

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light greenish-blue. They are positioned diagonally, with the blue one partially covering the green one.

Camera Control Using Cinemachine

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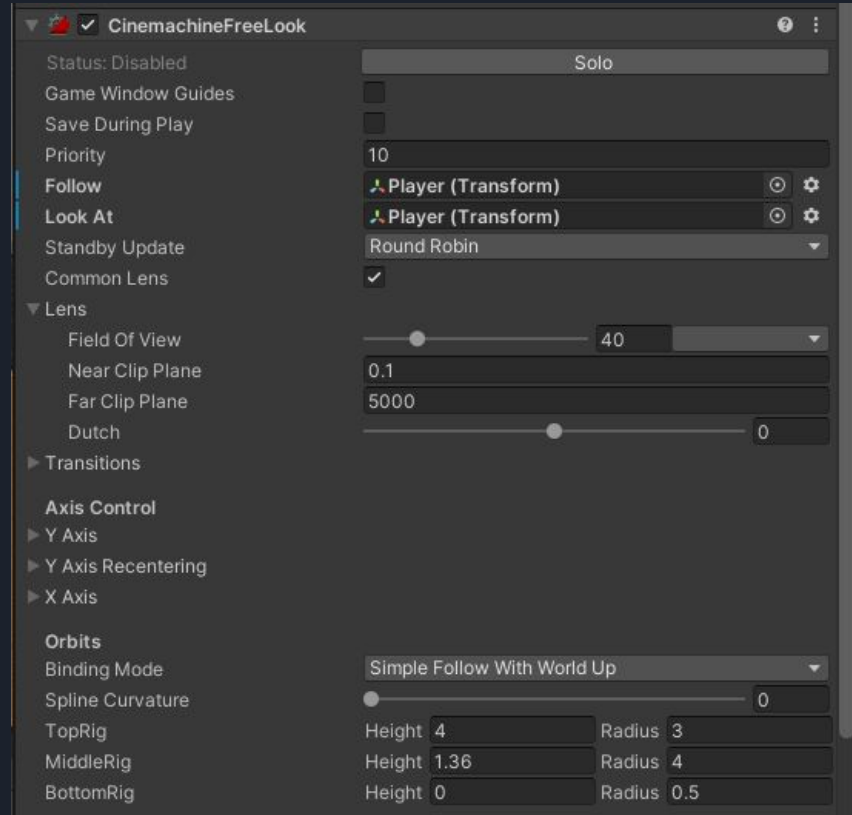


Purpose of Cinemachine

- Cinemachine is a package that allows users to create dynamic cameras in their games
- Can be applied to both 2D and 3D games
- Can create both first person and third person cameras

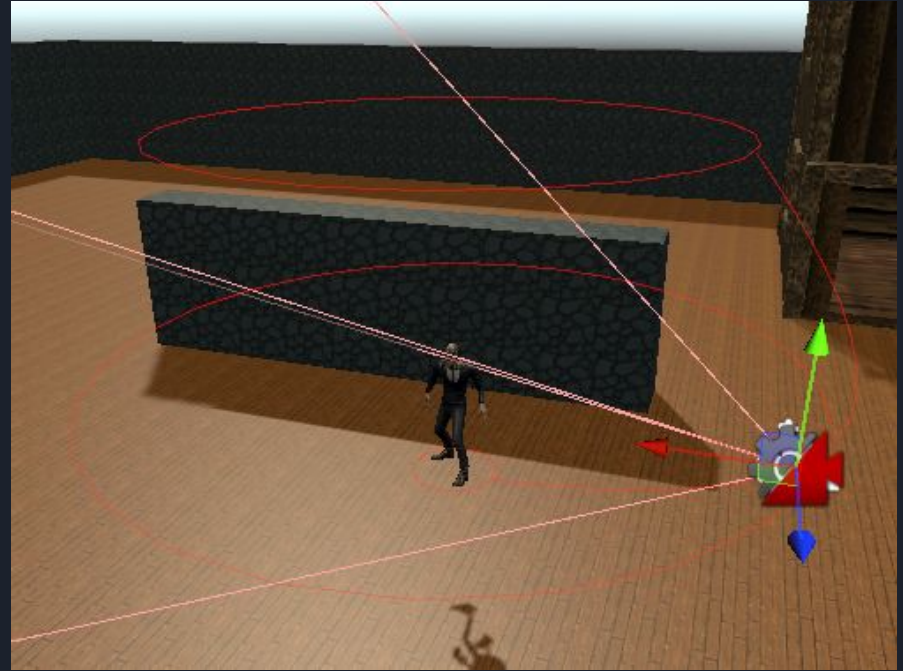
3rd Person Camera

- The CinemachineFreeLook component provides many camera options
- You can set the camera to follow the player
- The orbit of the camera can be adjusted to control how the camera follows the player



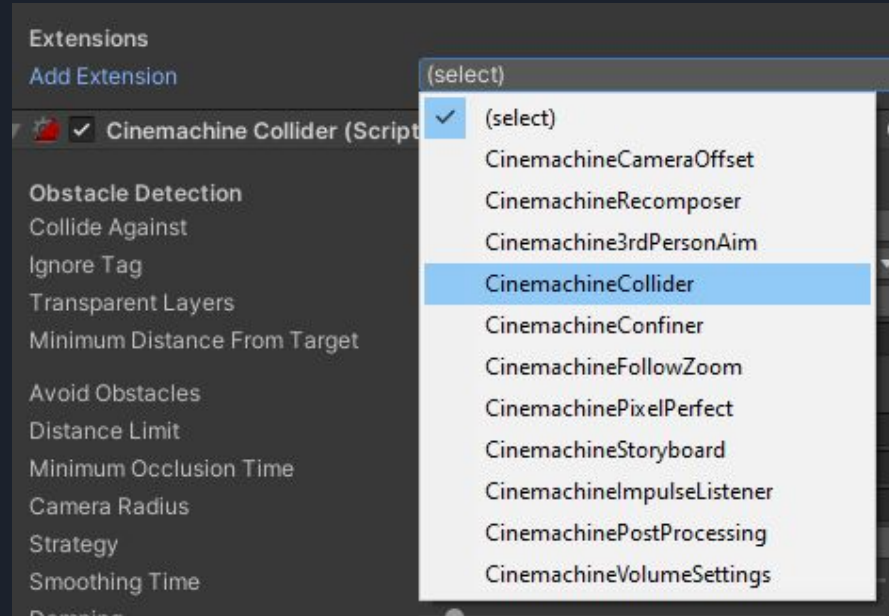
3rd Person Camera

- The red circles represent the orbits of the camera
- The camera will move around these rings while pointing towards the player



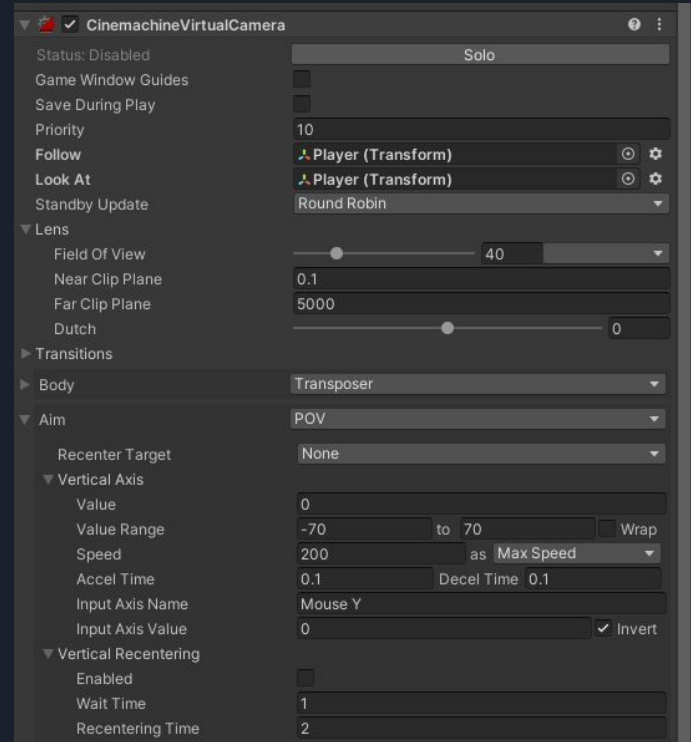
3rd Person Camera

- A cinemachine collider component can be added to the camera in order to prevent the camera from going through obstacles



1st Person Camera

- The camera is set to follow and look at the player
- The lens can be adjusted by changing the FOV
- The aim section allows you to control mouse sensitivity, as well as the method used to aim the camera





Switching Between Cameras

- You can freely switch between different cameras using Cinemachine
- In my game, I used a third person camera, and switched to a first person camera while aiming
- Start by including all the cameras in a script

```
public GameObject mainCam;  
public GameObject aimCam;
```



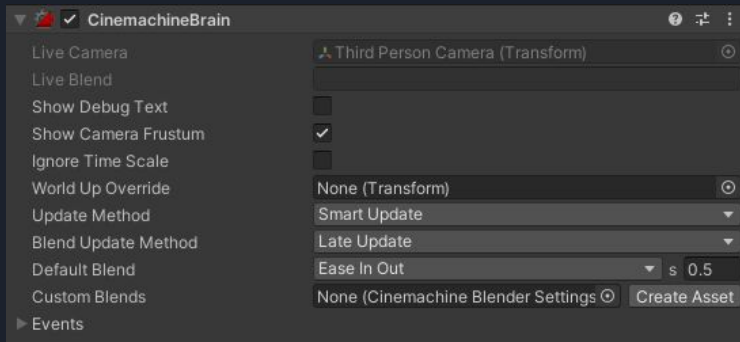
Switching Between Cameras

- You can enable and disable cameras using SetActive
- Here I disable my third person camera, and enable the first person camera

```
mainCam.SetActive(false);  
aimCam.SetActive(true);
```


Switching Between Cameras

- When you create a Cinemachine camera, the Main Camera automatically gets a CinemachineBrain component
- By changing the Default Blend to Ease In Out, the camera will smoothly transition over the set time period whenever the camera is switched





More About Cinemachine

- Here are some resources to learn more about Cinemachine
- <https://unity.com/unity/features/editor/art-and-design/cinemachine>
 - This link provides a look at all the features of Cinemachine
- <https://www.youtube.com/watch?v=4HpC--2iowE>
 - This video explains how to implement a third person camera