Summary

1 Introduction

Thank you for purchasing 2D NextGen Platformer Environment : 3 environments pack

2D NextGen Platformer Environment documentation contains everything you need to get started.
If you have any questions, please contact us at **tropicalstudio3d@gmail.com**

How to use 2D NextGen Platformer Environment:

- Read chapter 2 (Settings needed to use this asset).

- Open demo scene to see example scene.
NG_Env → Demo → Demo_Canyon
NG_Env → Demo → Demo_Desert
NG_Env → Demo → Demo_Tropical

Move : Arrows Keys
Jump : Spacebar key

- Read Chapter 3 to take full advantage of the possibilities of 2D NextGen Platformer Environment asset. link

- An « automatic Order in layer » script is included in this asset. This script is a real timesaver tool. To learn how to use this script read chapter 3 Tutorial Part 4 : Auto layer of order script link

- Effects enhance the quality of the final image (only for desktop).
Read chapter 4 to learn how to add effects to the camera. This chapter also suggest effects presets. link

- If you want to export to mobile read chapter 5. link

- For a new scene preferably use a starterkit scene .
All you need to start scene is set (Layer position, particles, auto « order in layer » script ,demo camera, demo character)

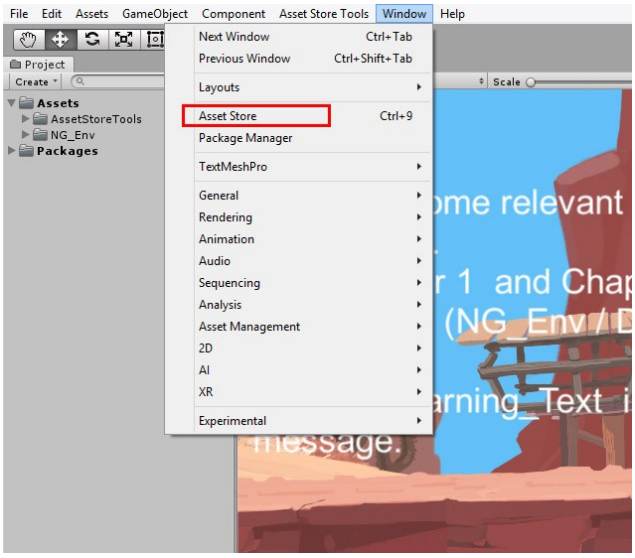
NG_Env → Assets → Scenes → Starterkit_Canyon
NG_Env → Assets → Scenes → Starterkit_Desert
NG_Env → Assets → Scenes → Starterkit_Tropical

- Sprites in prefabs folders are ready to use (Colliders, Tile ...)

NG_Env → Assets → Prefabs → Prefabs_Canyon
NG_Env → Assets → Prefabs → Prefabs_Desert
NG_Env → Assets → Prefabs → Prefabs_Tropical

2 Settings

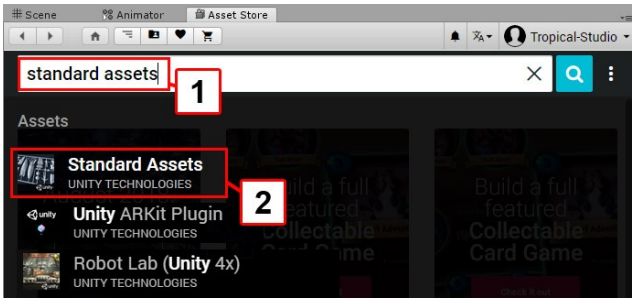
1 Go to Window → Asset Store



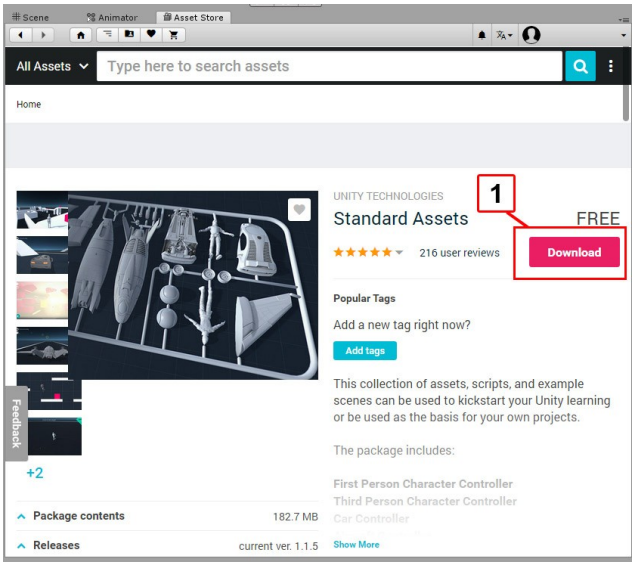
2 You need to log in

2 Search Standard assets (spot1)

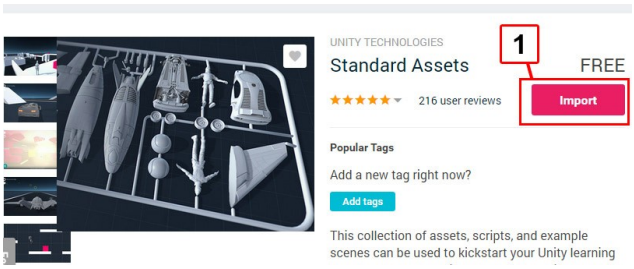
3 Press on Standard assets icon (spot2)



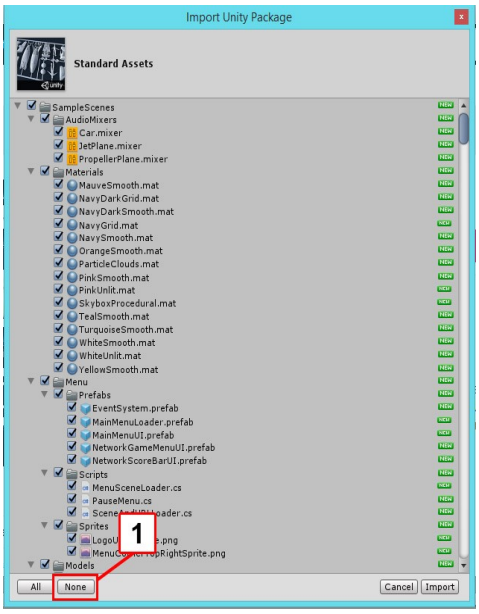
4 Press button Download (spot1)



5 Press button Import (spot1)



6 Press button None to deselect all (spot1)

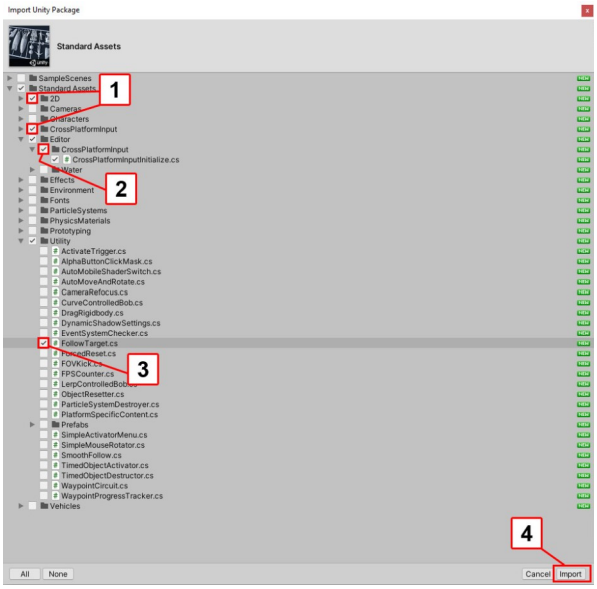


7 Select 2D + CrossPlatformInput (spot1)

8 Select <u>in Editor folder</u> CrossPlatformInput folder (spot2)

9 Select <u>in Utility folder</u> FollowTarget.cs (spot3)

10 Press button Import (spot4)



Important :

Sometimes character doesn't work because Unity doesn't refresh connection.
To solve the problem :
- Quit Unity
- Open the project again.

3 Tutorial

Part 1 : Overview

Tips :

For a new scene preferably use starterkit scene.
All you need to start scene is set (layer depth position, particles, auto « order in layer » script ,demo camera, demo character)

NG_Env → Assets → Scenes → Starterkit_Canyon
NG_Env → Assets → Scenes → Starterkit_Desert
NG_Env → Assets → Scenes → Starterkit_Tropical

- Sprites in prefabs folders are ready to use (Colliders, Tile …)

Prefabs are sorted by type of environment.

NG_Env → Assets → Prefabs → Prefabs_Canyon
NG_Env → Assets → Prefabs → Prefabs_Desert
NG_Env → Assets → Prefabs → Prefabs_Tropical

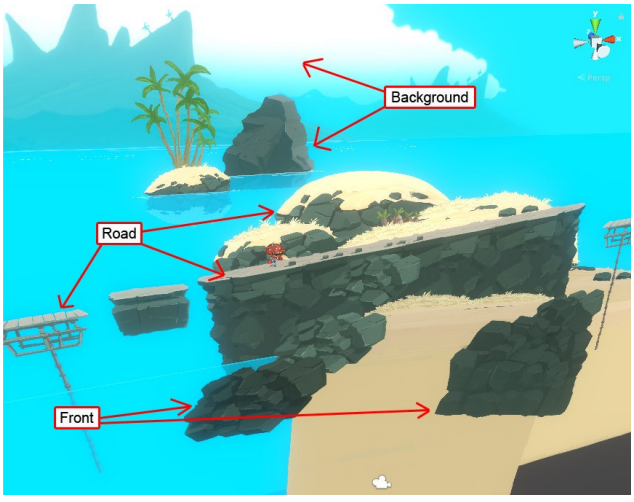
1 Open Starterkit_Tropical scene.

NG_Env → Assets → Scenes → Starterkit_Tropical

We can divide the depth into 3 categories :

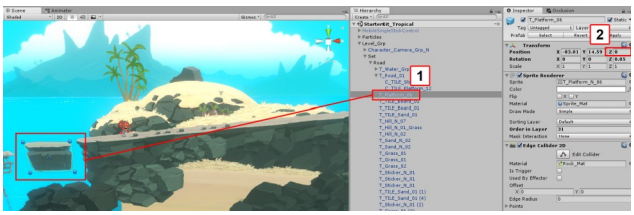
- Road : the platforms on which the player moves.
- Background : objects that are far behind the character.
- Front : objects that are in front of the character.

Tips : Some objects are more suitable for the background, others for the foreground.



2 In hierarchy tab select T_Platform_06 (spot1).

Z position of T_Platform_06 = 0.



Always :
- Put your platforms position : translate Z = 0.
- Verify that sprites rotate X = 0 and rotate Y= 0

(for all the sprites not only the platforms to avoid overlapping problems).

Tips : start doing your level by placing the platforms then add the objects that are in front of the character and the background.

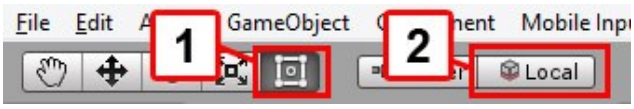
Part 2 : Tiles

1 In hierarchy tab select C_TILE_Platform_12 (spot1).

Level_Grp → Set → Road → T_Road_01 → C_TILE_Platform_12

2 Top left select the fifth icon(Tile tool) (spot 1).

3 Select Local (spot 2).



4 Drag C_TILE_Platform_12 to the right.

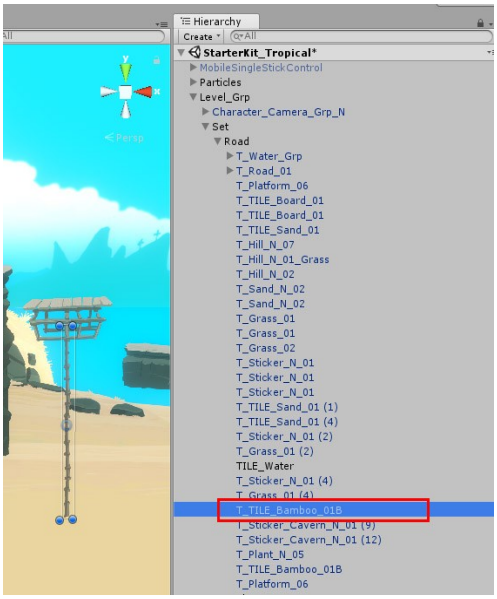
Collider automatically scale too.

In prefabs folder all the prefabs with the prefix TILE are tilable.

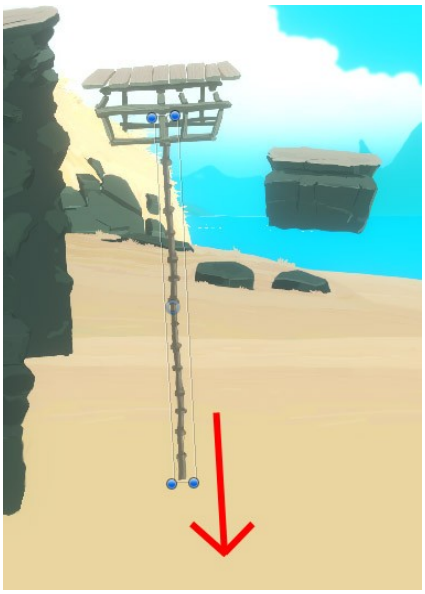
Some are only vertically tilable.
Some are only horizontally tilable.
Some are vertically and horizontally tilable.

5 In hierarchy tab select T_TILE_Bamboo_01B.

Level_Grp → Set → Road →T_TILE_Bamboo_01B



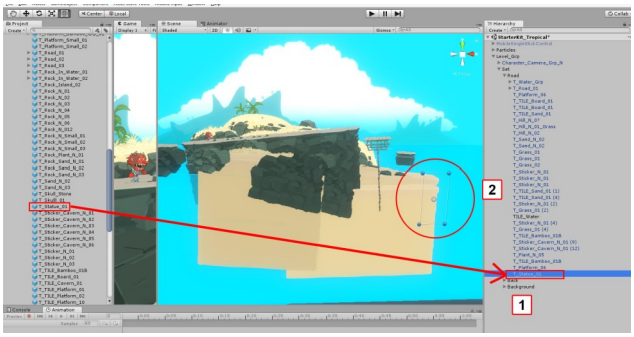
6 Drag T_TILE_Bamboo_01B downwards.



Part 3 : Order in layer concept

1 From project tab drag and drop T_Statue_01 to Road folder in hierarchy Tab (spot 1).

NG_Env → Assets → Prefabs → Prefabs_Tropical



As you can see, although T_Statue_01 object is in front of the sand, it is not visible.

Why ?

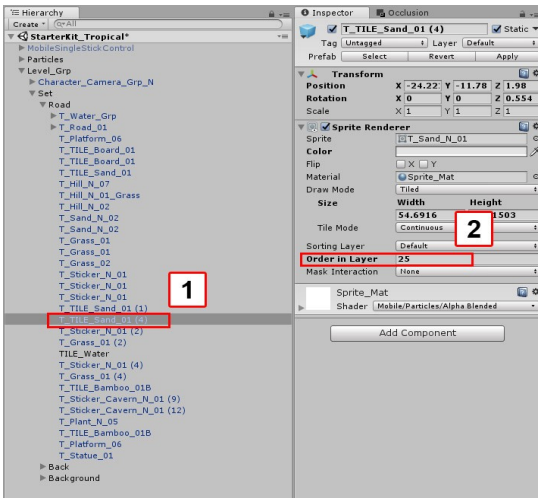
It’s because Order in layer number of

T_Statue_01 sprite is smaller than Order in layer number of the sand sprite.

2 In hierarchy tab select T_TILE_Sand_01 (4) (spot 1).

Level_Grp → Set → Road →T_TILE_Sand_01 (4)

As you can see, Order in layer = 25 (spot 2).

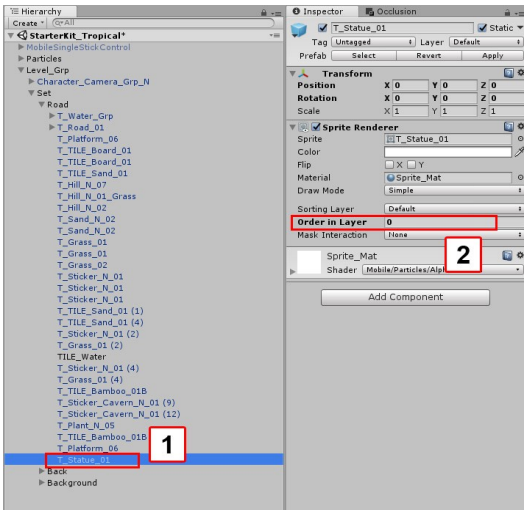


3 In hierarchy tab select T_Statue_01 (spot 1).

Level_Grp → Set → Road →T_Statue_01

As you can see, Order in layer = 0 (spot 2).

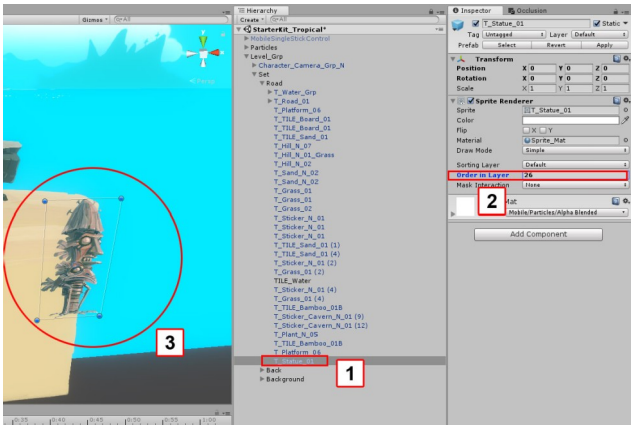
Order of layer number of T_Statue_01 (value = 0) is smaller than Order of layer number of T_TILE_Sand_01 (4) (value = 25)



4 Select T_Statue_01(spot 1).

5 Set Order in layer to 26 (spot 2).

Now T_Statue_01 is visible and in front of T_TILE_Sand_01 (4).



If there are a lot of layers it can become a long and tedious task.

That's why we created a script to do this task automatically.

To learn how to use this script read the next

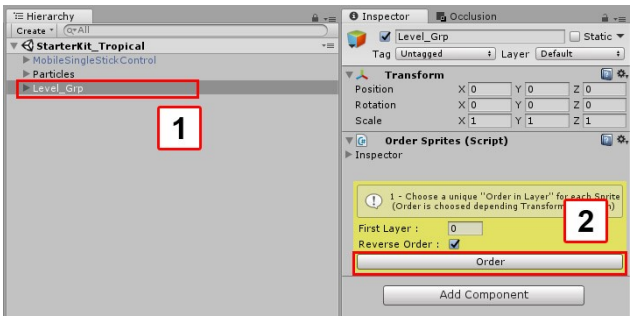
chapter : Chapter 3 Tutorial Part 4 : Auto Order in layer script link

Part 4 : Auto Order in layer script

1 In hierarchy tab select Level_Grp (spot 1).

StarterKit_Tropical → Level_Grp

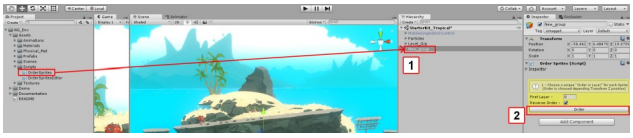
In inspector tab if you click on Order button all objects included in Level_Grp are automatically put in the right order (spot 2).



How it works ?

- Create a new group (rename it for example New_group).
- Put inside your sprites.
- From project tab drag and drop OrderSprites script on New_Group(spot 1).

NG_Env → Assets → Scripts → OrderSprites

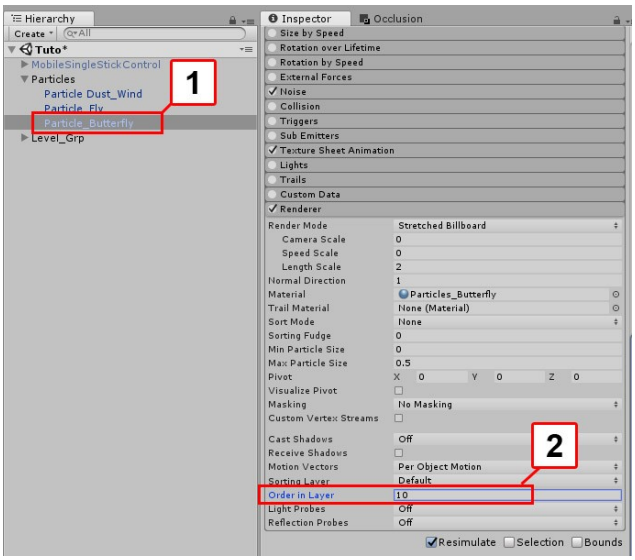


- Click on Order button (spot 2).
All objects included in New_Group are automatically put in the right order.

OrderSprites script assign order in layer value by evaluate distance between sprites.
Then if you have overlapping issue try to move your sprite forward or backward (Z-Axis) then click Order button again.

Tips : After adding a new prefabs or moving in Z an object press Order button.

Part 5 : Order in layer : Particles



For particles you need to set up Order in layer manually.

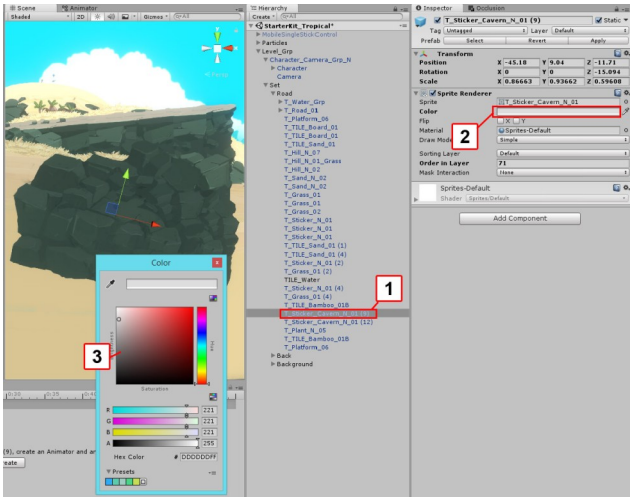
1 In hierarchy tab select Particle_Butterfly.

StarterKit_Tropical → Particles → Particle_Butterfly

2 In inspector tab click on Renderer tab to open it (spot 2).

If particles are not visible or partially hide by other sprites change order in layer value.

Part 6 : Adjust Color



Sometimes it is useful to modify the color of a sprite (for example to darken a sprite which is in the foreground or change the color of the grass).

1 In Hierarchy tab select a sprite (spot 1).

2 Click on color (spot 2).

3 Modify color (spot 3).

Part 7 : Pass through platforms

1 Open Tuto_PassThrough scene.

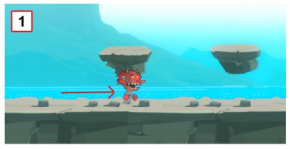
NG_Env → Assets → Scenes → Tuto → Tuto_PassThrough

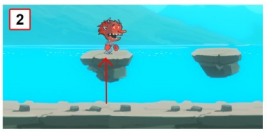
2 Click on play button.

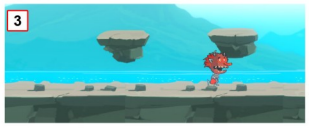
Try to cross both platforms.

Move : Arrows Keys
Jump : Spacebar key

Platform 1 :
- The character is not blocked by platform (spot 1).
-The character can jump through the platform (spot 2).



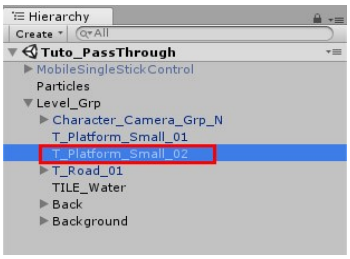




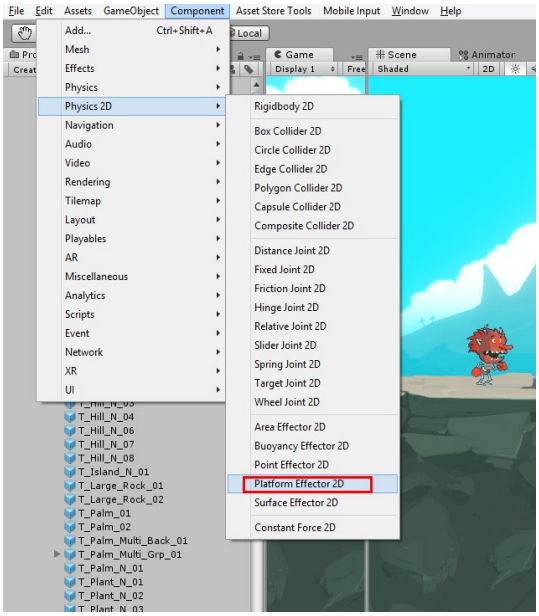
Platform 2 :
- The character is blocked by platform (spot 3).

3 In Hierarchy tab select T_Platform_Small_02 (spot 1).

Tuto_PassThrough → Level_Grp →T_Platform_Small_02

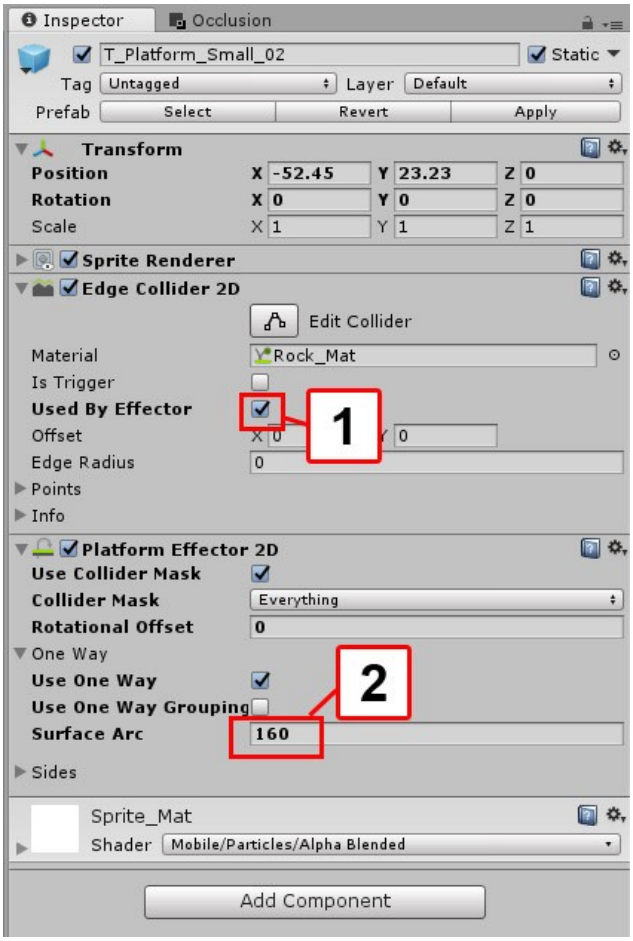


4 Go to Component → Physics 2D→ Platform Effector 2D



5 In Edge Collider 2D script check Used By Effector checkbox (spot1).

6 Optional : In Platform Effector 2D script modify Surface Arc Value to 160 (spot2).



7 Click on play button.

The character can now jump through the second platform.

Part 8 : Create special collider

Sometimes it is better to create only one collider for multiple platforms.

1 Open Tuto_Collider scene.

NG_Env → Assets → Scenes → Tuto → Tuto_Collider

2 Click on play button.

Move character forward.

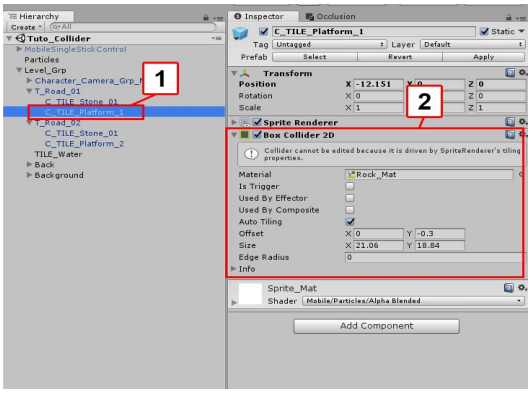
Move : Arrows Keys
Jump : Spacebar key

The platforms collider is not very smooth.

3 In Hierarchy tab select C_TILE_Platform_1 (spot 1).

Tuto_Collider → Level_Grp → T_Road_01 → C_TILE_Platform_1

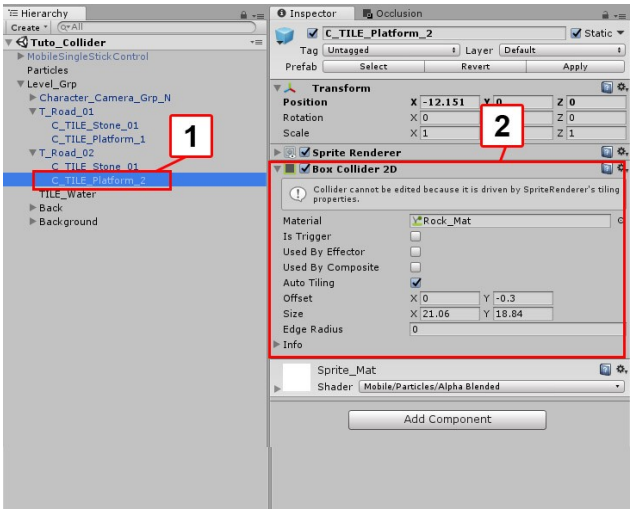
4 Delete Box Collider 2D Script (spot 2).



5 In Hierarchy tab select C_TILE_Platform_2 (spot 1).

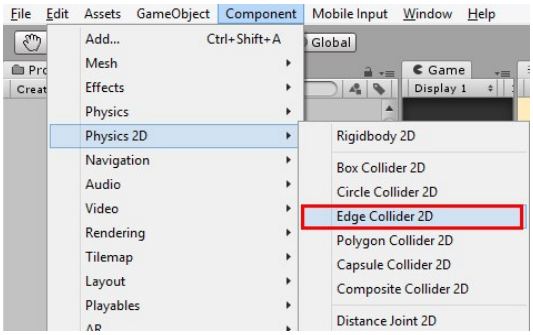
Tuto_Collider → Level_Grp → T_Road_02 → C_TILE_Platform_2

6 Delete Box Collider 2D Script (spot 2).

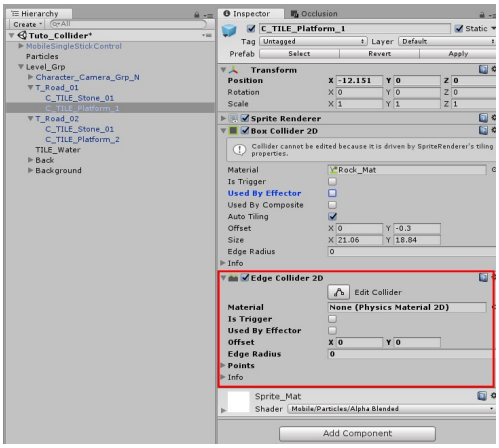


7 In Hierarchy tab select C_TILE_Platform_1.

8 Go to Component → Physics2D → Edge Collider 2D

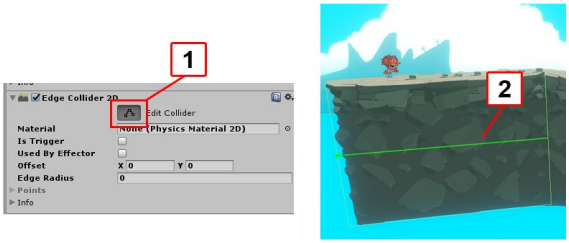


A new Edge collider 2D script is added in inspector tab.



9 Click on Edit Collider button (spot 1).

Collider color change (spot 2).



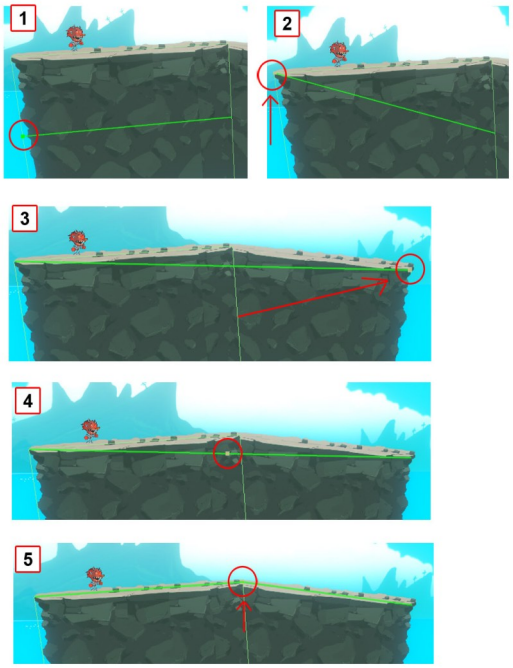
10 Move your mouse above the line at the bottom left (spot 1).

11 Mouse Left click + move upwards (spot 2).

12 Move your mouse above the line at the bottom right.
Mouse Left click + move to the right (spot 3).

13 Move your mouse above the line as shown in the picture (spot 4).

14 Mouse Left click + move upwards (spot 5).



15 Click on play button.

Move character forward.

The platforms collider is smooth.

Tips : add more points to smooth the transition between the two roads sprites.

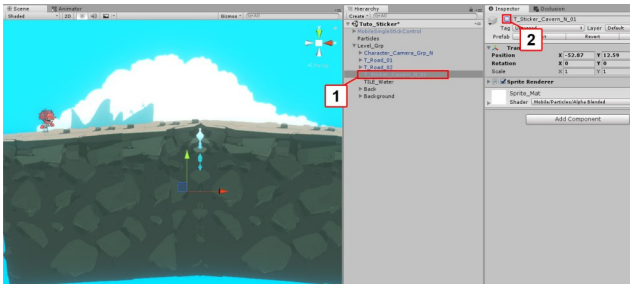
Part 9 : Stickers

1 Open Tuto_Sticker scene.

NG_Env → Assets → Scenes → Tuto → Tuto_Sticker

2 In Hierarchy select T_Sticker_Cavern_N_01 (spot 1).

3 In Inspector tab uncheck visibility checkbox (spot 2).



You can see the result with and without the sticker.

Sticker are really usefull to :
- add diversity to the platform.
- help with the transition between two parts of the platforms.
- add diversity to the foreground.

Open the demo scene to see the example of the use of the stickers.

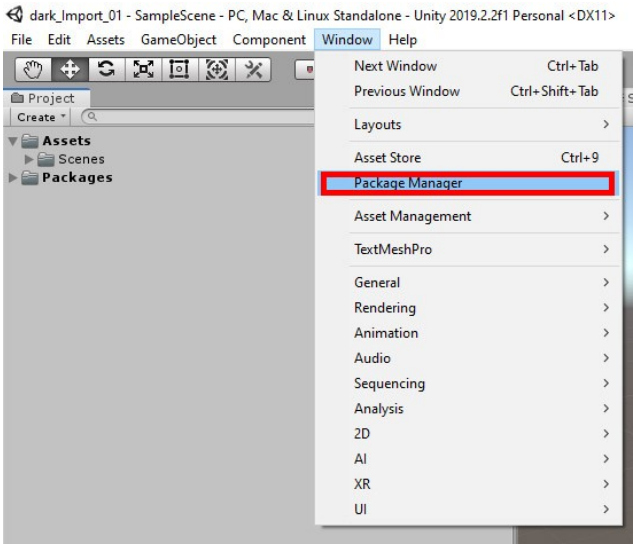
NG_Env → Demo → Demo_Canyon
NG_Env → Demo → Demo_Desert
NG_Env → Demo → Demo_Tropical

Part 10 : Reverse sprite group

To reverse a group of sprite do not rotate at 180°.
Instead of scale X = -1 the entire group.

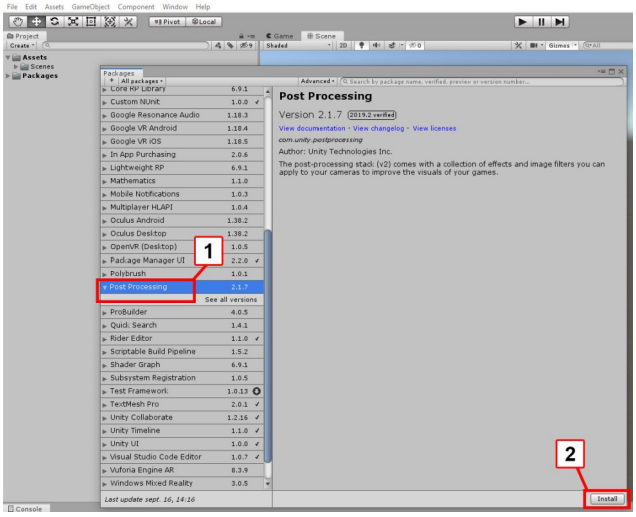
4 Camera Effects (only for desktop)

1 Go to Window > Package Manager



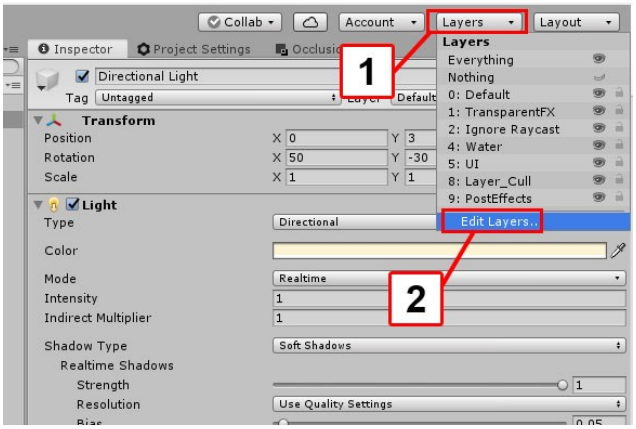
2 Select Post-Processing (spot 1)

3 Press button Install (spot 2)

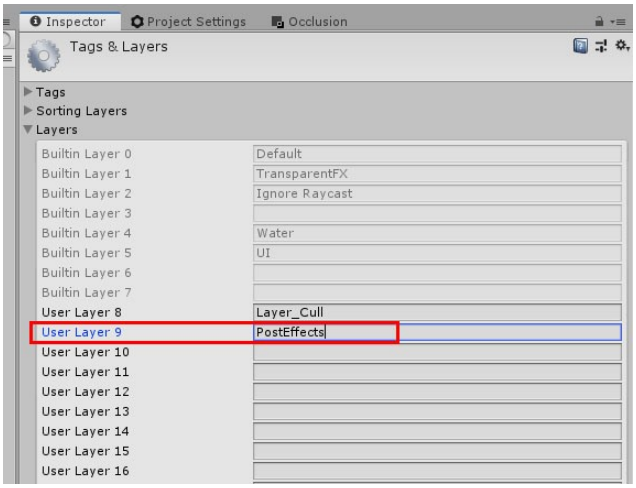


4 Top right select Layer (spot 1)

5 Press button EditLayer (spot 2)



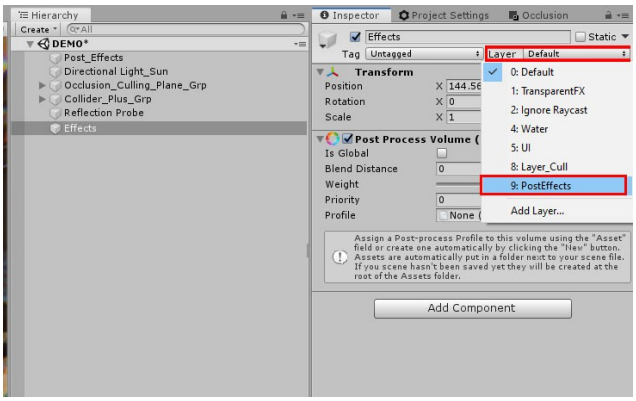
6 Create a new layer
Name it for example : PostEffects



7 In hierarchy tab create an empty object

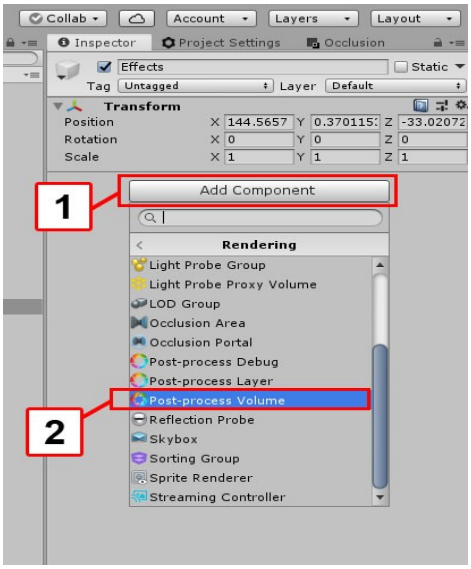
8 Rename it for example : Effects

9 In Hierarchy tab select Effects



10 In Inspector tab press button Add Component (spot 1)

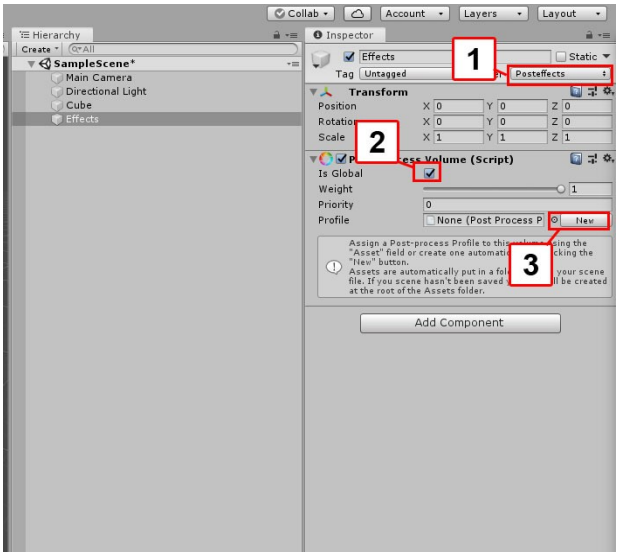
11 Choose Rendering > Post-process Volume (spot 2)



12 In Inspector tab choose layer: PostEffects
(spot 1)

13 Check is global checkbox (spot 2)

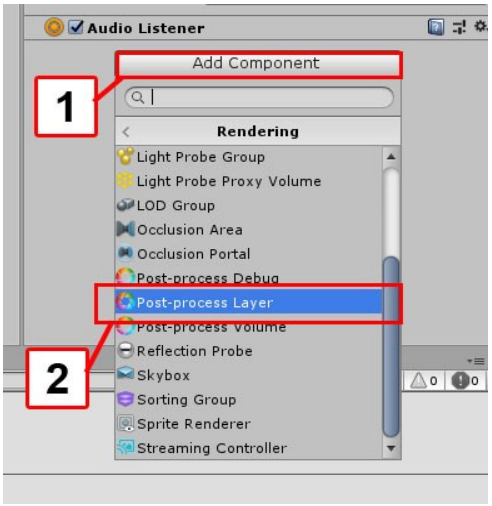
14 press button New (spot 3)
A new profile is create in Project tab



15 In hierarchy tab select your camera

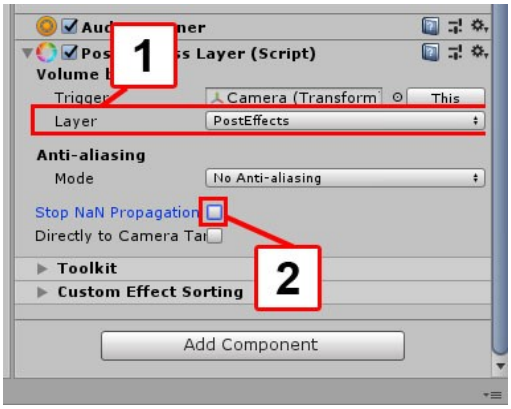
16 In Inspector tab press button Add Component (spot 1)

17 Choose Rendering > Post-process Layer (spot 2)



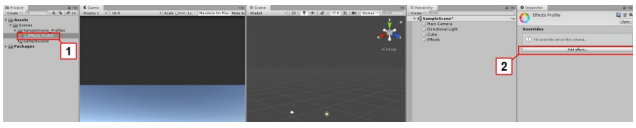
18 Choose Layer > PostEffects (spot 2)

19 Optional : UnCheck Stop NaN Propagation checkbox (spot 2)



20 In Project tab select your post process profile (spot1)

21 In Inspector tab press button Add effect (spot 2)

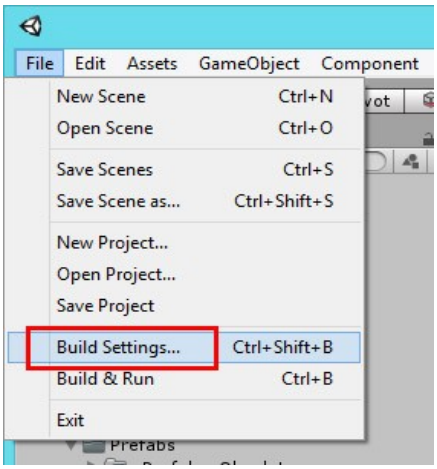


22 Add the effects you want.

5 Export to mobile

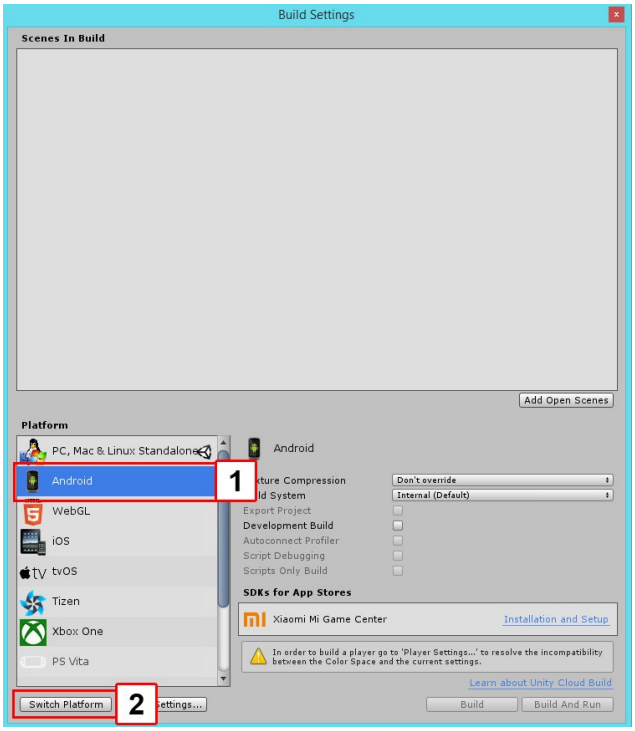
Follow this step to export your project to mobile (exemple for Android)

1 Go to File → Build_Settings.

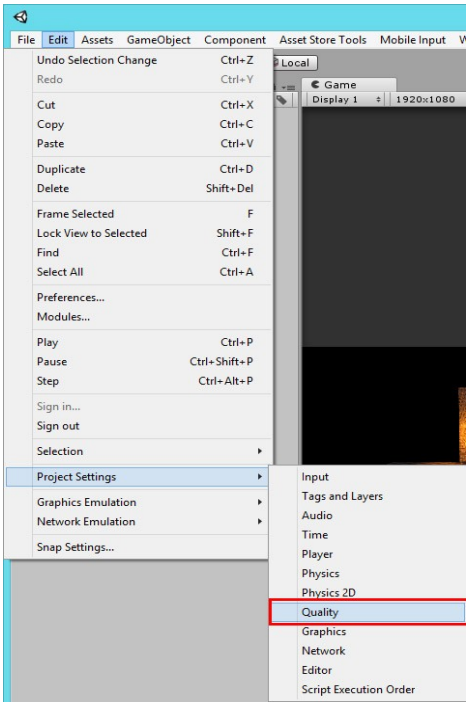


2 Select Android (spot 1)

3 Press button Switch Platform (spot 2)



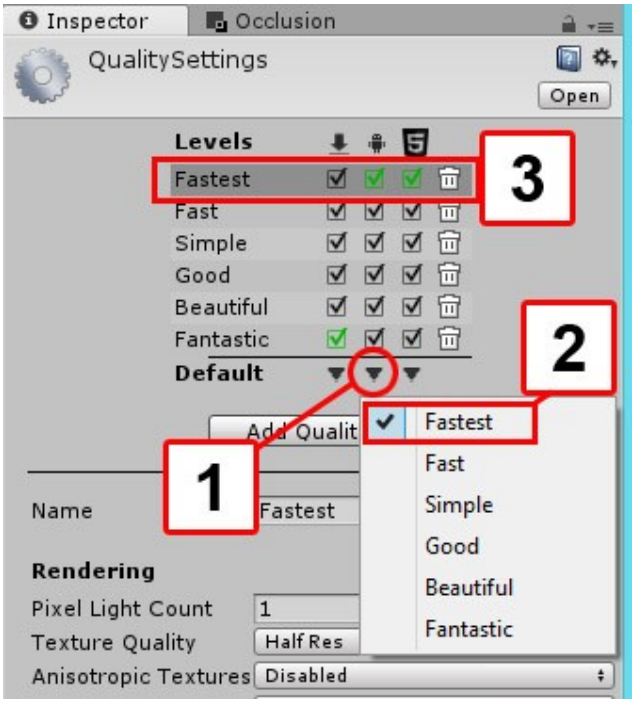
4 Go to Edit → Project Settings → Quality



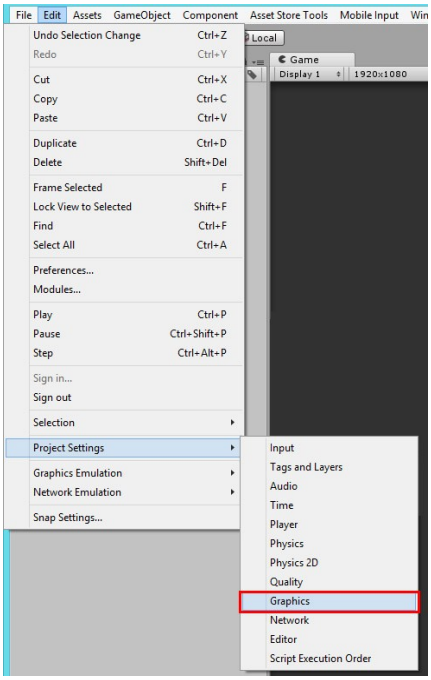
5 Press the triangle (spot 1)

6 Select Fastest to choose fastest when build (spot 2).

7 Press Fastest to choose fastest visualization in unity viewport (spot 3)



8 Go to Edit → Project_Settings → Graphics

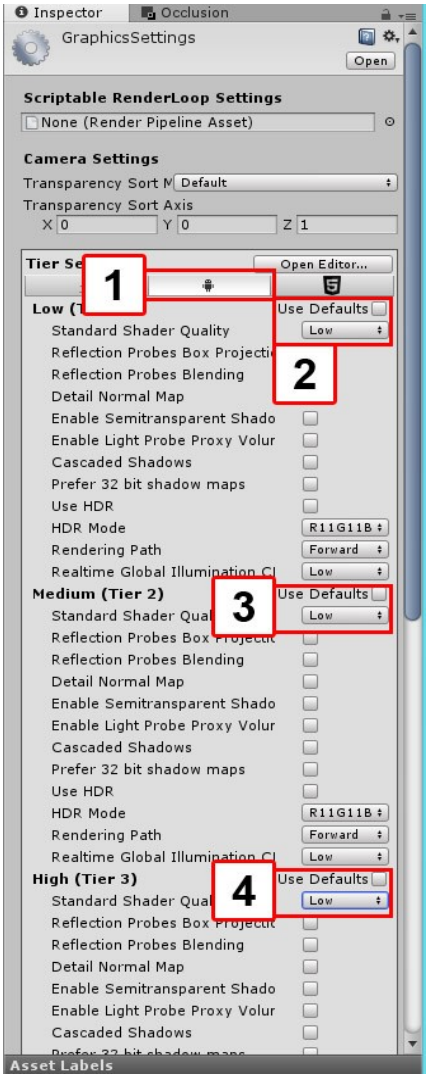


9 Choose Android (press android small icon)
(spot 1)

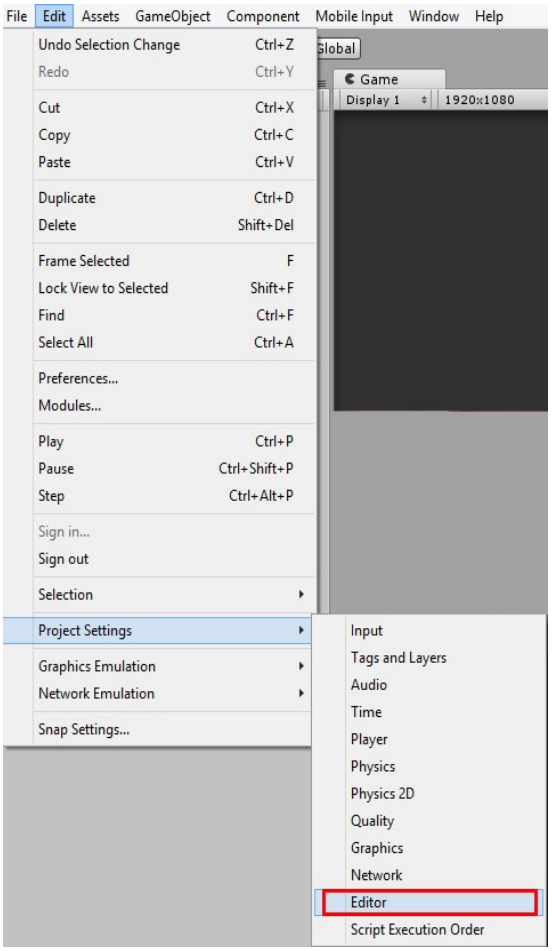
10 Uncheck Use Default checkbox
Then choose Low (spot 2)

11 Uncheck Use Default checkbox
Then choose Low (spot 3)

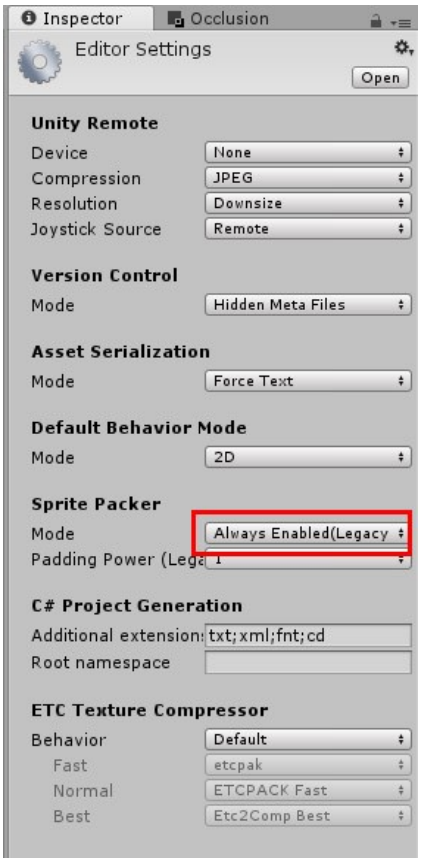
12 Uncheck Use Default checkbox
Then choose Low (spot 4)



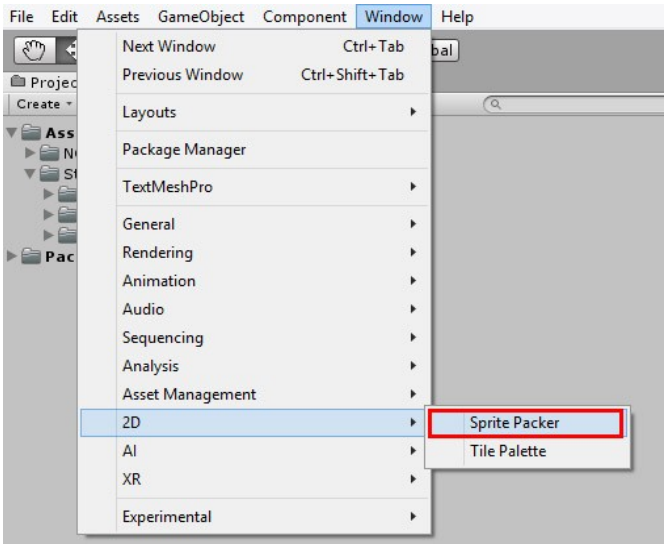
13 Go to Edit → Projects Settings → Editor



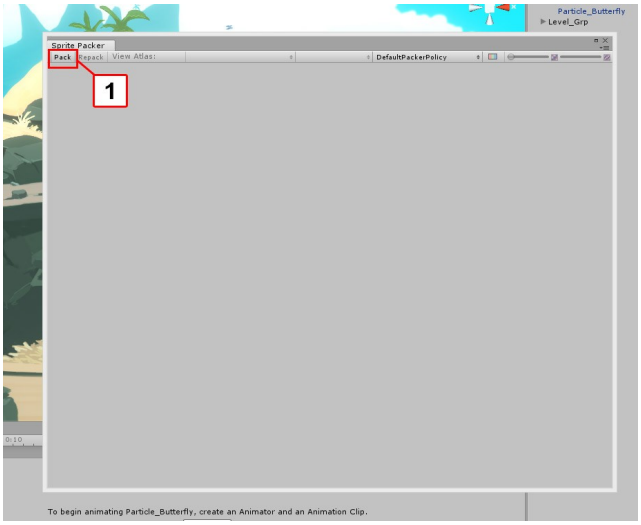
14 Set Sprite Packer Mode to Always Enabled (Legacy Sprite Packer)



15 Go to Window → 2D → Sprite Packer

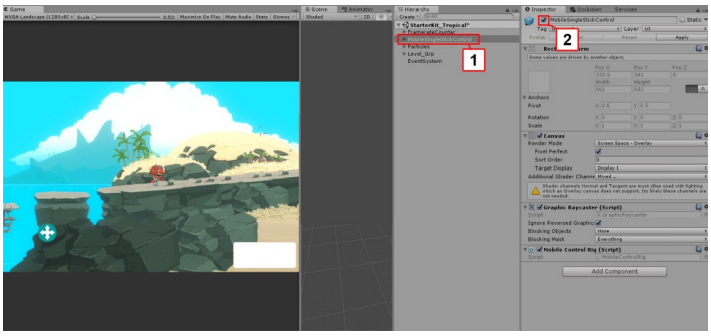


16 Press down the Pack button (spot1).



17 In hierarchy tab select MobileSingleStickControl (spot 1).

18 In Inspector tab check MobileSingleStickControl hide/unhide checkbox (spot 2).



19 If you use Effects on camera delete Post-Processing Behaviour script.

For more informations about Effects read chapter 4 link

You project is ready to export to Mobile platform