

Isometric Toolkit

Version 1.1

Usage:

With the prefab:

1. Create a new scene (or using an existing one) and delete the camera that Unity creates by default.
2. Go into the "Prefabs" folder inside the "Isometric Toolkit" folder in your project.
3. Drag the "Isometric Toolkit" prefab into your scene.
4. You're done! Movement-related settings can be changed from the "Isometric Toolkit" object, and ghosting-related settings from the child camera object, called "Isometric Camera" by default.

Manually:

1. Create a new scene (or using an existing one) and delete the camera that Unity creates by default.
2. Create a new empty GameObject (GameObject -> Create Empty). I'll refer to it as the target object for the rest of the tutorial. Make sure it's at the position (0, 0, 0). If it's not, move it there.
3. Set the target object's rotation to the desired value. For this tutorial, I'll be using (30, 45, 0), which is an isometric perspective. Isometric Toolkit will theoretically work with any rotation, but it was made for use with an isometric perspective (hence the name).
4. In the Inspector pane, click Add Component, and add the Movement script (Isometric Toolkit -> Target -> Movement).
5. Create a new camera (GameObject -> Create Other -> Camera). Move it inside the target object and set its position to (0, 0, -30). It will be referred to as the camera for the rest of the tutorial.
6. Select the camera, click Add Component, and add the Ghoster script (Isometric Toolkit -> Camera -> Ghoster). You're done! You should be able to run the scene and move around with the movement keys or the mouse.

Configuration:

Target:

- The "Base Movement Multiplier" property controls how fast the camera moves. Higher equals faster.
- The "Screen Edge Movement Multiplier" property is used in addition to the base multiplier to control how fast the camera moves when you move your mouse to the edge of the screen.
- The "Scroll Multiplier" property controls how fast the camera moves up and down when you scroll.
- The "Minimum Height" and "Maximum Height" properties control how high and low the camera can go.
- The "Screen Border Size" property controls how close to the edge of the screen the mouse has to be to move the camera.

Camera:

- The "Fade Speed" property in the Ghoster script controls how fast objects fade in and out. Higher values are slower.
- The "Targets" list which objects should always be visible. Anything between the camera and them will be ghosted (turned transparent).
- The "Ghost Layers" property controls which layers should be ghosted. It is "Everything" by default.
- The "Imprecise Mode" property controls whether the script should raycast towards the targets' origin or center. When it is unchecked, the raycast will be towards the center, which is more precise but needs the object to have a renderer.

- You can change the camera to be orthographic (no perspective), and the scripts will adapt. Keep in mind that the script was written to be used with a perspective camera, so some things may not work as intended (notably the ghosting).

API (work in progress):

Call these functions by sending a message to the target object:

UpdateDefaultRotation(): Updates the default rotation of the target to its current rotation so that when the user double-clicks middle mouse, that's what it reverts to.

SetTargetPosition(Vector3): Sets the position of the target object. If the camera is orthographic, this function will change the orthographic size accordingly.

TranslateTargetPosition(Vector3): Translates the target object *in the world space*. That means that if you call it with Vector3(5, 0, 0), it will move five units along the world's X axis, not the object's. This is deliberate.

Other Notes:

You may want to move the Audio Listener to another object. It is on the camera by default, but it's so high up a lot of the time that you won't hear anything.

Credits:

jjmoser on OpenGameArt for the example character model, licensed with CC-BY 3.0. Thanks!