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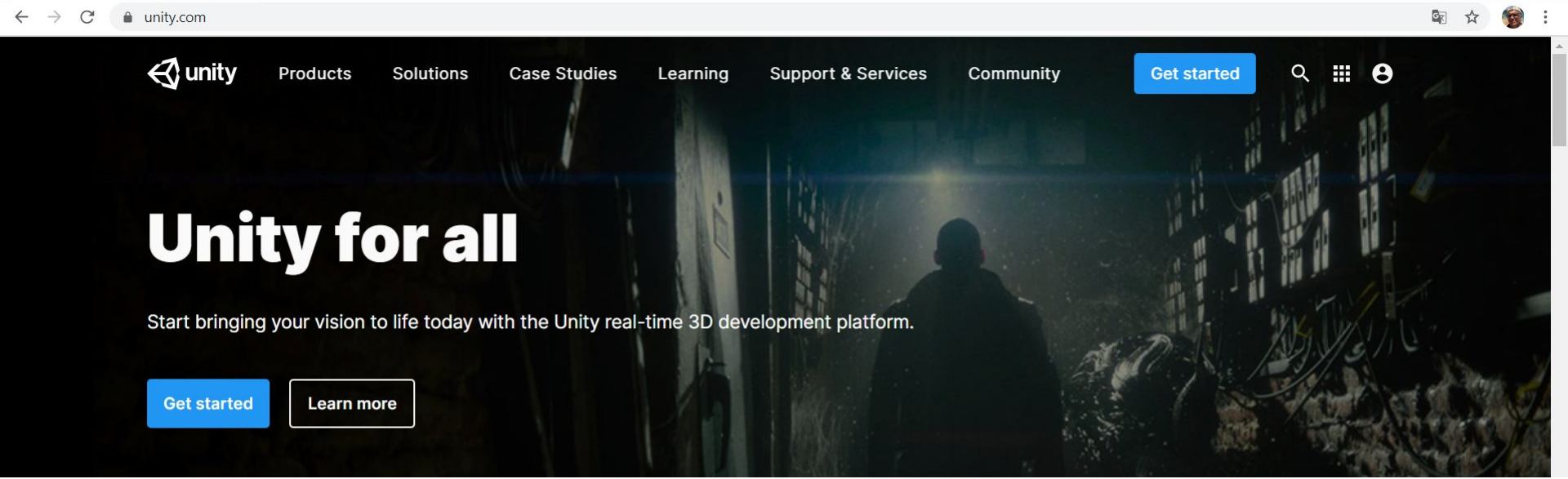
Unity installation



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Free

Get started Learn more

Eligibility:
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Unity Learn

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Start learning

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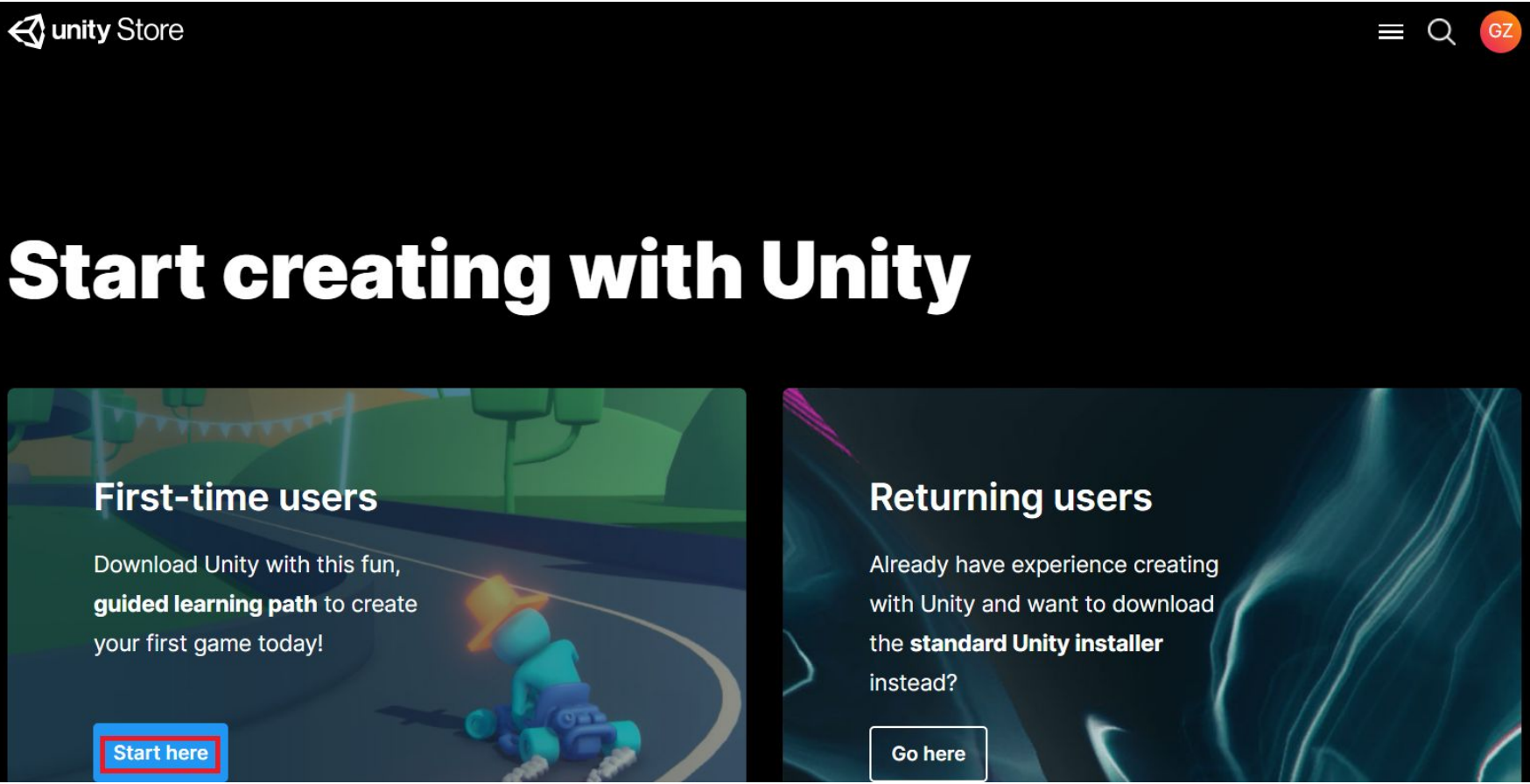
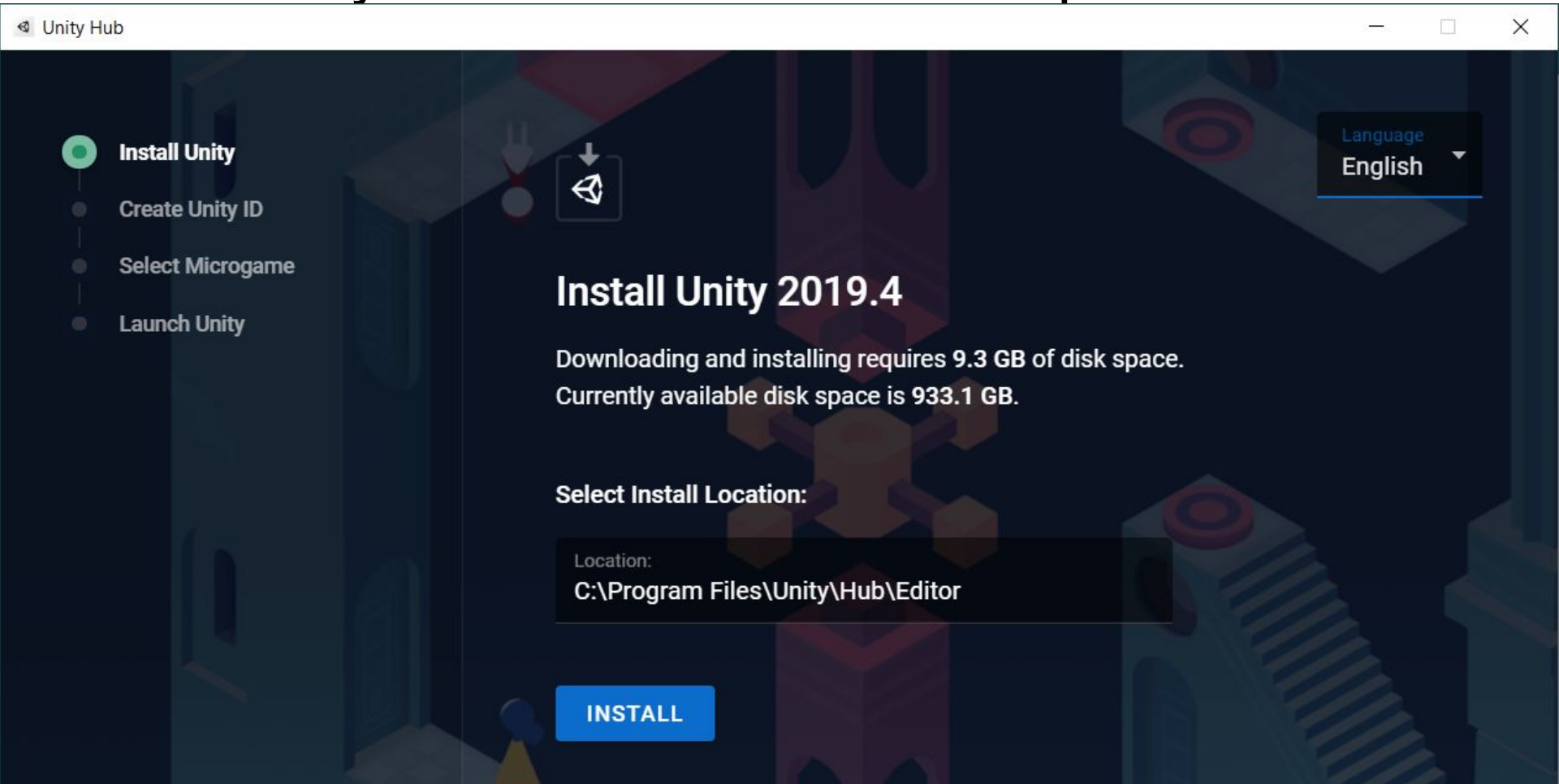
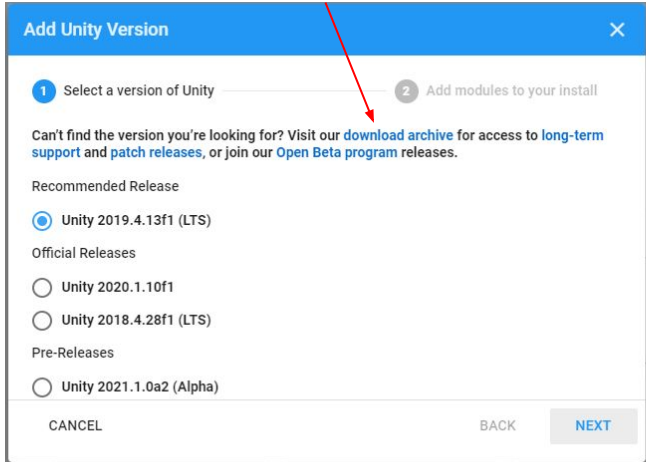


Install Unity Hub and launch with “skip install wizard”



Select install tool and add Unity 2018.4.14 from download archive with Android Build Support



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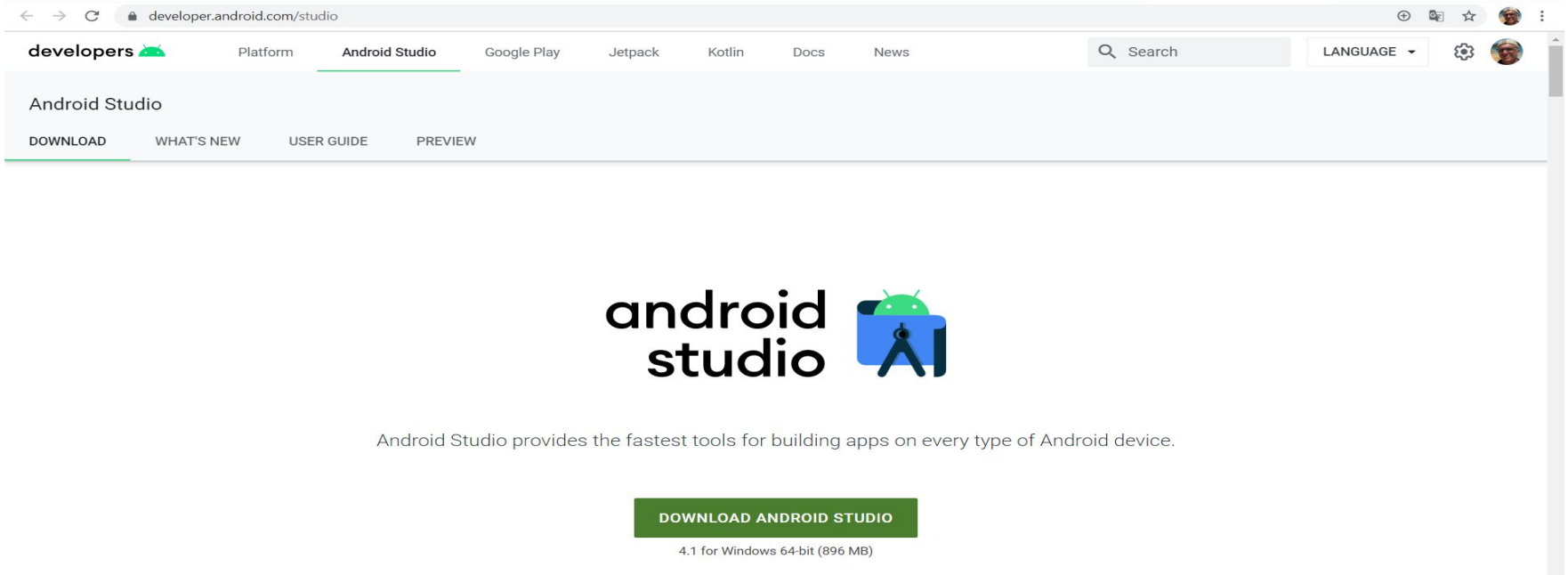
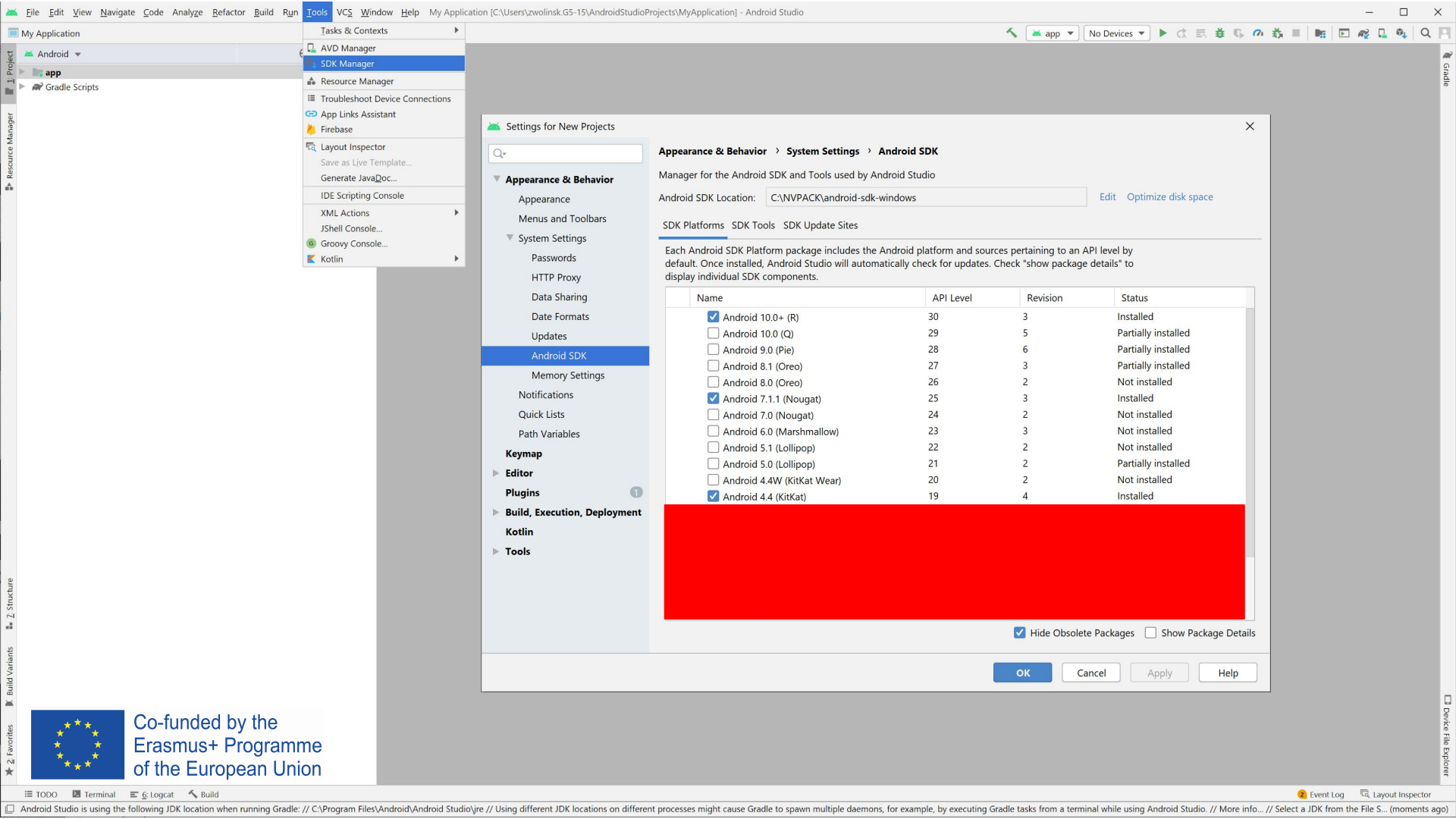
Install android studio and open SDK Manager tool




File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
My Application [C:\Users\zwolinsk.G5-15\AndroidStudioProjects\MyApplication] - Android Studio
Tasks & Contexts
AVD Manager
SDK Manager
Resource Manager
Troubleshoot Device Connections
App Links Assistant
Firebase
Layout Inspector
Save as Live Template...
Generate JavaDoc...
IDE Scripting Console
XML Actions
JShell Console...
Groovy Console...
Kotlin
Settings for New Projects
Appearance & Behavior › System Settings › Android SDK
Manager for the Android SDK and Tools used by Android Studio
Android SDK Location: C:\NVPACK\android-sdk-windows
Edit
Optimize disk space
SDK Platforms
SDK Tools
SDK Update Sites
Each Android SDK Platform package includes the Android platform and sources pertaining to an API level by default. Once installed, Android Studio will automatically check for updates. Check "show package details" to display individual SDK components.
Name
API Level
Revision
Status
Android 10.0+ (R) 30 3 Installed
Android 10.0 (Q) 29 5 Partially installed
Android 9.0 (Pie) 28 6 Partially installed
Android 8.1 (Oreo) 27 3 Partially installed
Android 8.0 (Oreo) 26 2 Not installed
Android 7.1.1 (Nougat) 25 3 Installed
Android 7.0 (Nougat) 24 2 Not installed
Android 6.0 (Marshmallow) 23 3 Not installed
Android 5.1 (Lollipop) 22 2 Not installed
Android 5.0 (Lollipop) 21 2 Partially installed
Android 4.4W (KitKat Wear) 20 2 Not installed
Android 4.4 (KitKat) 19 4 Installed
Hide Obsolete Packages
Show Package Details
OK
Cancel
Apply
Help
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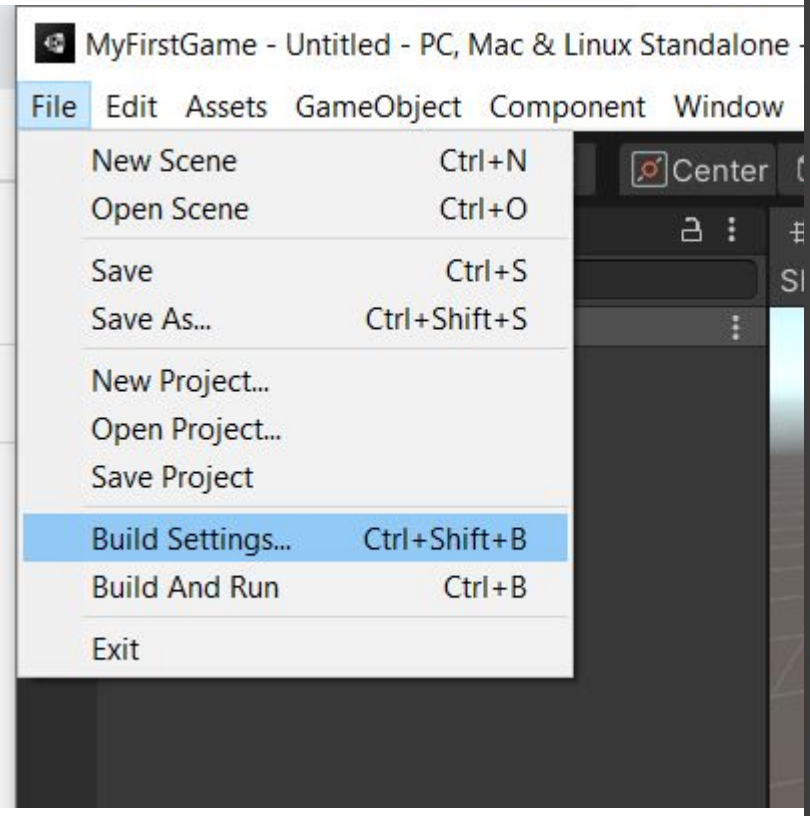
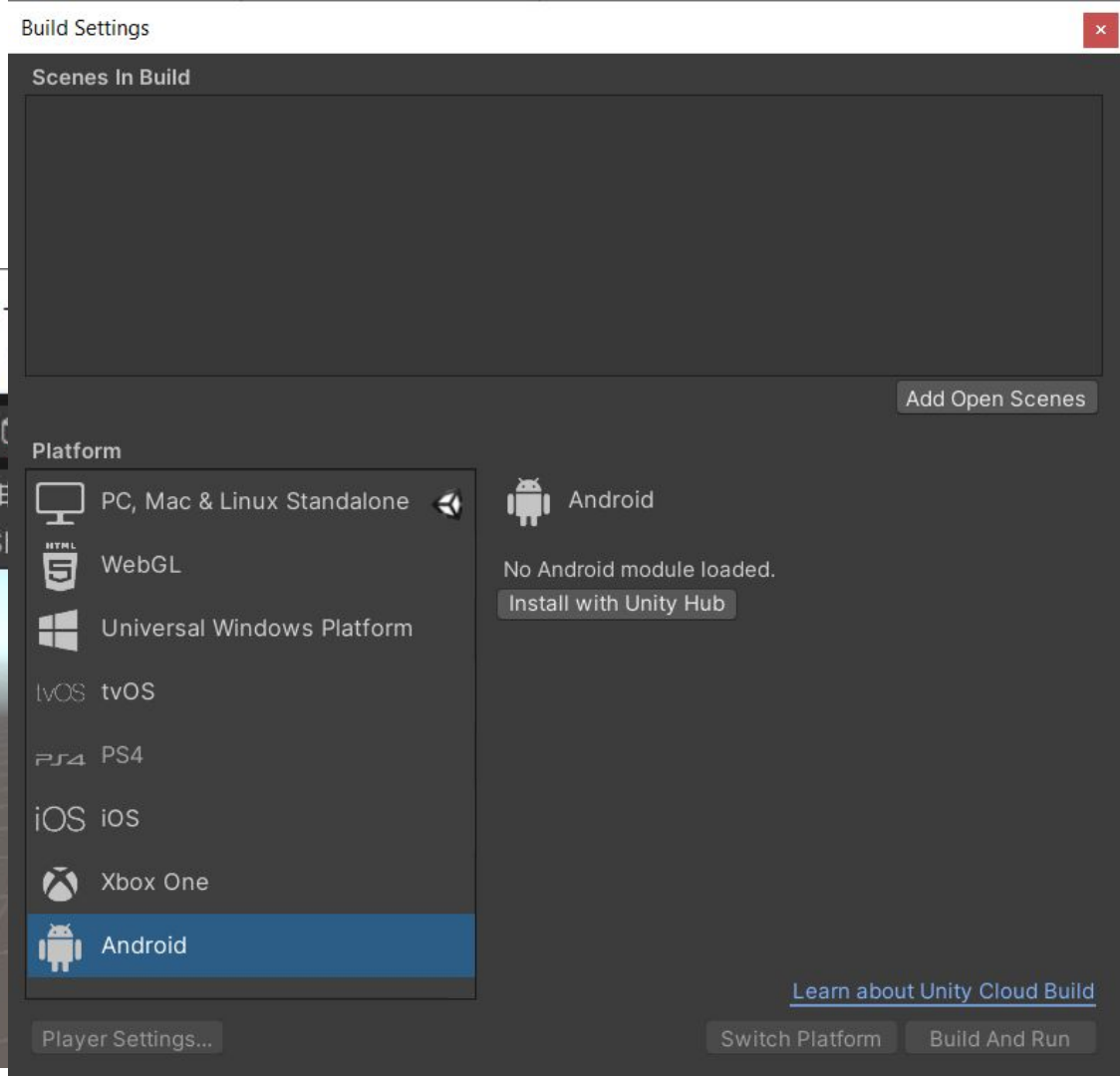
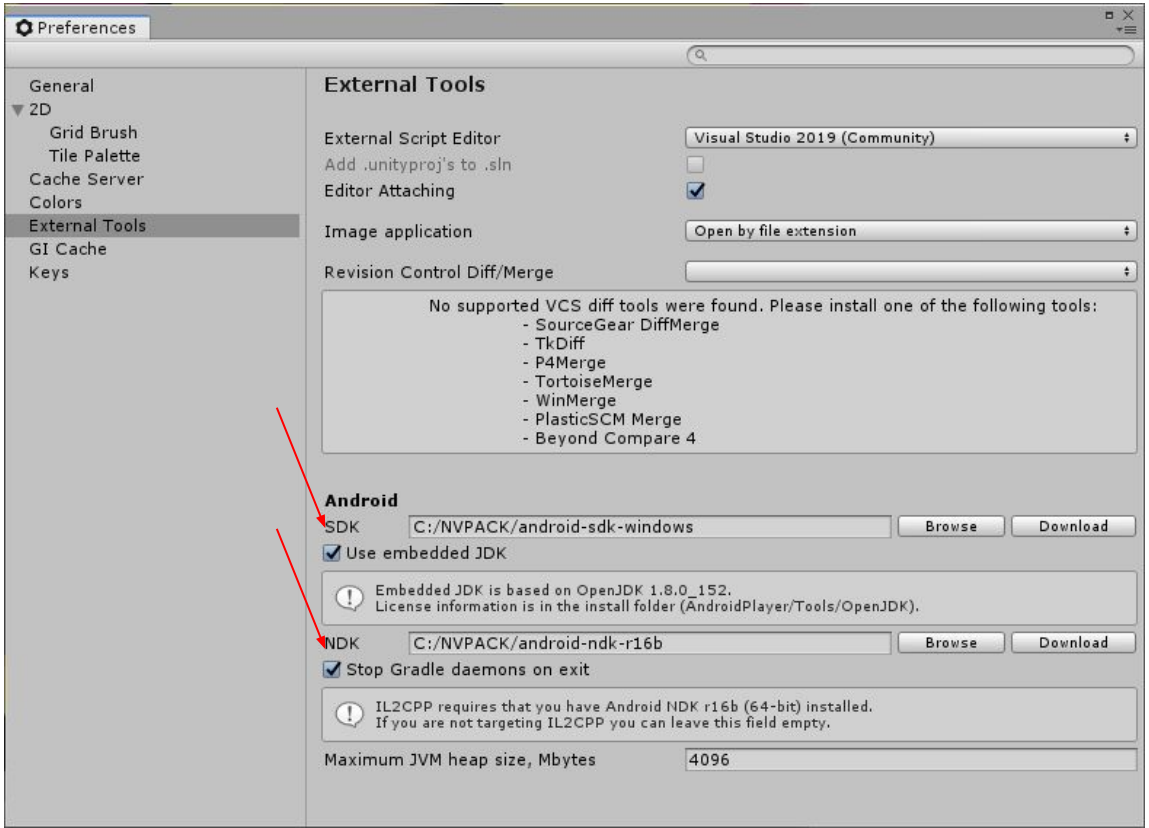
Create new 3d project and switch platform to Android





Validation of path detection to SDK and NDK

Edit -> Preferences -> External Tools ->



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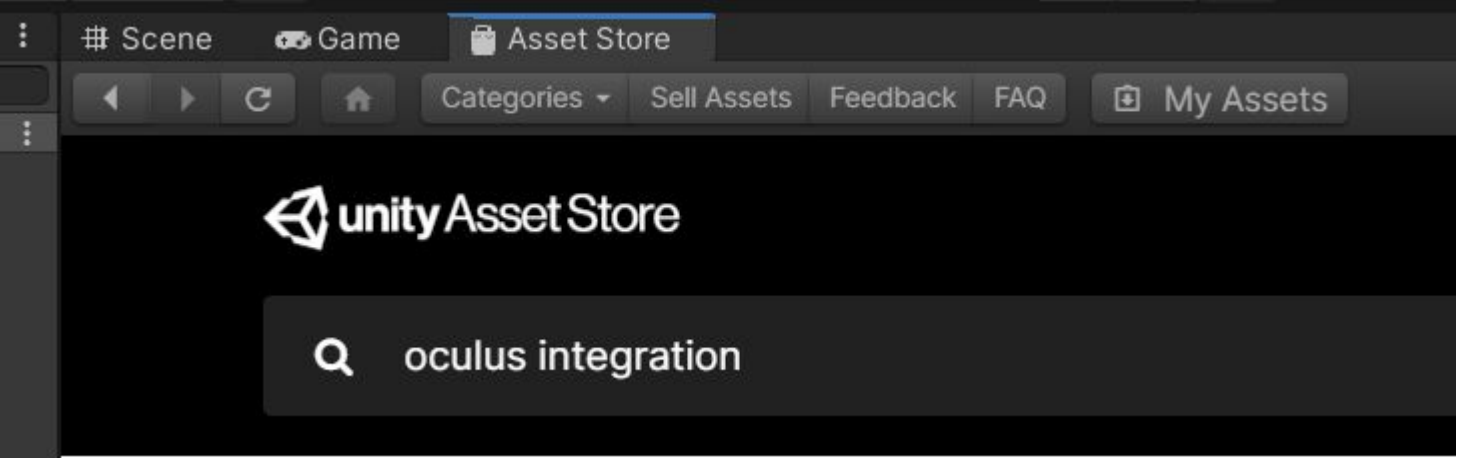
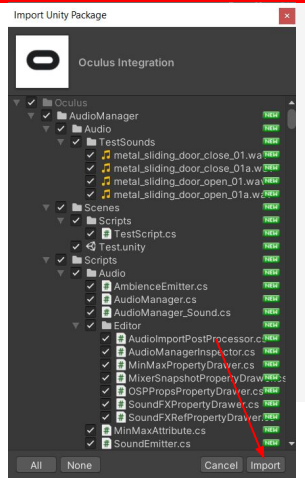


alternatively install the package delivered in class



Oculus Integration

Oculus

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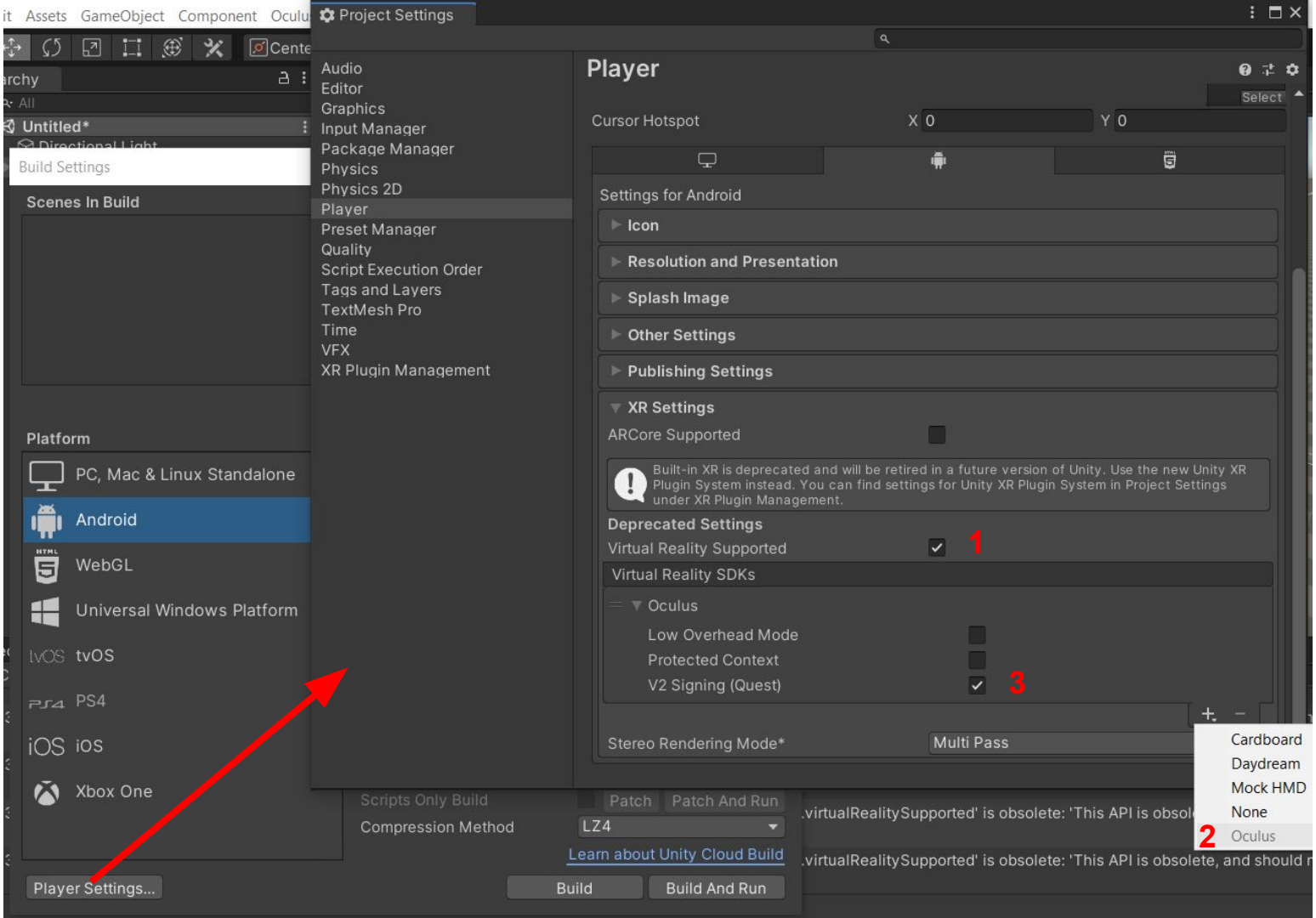
gustavosantosr

★★★★★ 4 days ago

god work


Assets
GameObject
Component
Project Settings
Audio
Editor
Graphics
Input Manager
Package Manager
Physics
Physics 2D
Player
Preset Manager
Quality
Script Execution Order
Tags and Layers
TextMesh Pro
Time
VFX
XR Plugin Management
Player
Cursor Hotspot
X 0
Y 0
Settings for Android
Icon
Resolution and Presentation
Splash Image
Other Settings
Publishing Settings
XR Settings
ARCore Supported
Built-in XR is deprecated and will be retired in a future version of Unity. Use the new Unity XR Plugin System instead. You can find settings for Unity XR Plugin System in Project Settings under XR Plugin Management.
Deprecated Settings
Virtual Reality Supported
1
Virtual Reality SDKs
Oculus
Low Overhead Mode
Protected Context
V2 Signing (Quest)
3
Stereo Rendering Mode*
Multi Pass
Cardboard
Daydream
Mock HMD
None
Oculus
2
Untitled*
Build Settings
Scenes In Build
Platform
PC, Mac & Linux Standalone
Android
WebGL
Universal Windows Platform
tvOS
PS4
iOS
Xbox One
Player Settings...
Scripts Only Build
Patch
Patch And Run
Compression Method
LZ4
Learn about Unity Cloud Build
Build
Build And Run
.virtualRealitySupported' is obsolete: 'This API is obsol
.virtualRealitySupported' is obsolete: 'This API is obsolete, and should

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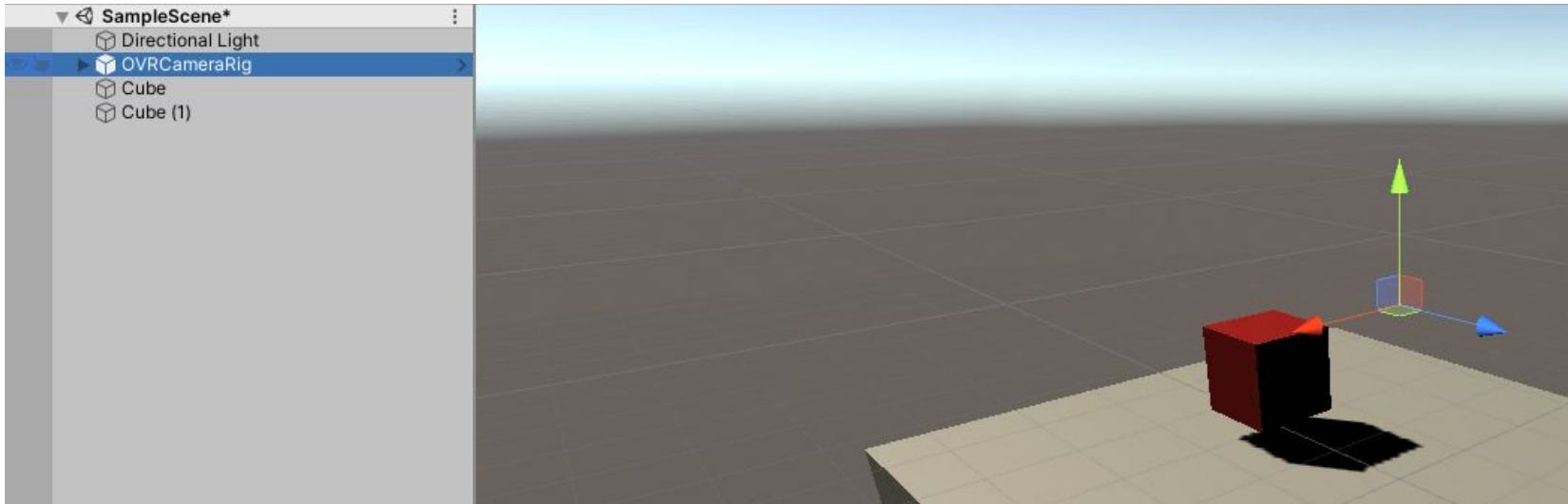
Building a simple 3d scene

- delete MainCamera
- insert OVRCameraRig (assets/oculus/VR/prefabs)
- insert box under OVRCameraRig and a few others 3d primitives



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Connect Oculus Quest to PC by USB wire

set enable USB connection for developer:

- settings->developer->USB Connection Dialogue

Once you belong to a developer organization, follow these steps to put your device in developer mode:

1. Open the Oculus app on your iOS or Android phone.
2. In the Settings menu, select the Oculus headset that you want to use for development.
3. Select More Settings.
4. Toggle Developer Mode on.

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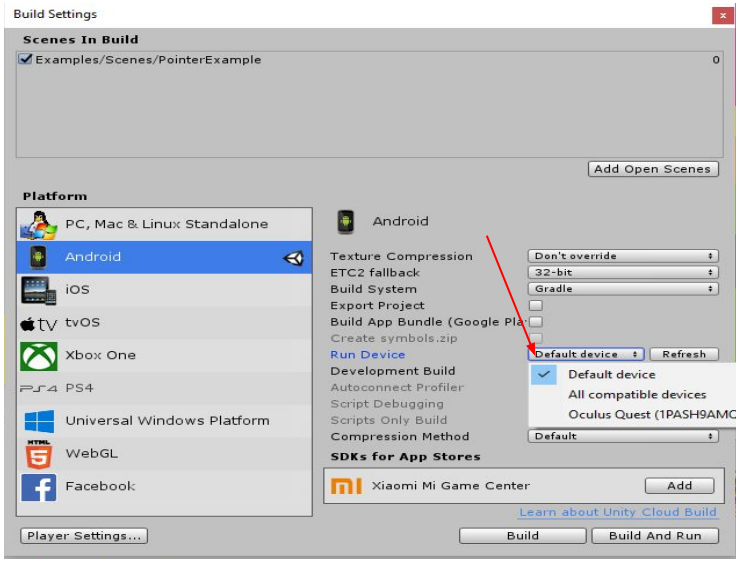
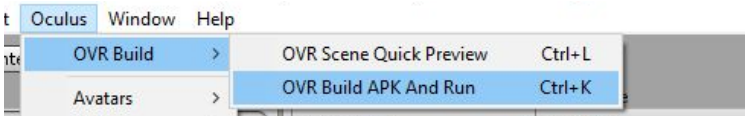
Detect the connected unit to set Development Build



make and run your application on the unit



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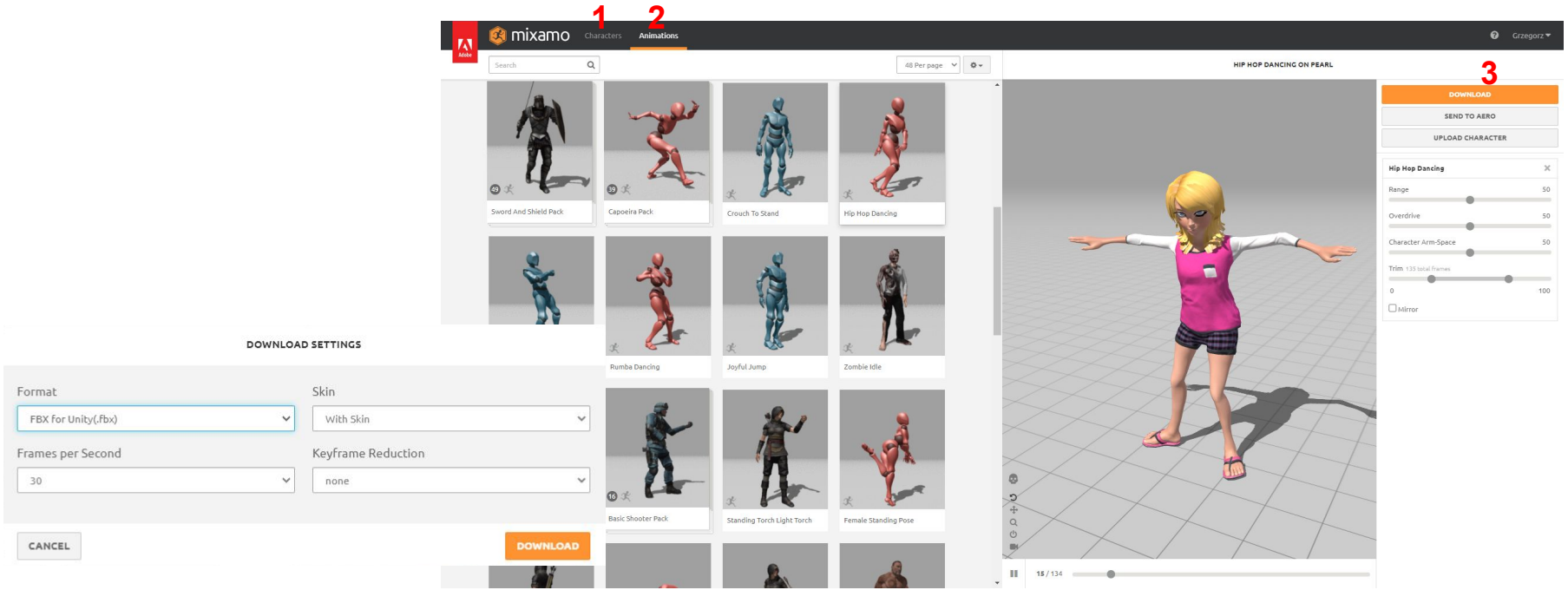
Animation support

https://www.mixamo.com/



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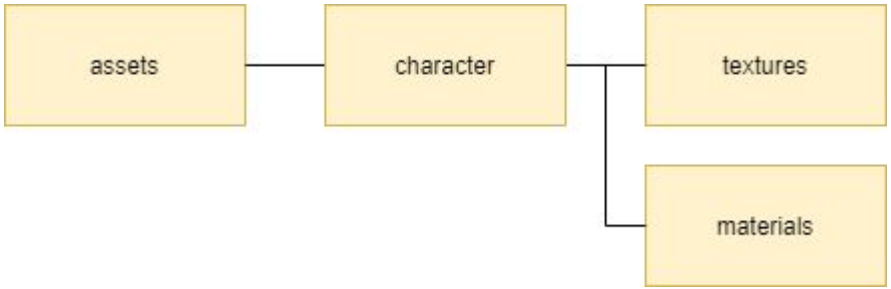
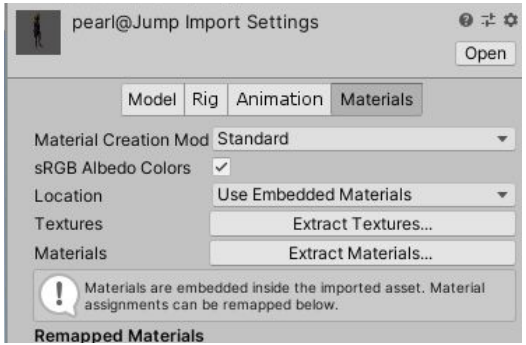
Assets -> Create -> Folder

to make structure like:



put into “character” folder fbx files (mixamo)

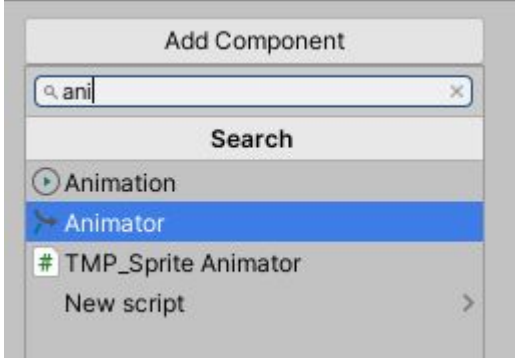
extract textures and materials to the appropriate folders

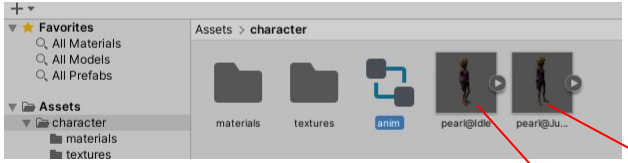


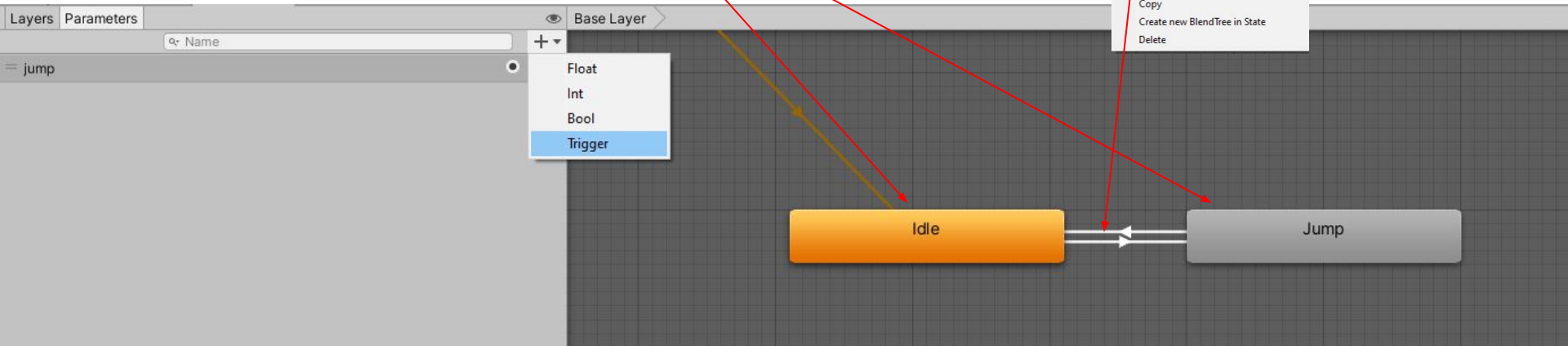
add Animator Component to character

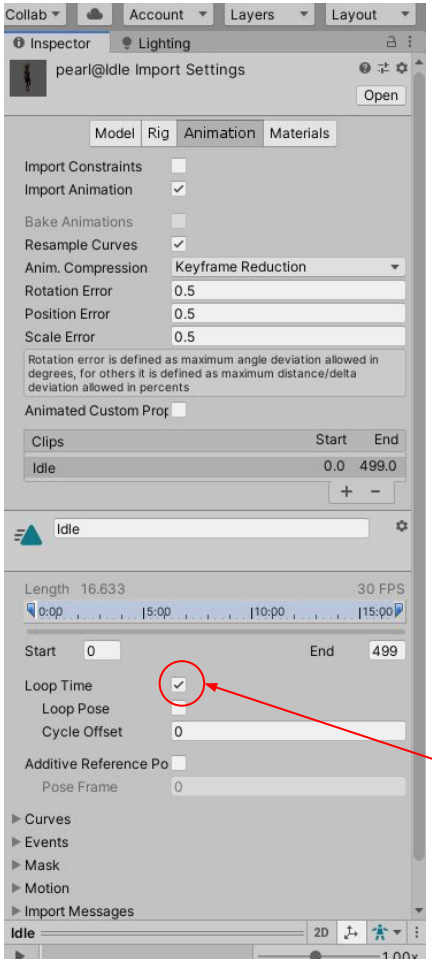
assets -> create -> Animator Controller (character folder)

adding Animator trigger








Collab
Account
Layers
Layout
Inspector
Lighting
pearl@Idle Import Settings
Open
Model
Rig
Animation
Materials
Import Constraints
Import Animation
Bake Animations
Resample Curves
Anim. Compression
Keyframe Reduction
Rotation Error
0.5
Position Error
0.5
Scale Error
0.5
Rotation error is defined as maximum angle deviation allowed in degrees, for others it is defined as maximum distance/delta deviation allowed in percents
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Mask
Motion
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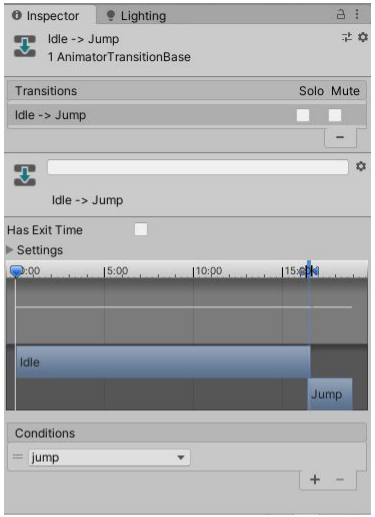
Inspector
Lighting
Idle -> Jump
1 AnimatorTransitionBase
Transitions
Solo
Mute
Idle -> Jump
Idle -> Jump
Has Exit Time
Settings
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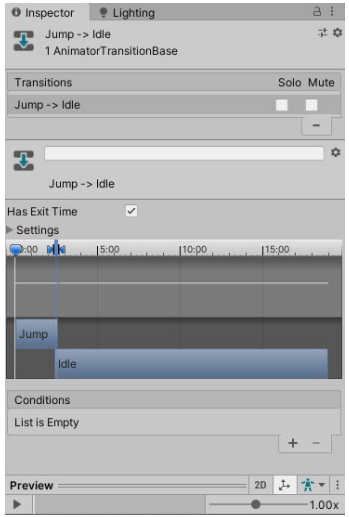
5:00
10:00
15:00
Idle
Jump
Conditions
jump

1

2


Inspector
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Jump -> Idle
1 AnimatorTransitionBase
Transitions
Solo
Mute
Jump -> Idle
Jump -> Idle
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Jump
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Conditions
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Preview
2D
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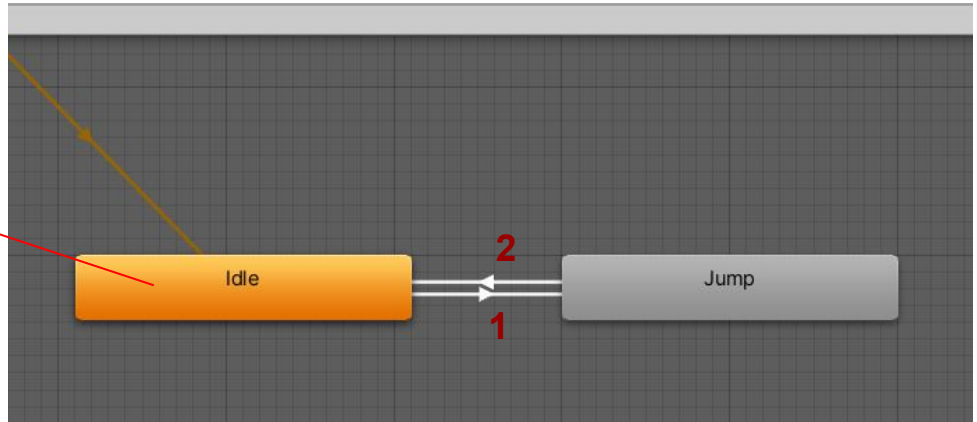
Idle
Jump
2
1

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Adding a script to handle characters

Add Component -> New Script [nameOfClass]

```
public class proc : MonoBehaviour
{
    Animator m_Animator;

    void Start()
    {
        m_Animator = gameObject.GetComponent<Animator>();
    }

    void Update()
    {
        if (Input.GetKey(KeyCode.UpArrow))
        {
            m_Animator.SetTrigger("jump");
               }
               else
               {
            m_Animator.ResetTrigger("jump");
        }
    }
}
```

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How to use the physic?

1) add a 3D object (eg. a ball) and a cube (imitating the floor) to the scene;
2) add *rigidBody* component to the ball and set *mass* parameters
3) add *rigidBody* component to the floor and add *Is Kinematic* (fixed object) - check what happens in VR
4) add new *Physic Material* [bounciness: 0.8] and use them to all colliders (floor and the ball) - check what happens in VR

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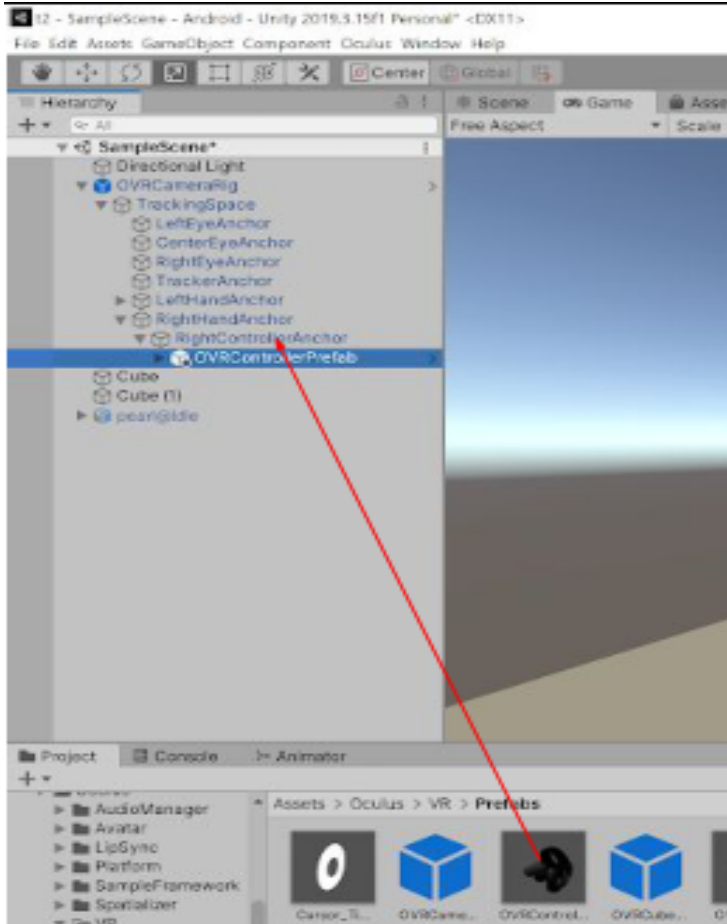
Interactivity

1) add OVRControllerPrefab to RightHandAnchor and to LeftHandAnchor (drag and drop method) and check the results in VR;
2) add two spheres to the scene with the spatial location according to zgodną z location of RightControllerAnchor i LeftControllerAnchor;
3) add *RigidBody to both* spheres, make sure if both spheres have *Sphere Collider*. Check the results in VR - if it works correctly, turn off the sphere shell rendering in the project - uncheck the *Mesh Renderer* switch)