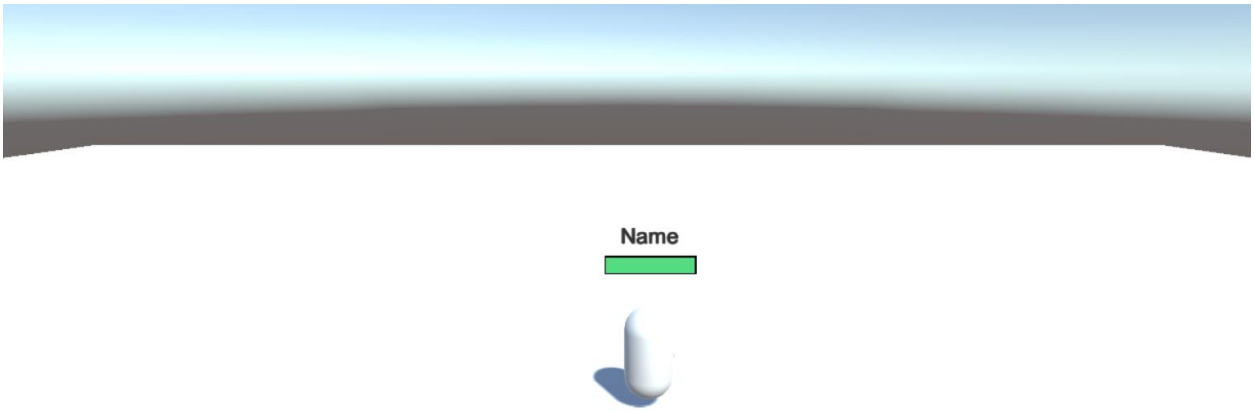
WORLD SPACE CANVAS UI

DOCUMENTATION v1.6

First of all, thank you for purchasing this asset through Unity Assets Store. This documentation will guide you through the usage in order for this tool to work properly in your game project.

WHAT IS WORLD SPACE CANVAS UI?



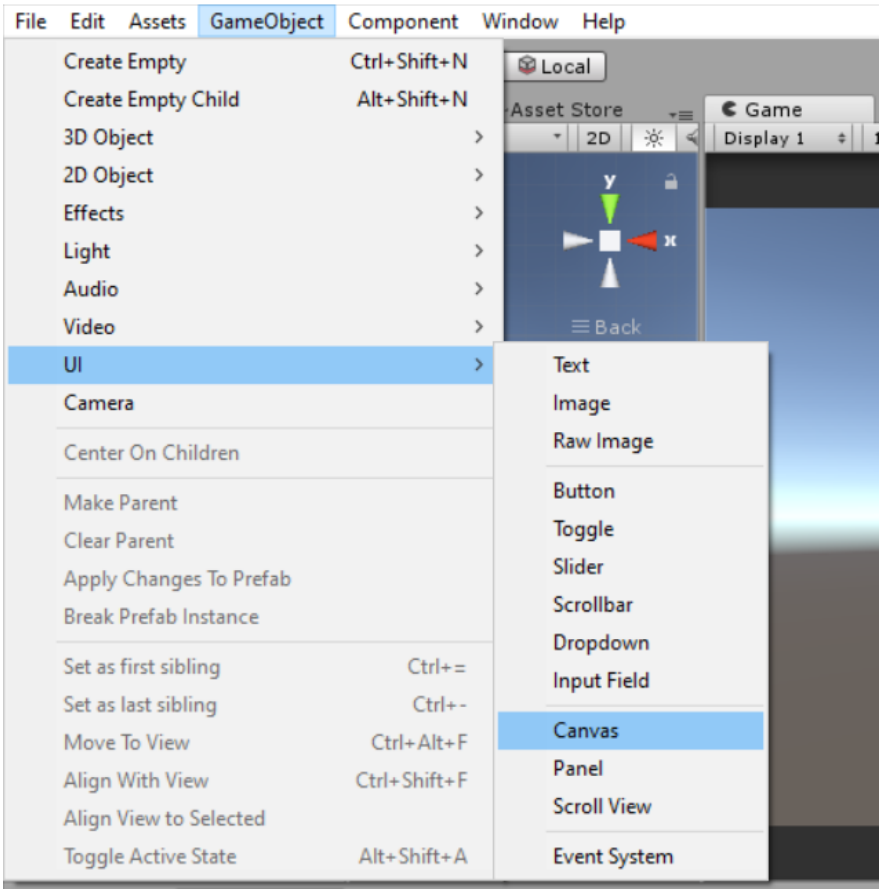
World Space Canvas UI is a tool that will help you create UI elements in Unity's built-in canvas that follow the position of world space objects (3D or 2D) without affecting the rotation and size of UI elements that are usually caused by the world space camera perspective. This feature is compatible for all canvas UI scale modes, including Constant Pixel Size, Scale With Screen Size, and Constant Physical Size.

Contents

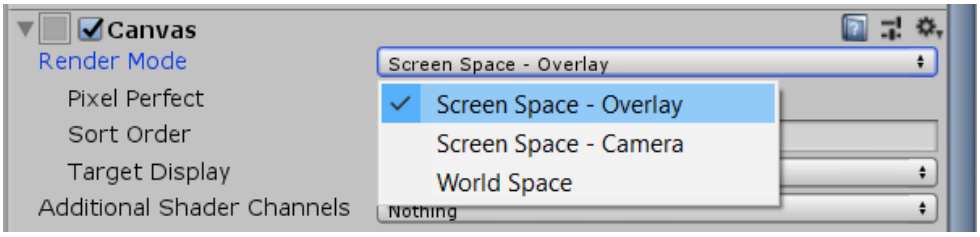
HOW TO SET UP

Setting Up The Canvas

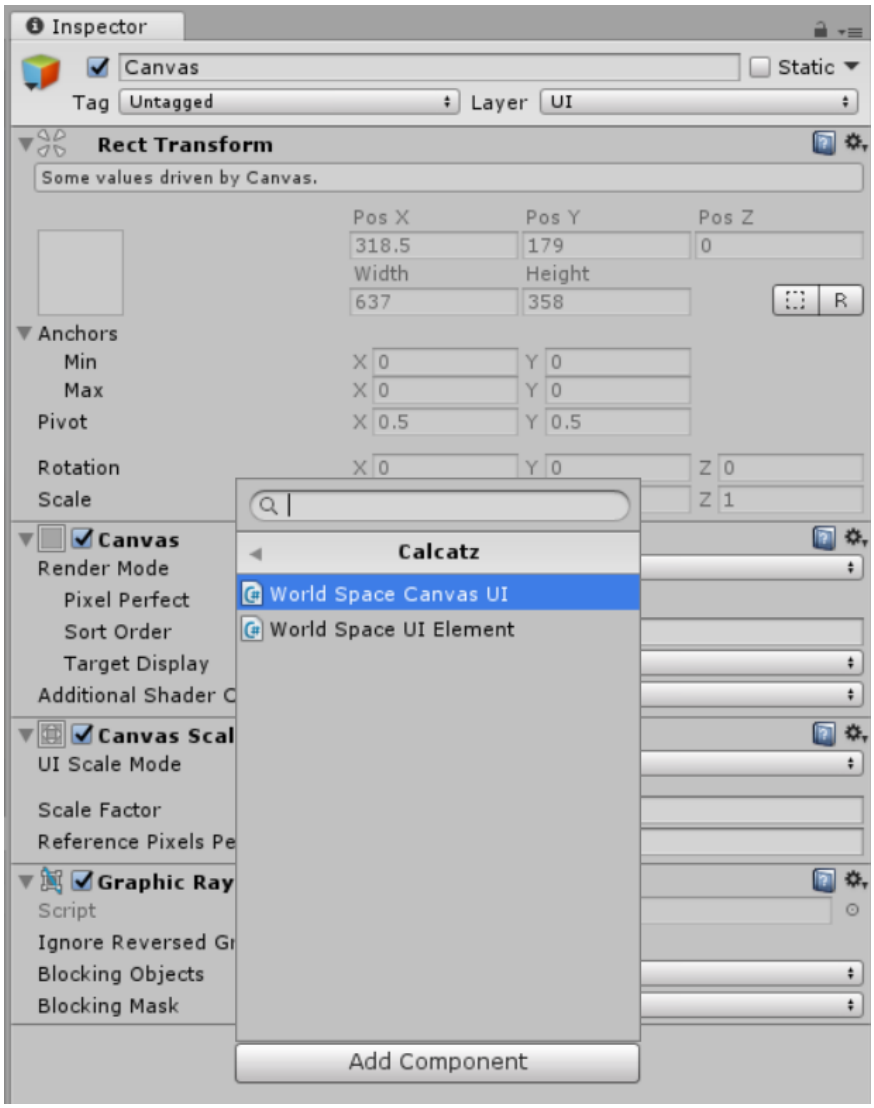
Create a Canvas GameObject by clicking on menu bar **GameObject -> UI -> Canvas**.

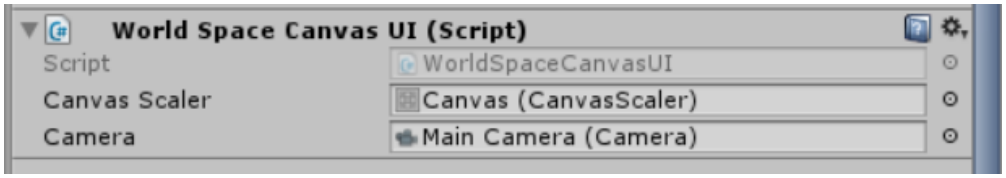


From the inspector, set the Canvas' Render Mode to either **Screen Space – Overlay** or **Screen Space – Camera**. (See ADDITIONALS section for a special case using World Space Render Mode)



Add a World Space Canvas UI component inside the created Canvas GameObject, by clicking on inspector **Add Component -> Scripts -> Calcatz -> World Space Canvas UI**.



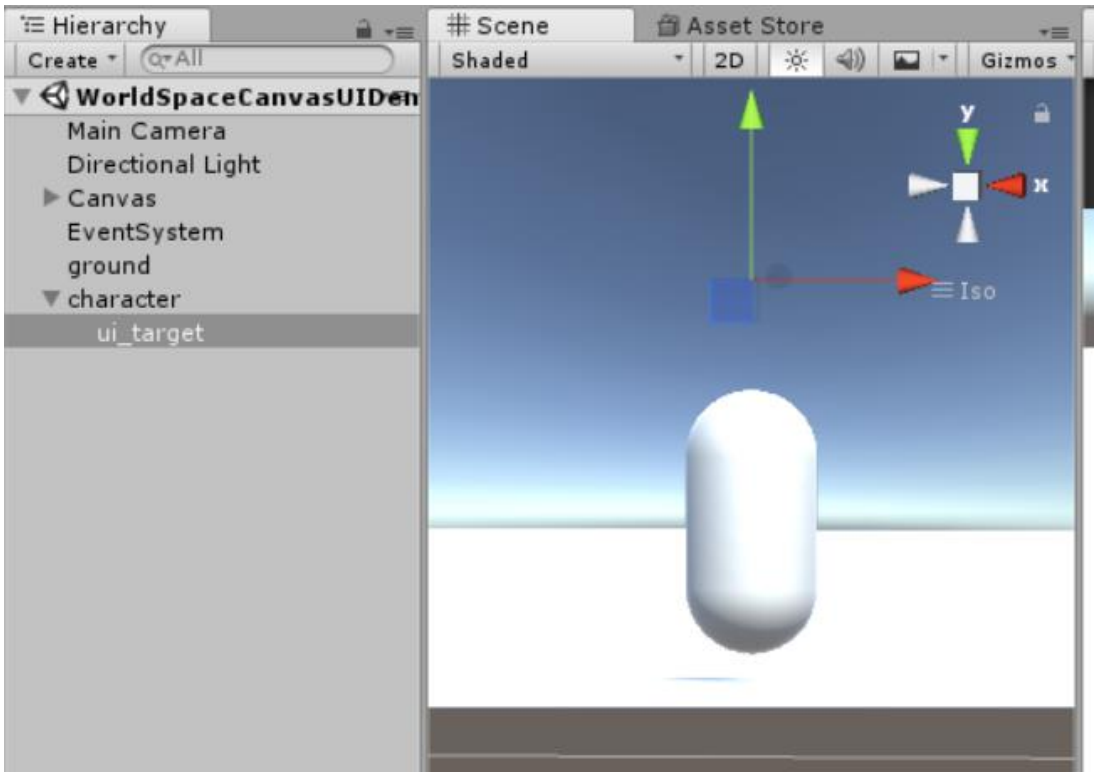


The properties will be automatically assigned if you properly add the component to a Canvas GameObject. The Camera property will be automatically assigned from main camera, but in case you want to choose a specific camera, then you can also manually assign the camera reference.

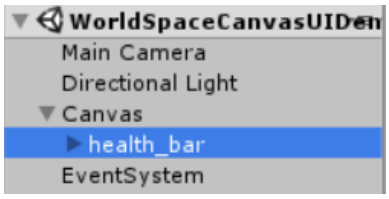
Setting Up the World Space Target Object

There's actually no restriction on how to set the world space target object. All that you need is to specify which Transform object to track to determine the position for the UI elements.

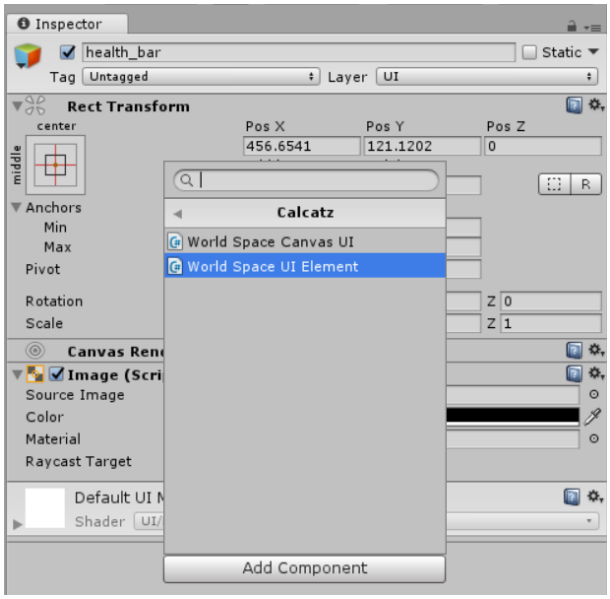
In the demo scene, we add a UI element that follows the top part of a capsule character. In order to do that, we need to add a child GameObject, placed on top of the character, to be used as the target for the UI element to follow.



Setting Up the UI Element

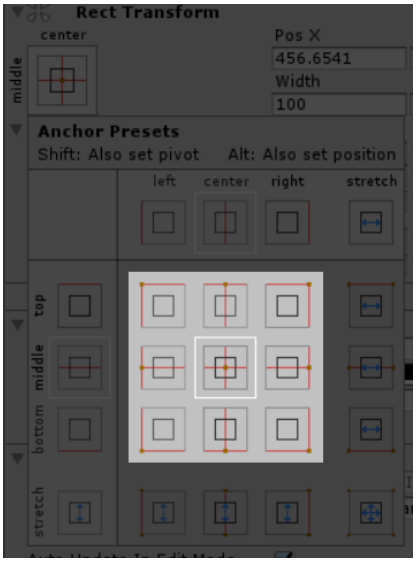


Create any UI GameObject inside the Canvas GameObject, and add a World Space UI Element component by clicking on inspector **Add Component -> Scripts -> Calcatz -> World Space UI Element**.

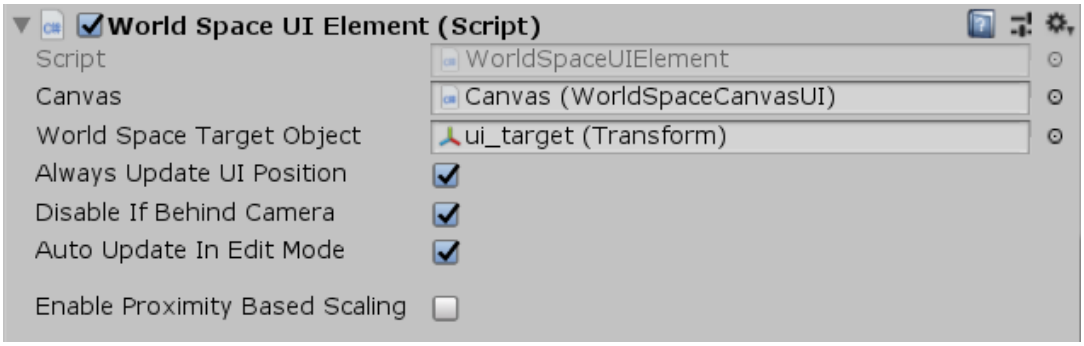


In the demo scene, we used health_bar GameObject as an example of the UI element.

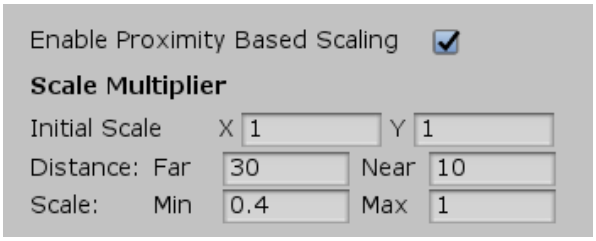
In order to make this feature works correctly, we need to set the anchor as a **point** (you can set the point anywhere, but it's best to choose in the middle center)**,** and make sure it's not **stretch**.



Assign the World Space Target Object that we created before.



- **Canvas:** This will be automatically initialized, as long as its root canvas GameObject has WorldSpaceCanvasUI component added in it (and this is a requirement).
- **World Space Target Object:** The world space target object that the UI element should follow.
- **Always Update UI Position:** Update UI position every frame. For a more optimal performance, you can choose to disable it, and update the position by script anytime when needed by using *UpdateUIPosition()* method.
- **Disable If Behind Camera:** Disable the behaviour (prevent showing it on screen) if the target object is located behind camera.
- **Auto Update In Edit Mode:** Auto update position every frame update in edit mode (when the editor is not in play mode).
- **Enable Proximity Based Scaling:** Check this to enable proximity-based scaling. This will scale the element based on a distance between camera and the UI element.



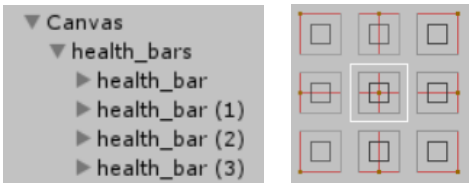
  - **Initial Scale:** Initial scale of the element.
  - **Distance:**
    - **Far:** If the distance between camera and this element is more than or equal to far value, then apply min scale.
    - **Near:** If the distance between camera and this element is less than or equal to near value, then apply max scale.
  - **Scale:** Scale value to apply based on the specified distance values. If the distance is between far and near, then the scale is applied based on the percentage between far and near distance.
  - **World Space Scale Render Factor** (World Space Render Mode only): Scale factor used for world space render mode only.

That's all you need to do, and your created UI element will follow the target's position.

ADDITIONALS

Grouping UI Elements

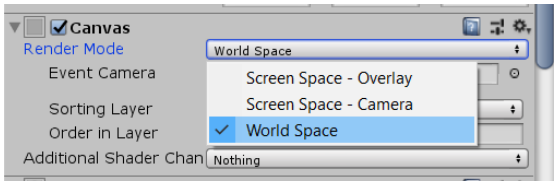
You can place the world space UI elements as children of a certain GameObject in Canvas. This might come in handy if you want to manage the object structure into a group.



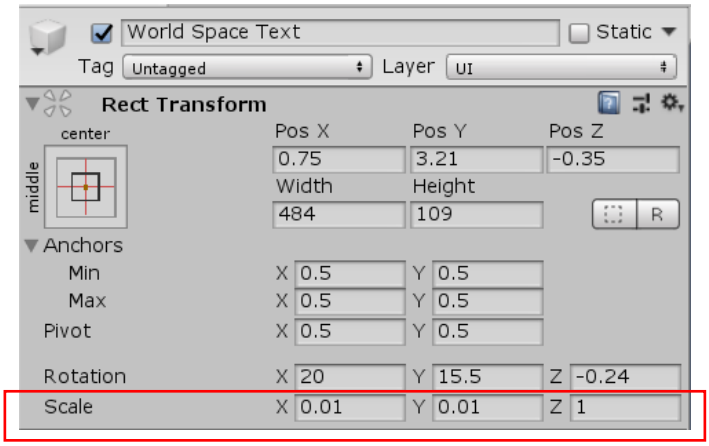
To do so, you need to set the anchor of the UI elements to be in the **middle center** (this is why it's best to choose the anchor in the middle center as mentioned before). And, you're all set.

Using World Space Render Mode

This tool is specifically made for world space UI in Canvas Screen Space Render Mode usage to avoid camera's perspective involvement. But as an additional feature, this tool also provides billboard UI that is rendered in World Space Render Mode.



The most noticeable difference between Screen Space and World Space is that World Space Render Mode often has larger scale, because screen size unit is usually bigger that world's unit. So, you might want to resize all your UI elements to a smaller scale.



However, if you use **proximity based scaling** for the element, then **the Scale will be calculated for you**, and you can tweak the **World Space Scale Render Factor** value instead.

Check World Space Render Mode demo scene for an example.

SUPPORT

If you have any questions or difficulties regarding this tool, you can send an email to affan@calcatz.com.
Thank you for having this asset, cheers!