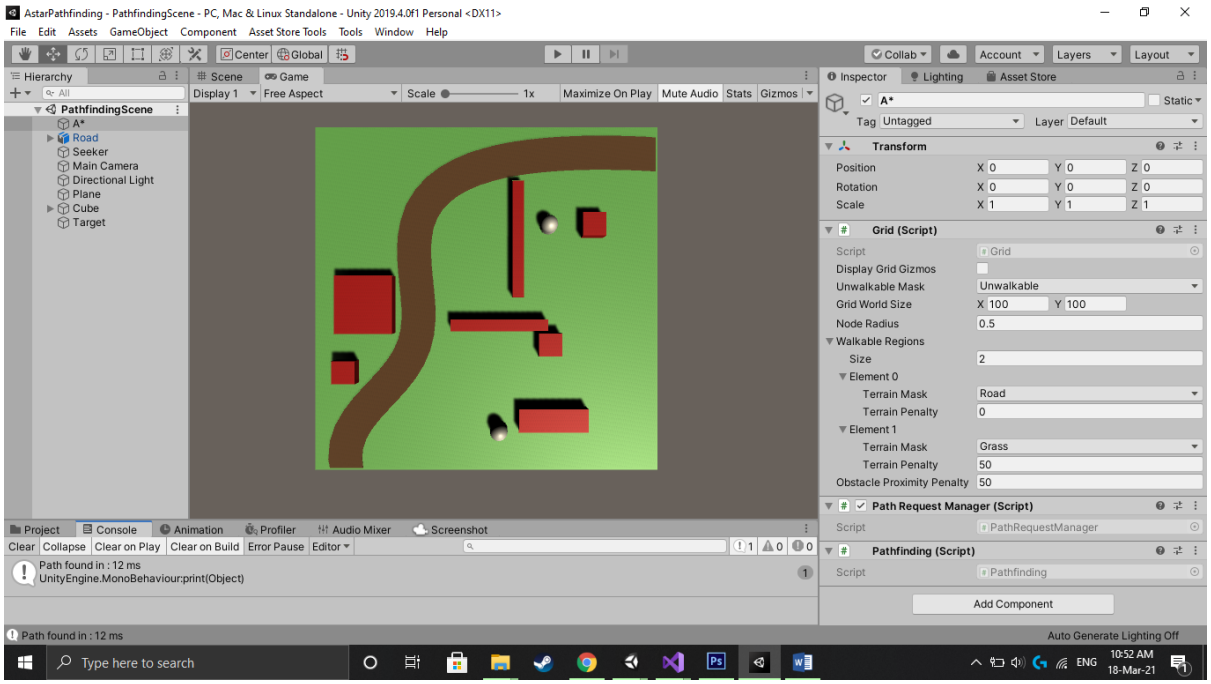


Grid world size is the size of your ground. Pathfinding will only take place within this area.

Node radius is set to 0.5 by default. This is the radius of your player.



If you want your player to have different tendancies to walk on different type of ground. For example, if you want your player to run only on the road but may run on grass if it saves a huge amount of time, then you just add a walkable regionand set the layer of the road and grass to different layers like “Road” and “Grass” and then assign a terrain penalty.



Here the road has 0 penalty as it is favourable to walk on road and grass has a penalty of 50. If you want the player to only walk on road at any cost and never walk on the grass, then you may increase the terrain penalty of grass to a very high number like 500.

If your player tends to walk too close to obstacles or partially goes through them, you can increase the obstacle proximity penalty. A tried and tested number like 50 works just fine for most projects but you may change it according to your needs.