Initializing non-VR player character

In this tutorial, we will assume that your Unity project has already been set up for VR use with the XR Interaction Toolkit, as well as the Input System. To initialize a non-VR player character in an existing VR project in Unity, follow these steps:

1. Create a new GameObject: In the Unity Editor, right-click in the Hierarchy panel and select "Create Empty." This will create a new empty GameObject. Name this object "Player".

2. Attach the VR Mode Switcher script to the "Player" GameoObject. This script will allow you to enable/disable the VR Mode at runtime.

3. Create a child GameObject: right-click on the Player GameObject in the Hierarchy panel and select "Create Empty". Name this object "Player Controller".

4. Attach a Rigidbody: Select the "Player Controller" GameObject, then click on the "Add Component" button in the Inspector panel. Search for "Rigidbody" and add it to the GameObject. Set the "Interpolate" property to "None". The Rigidbody controller will handle physics for your player object.

   > **Be careful with Mesh Colliders!**
   > GameObjects that have a Rigidbody component only support Mesh Colliders that have Convex option enabled: the physics engine can only simulate convex mesh colliders.

5. Attach a character controller: Select the "Player Controller" GameObject, then click on the "Add Component" button in the Inspector panel. Search for "Character Controller" and add it to the GameObject. The Character Controller component will handle the player's movement and collision.

6. Add a 3D model or sprite: If you want a visual representation for your player character, you can add a 3D model or sprite. Import your desired model or sprite into Unity by dragging it into the Project panel. Then, drag and drop the model or sprite onto your Player GameObject in the Scene view or Hierarchy panel.

7. Set up player controls: Attach a Player Input object and the Input System Test to the Player Controller. Open the "Events" drop-down menu, and add the corresponding

function from Input System Test to each Event included in the Input Action Asset. Some example functions for things such as camera movement, player movement, and jumping are already included in the Input System Test script.

8. Add a raycast for UI interaction: To enable the player character to interact with UI elements such as buttons or menus, you'll need to add a raycast. Attach the Raycaster script to the player character GameObject. This script uses the Physics.Raycast method to detect if the ray hits any UI elements and perform the desired actions accordingly, such as button clicks or menu selections.

9. Test and refine: Save your script and go back to the Unity Editor. Disable the Xr Origin object to make sure that the game won't start in VR mode. Press the Play button to enter Play mode and test your player character initialization and movement. Make any necessary adjustments to the code or settings until you are satisfied with the result.

That's it! By following these steps, you can initialize a player character in Unity and have them ready for movement and interaction in your game.

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