



# B-INN-000 - Workshop: Face AR

## AR/VR Workshop: Face AR

It **V**irtually **R**uns!





# AR/VR Workshop: Face AR

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Language: C#

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**Your repository must contain all of your source files but NO useless files.**

No, you won't find long and useless pages here. Let's begin exercise #1.

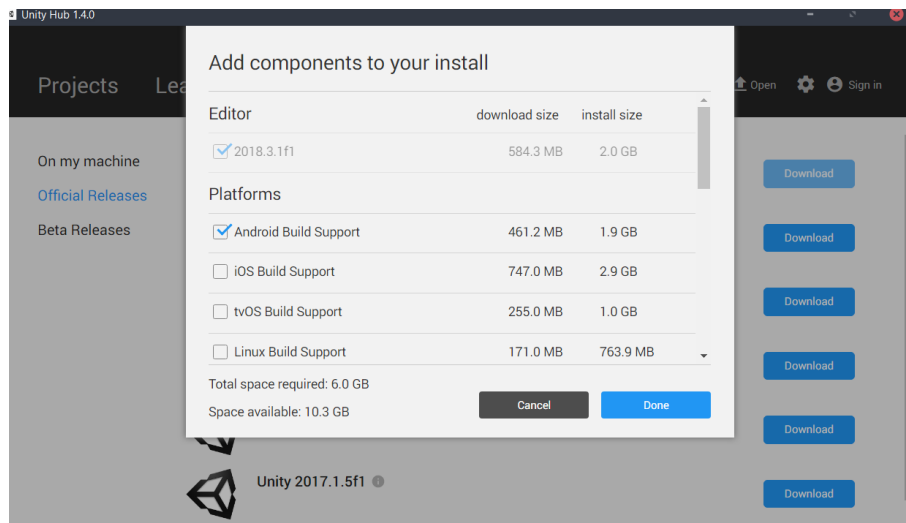


## Exercise 00: Installation

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Download Unity Hub : <https://store.unity.com/download>

Download Unity 2019.x or after with android package (on unity hub)



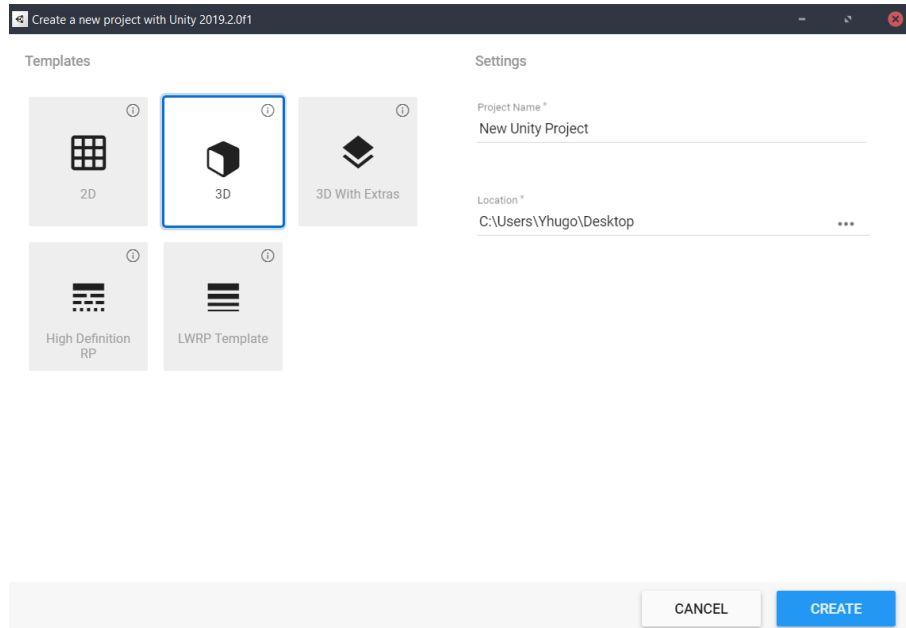
Download android studio if it's not installed



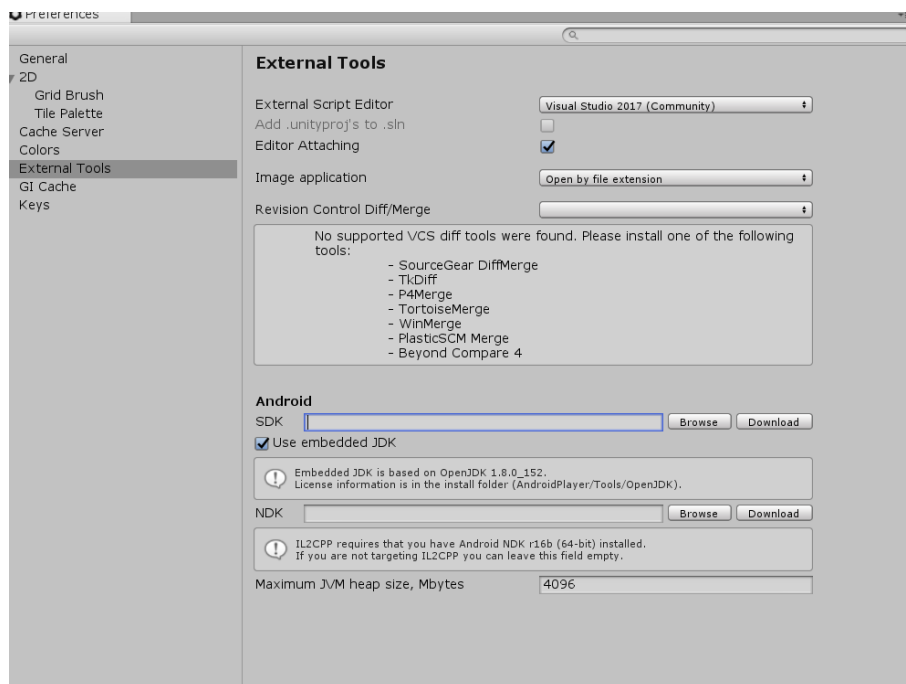
**Watch out where you install Android SDK**



## Create a unity project in unity hub with a "3D" template



Link Android sdk with unity: Go to edit->preference->external tool and set android sdk path





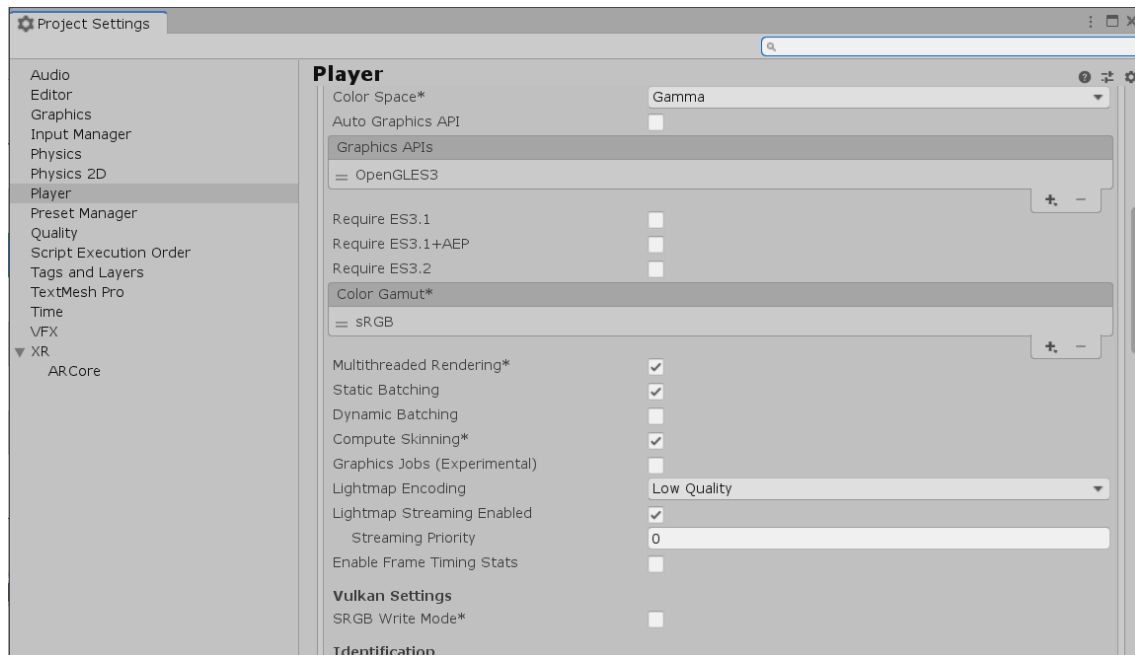
Set up the project setting for build an android project Switch the build setting to Android

Got to window -> packageManager and install:

- AR Foundation 2.1.1
- AR SubSystems 2.1.0
- ARCore XR plugin 2.1.1

Go back to the build setting and Set the player setting to :

- Other setting :
  - Package name to com.poc.ARVRWorkshop
  - Minimum API level to 24
  - Target API level to your phone
  - delete Vulkan in graphic API





## Exercise 01: Scene Set up

Create a new scene name "AR Scene" do the basic set up of an AR Foundation scene and build the scene on your phone **Prof Zone** :


- Create scene
- Go to **DOC**
- Add AR Session
- Add AR Session Origin
- Build Setting add the open scene

 You can go to AR foundation documentation getting started ;)

## Exercise 02: Face tracking

Set up your scene for face tracking **Prof Zone** :

- Go to **DOC**
- Add face manager on the AR default session origin
- Add default AR face
- set default AR face in face tracking manager

 if you don't understand the documentation for face tracking look plane tracking first

## Exercise 03: Create Ball Button

Add a Ui button when this button is clicked he instantiate ball **Prof Zone** :

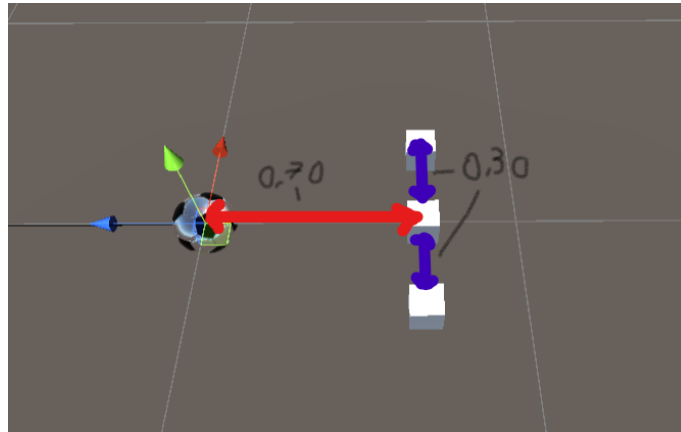
- Go to **DOC**
- Create UI button
- Create prefabe BALL from ball material and a sphere
- create a public script Ball Spawner
- create public GameObject var ball
- create Onclick() function
- instantiate( Ball, transorm) in Onclick
- set up the button



⚠ look to button documentation in the unity documentation

## Exercise 04: Life without aim is sad

create 3 box at -0.70 Z from the ar-origin and 0.10 x from each box





## Exercise 03: Trow the ball

Throw the ball to a random box position **Prof Zone** :

- Go to **DOC**
- add component Rigidbody to Ball prefab
- desactivate gravity to Rigidbody
- create a script on ball : Throw
- create public GameObject[] target
- create public Rigidbody rigidBody
- add to On start a random between 0,2 who determine thebox focused
- rigidBody.move target.transform.pos / 100

 look to the rigidBody Unity documentation

## Exercise 04: breaking balls


Destroy the ball when it collide with the face or the box **Prof Zone** :

- Go to **DOC**
- set Ball collider trigger to true
- add OnTriggerEnter(collider other) to Throw
- destroy(this) M

 you may Use a triggered collider

## Exercise 05: Bonus

create a button ui, when you click this buttun change the face of material of the tracked face

 you may Use a triggered collider