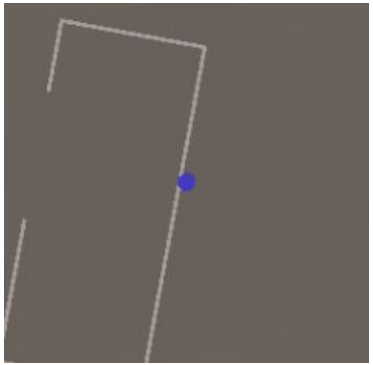
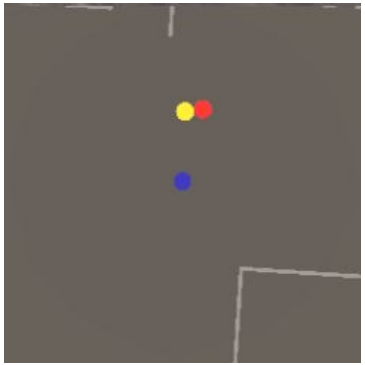
Minimap System in Unity

Bence Takacs

Intro

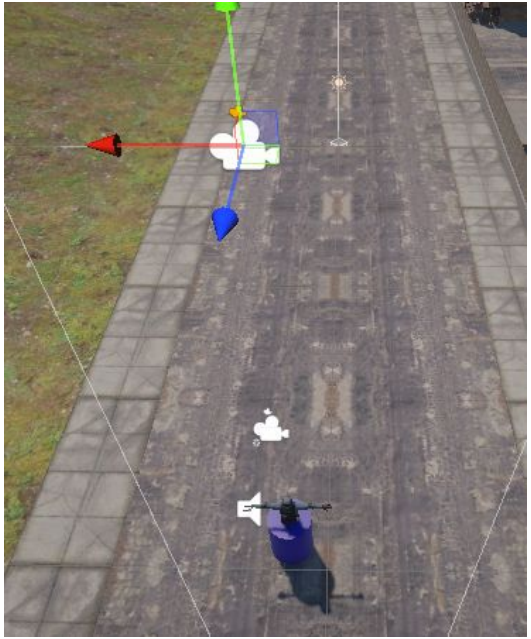
- For this project, a minimap system was created following the instructions at: https://blog.theknightsofunity.com/implementing-minimap-unity/
- The minimap displays the player and nearby enemies as circles
- Enemy states (patrolling, alerted, hunting) are displayed via colour on the enemy circles





Creating the Camera

- A new camera can be created and parented to the player's game object
- The camera will be above the player, pointing straight down
- Change projection to Orthographic to ignore perspective
- Culling Mask should be set to a new Layer (called "Minimap" for example)



Render Texture

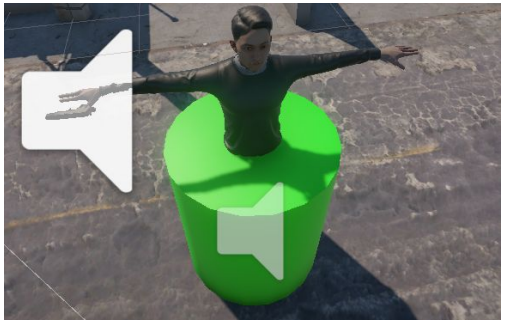
- The camera will need a Render Texture to render to so that it can be displayed on a UI element
- It can be created by clicking on Assets > Create > Render Texture
- This texture will be assigned to the camera's Output Texture field in the Inspector

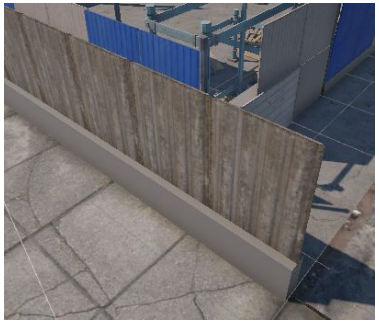
UI Canvas

- A Raw Image component can then be added to a child of a Canvas and have its Texture field set to the Render Texture in the Assets view
- The minimap image in this project was anchored to the bottom left corner of the screen and given a size of 100x100

Making Objects Visible

- Since the camera has its culling mask set, it will only render objects that have that layer
- This can be used to create coloured cylinders parented to enemies and the player character
- Only the cylinder will appear on the minimap
- Map objects also have stretched Cube objects to make them visible





Main Camera

- The main camera will also need to have its culling mask changed to prevent the rendering of the minimap objects