PSD to Mobile UI Tutorial

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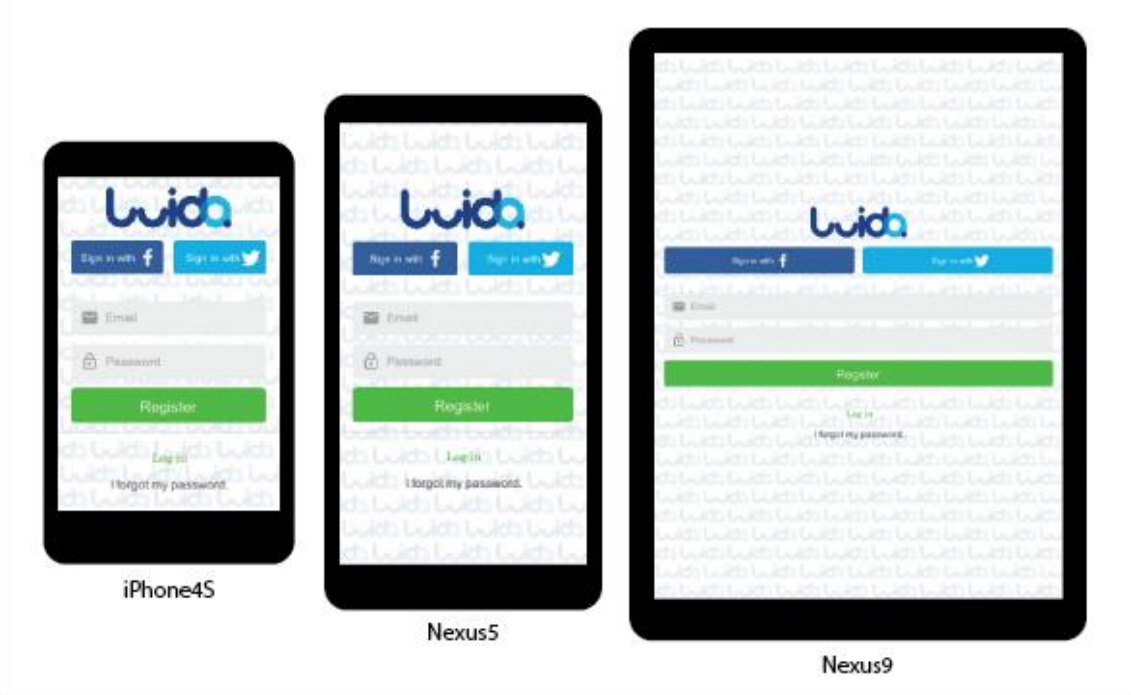
Planning for design

Decide the support devices for the application

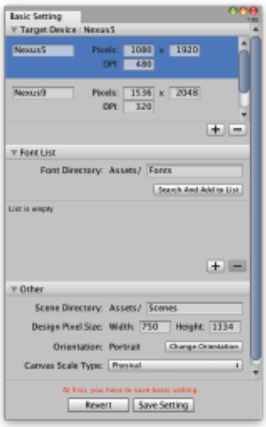
Before start to create application, you should decide the support devices for the application. There are various screen size of mobile phone in the world. For example, iPhone4S has a small screen and Nexus9 has a large one. And many native applications adjust their UI layout fitting the device screen size. Think about a Tool bar on the top of screen, the height of the toolbar at the height of the entire application on Nexus 9 is shorter than that on the iPhone 4. With this package, you can create such application which has responsive design.

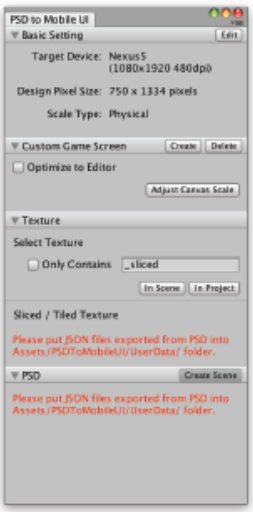


Target Device for design

Please select one device from the devices your application will support. It is recommended to be the medium screen size among the all supported devices. For example Nexus5. It will the target device for design. It means that the appearance on Photoshop is the same as the look on that device.

Import Asset package

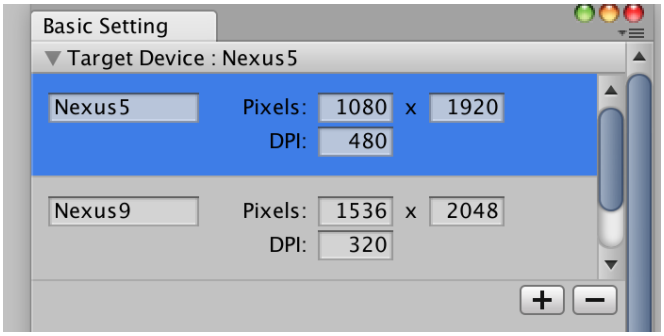

Basic Setting


Main Panel

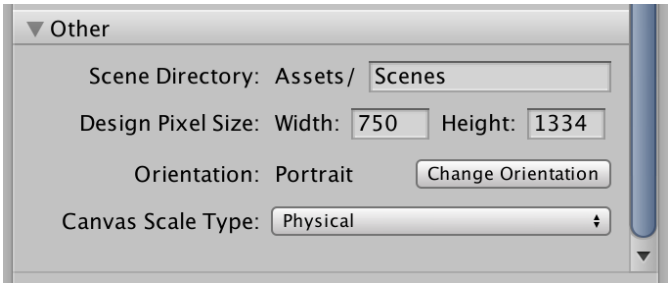
After importing asset package, you will find two panels titled 'Basic Setting', 'PSD to Mobile UI'. 'PSD to Mobile UI' is the main panel of this package. At first, we should do setting on 'Basic Setting'.

Basic Setting

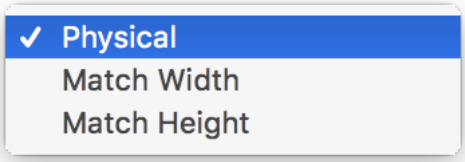
On this panel, we can set the basic setting.



There are default devices in "Target Device' section. You can change them to your devices you want to support. 'Pixels' expects 2 numbers, in order of short side and long side. DPI is dot per inch. You should find the information from the specification of the device.



In 'Other', you decide the directory for scenes. And input the pixels of the Photoshop documents.



Canvas Scale Type contains 3 types.

- Physical (UI layout will be adjusted like a responsive design.)
- Match Width (UI layout will be scaled match the screen width.)
- Match Height (UI layout will be scaled match the screen height.)

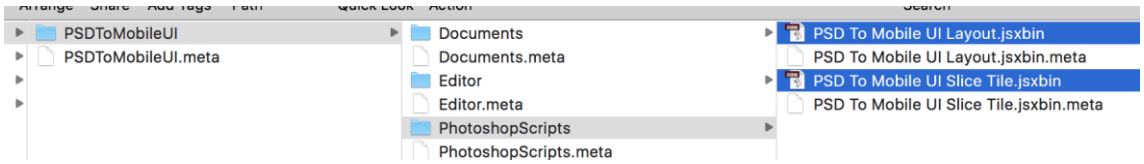
There are other settings, but in this time, please press the 'Save setting' button and close this panel. You can change it later.

Preparation for Photoshop

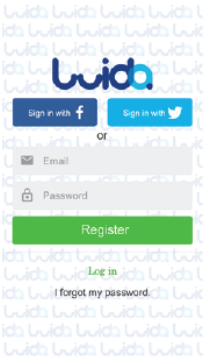
Open the directory of the imported asset package in Finder. You will find two 'jsxbin' files. There are script for Photoshop to export the information of layout and slice/tile setting. To use them, copy to the Photoshop application directory.

OSX: /Applications/Adobe Photoshop XXX/Presets/Scripts/

Win: [Adobe Photoshop Installation Path]¥Presets¥Scripts¥



How to make PSD file

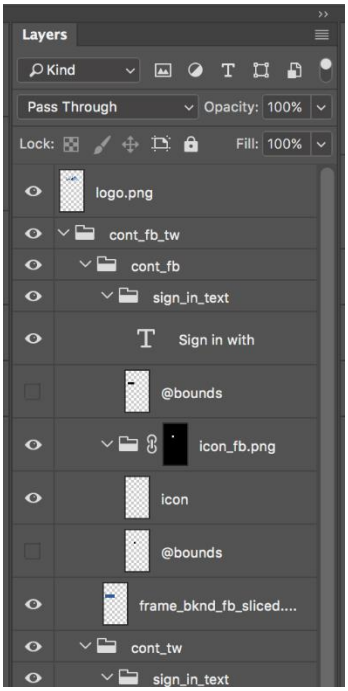


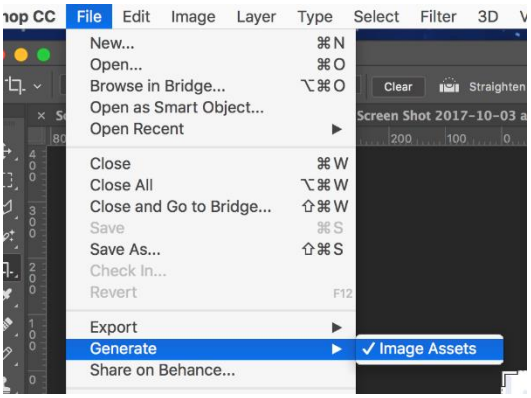
For layout

For slice / tile setting

There are two kinds for PSD file. One of them layout of each scene. Other one is for slice and tile setting. Setting will be exported as JSON file. And export PNG files by the function of Photoshop.

If you name the layer or layer set to the word ended with '.png', you can get PNG files. It is a function of Photoshop.

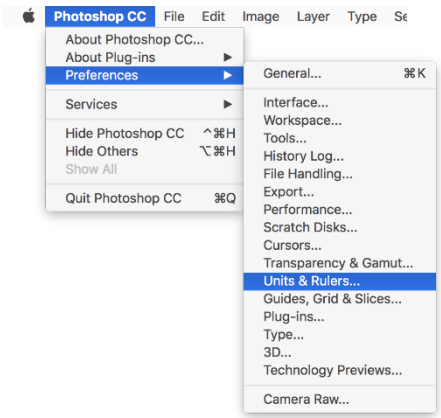


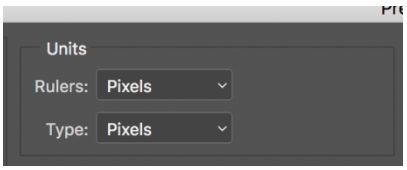


To use this function, Go to File/Generate/Image Assets and check it.

Common rule

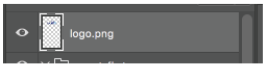
Units & Rulers



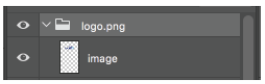


First you need to set Units & Rulers for Photoshop. Open "Preference / Units & Rulers" and make both Units and Type to Pixels.

PNG layer



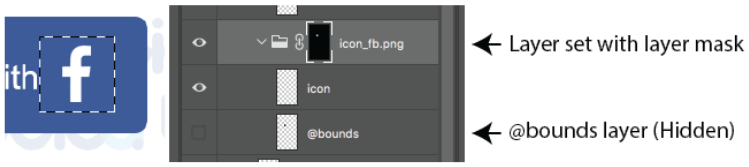
In case of layer



In case of layer set

The layers name ended with '.png' will be a UI parts has Image component in Unity. There is no difference between layer and layer set. The size of 'Rect Transform' is determined by the opaque area of the layer or layer set.

However, there are cases in which UI parts also include transparent areas. For example, buttons and so on. If you want to align the images of the state when 'default' and ' pressed', you can do it by using a special layer name '@bounds'.

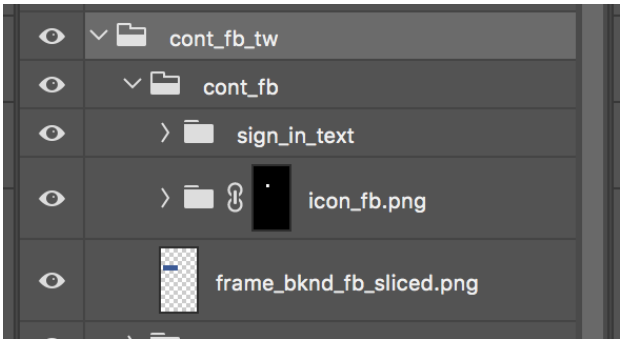


'@bounds' is a layer for specifying an area of UI, filling in a rectangle with a solid color. The color can be anything. Hide it so that it will not be exported to png.

However, if '@ bounds' is hidden, the specified area will not be reflected in png. Make a layer mask with the same size as @bounds.

PSD file for Layout

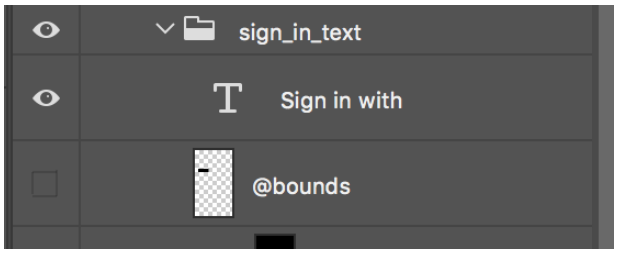
Nested Layer



Nested layer sets will nests UI parts in Unity. A layer set that does no have a special name like png will be a node with only 'Rect Transform' without Image component in Unity. It can also have '@bounds'.

If there is no layer containing UI elements such as images in below or deep hierarchy, that layer set is not included in the export target.

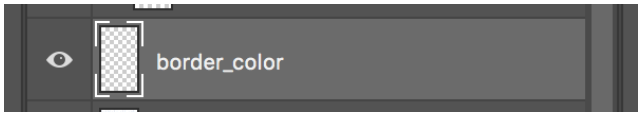
Text Layer



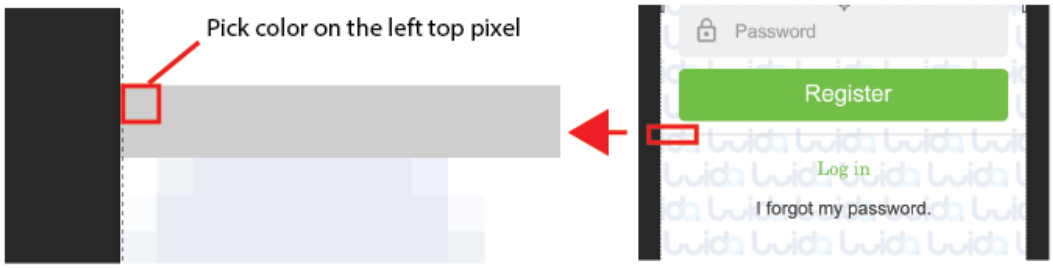
A layer set whose layer name ends with text becomes a Text component in Unity. The text, font name, and font size of the text layer will be read. In order to get the area, align, layer set must include '@bounds'.

The text anchor is determined to be one of 9 depending on the positional relationship between @bounds and the text layer. If it is an ambiguous position it will not be reflected correctly.

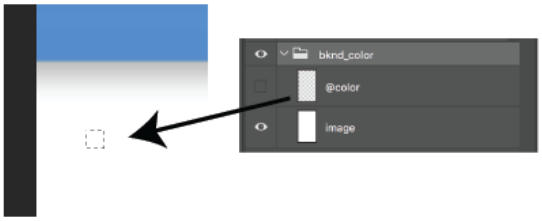
Colored Layer



A layer whose layer name ends with color becomes a filled Image node in Unity. It is useful for borders and backgrounds.



The color of the upper left pixel of the layer will be read.



However, if the upper left corner is hidden in another layer, specify the position to pick the color with the layer named @color. It is an invisible layer painted square like @bounds. One pixel is sufficient for filling, but if it is larger than that, it will be the upper left pixel.

PSD file for Parts

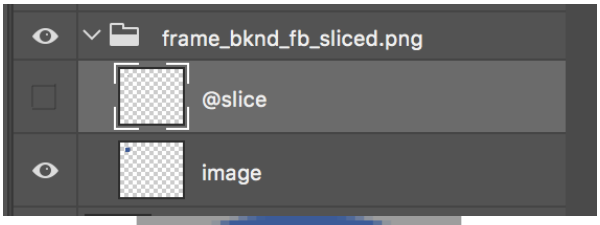
In the UI parts, there are things you want to set 9 slices like rounded buttons, the background you want to fill with a tiling pattern, and so on. If you set these in Photoshop in advance, it can be reflected in Unity UI.

Image in the PSD for layout

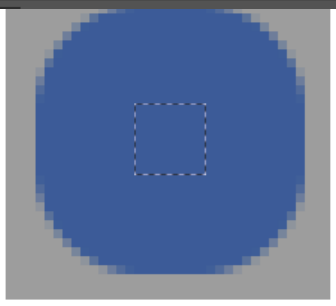
Image in the PSD for 9slice

The PNG layer name should be the same name as one of the PSD for the layout. However, the size is different. For example, 9 slice buttons are not as large as those for layout, so make it smaller.

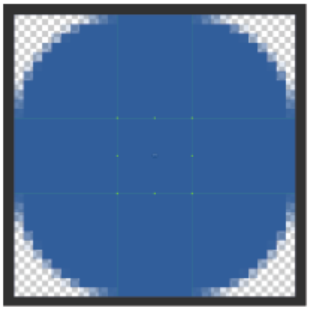
9slice



9 slice can be set by creating a layer named @slice. As in @bounds, it is an



@slice layer range in PSD

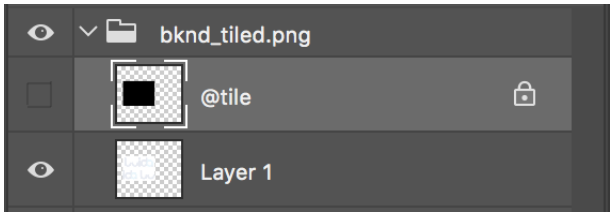


sprite editor in Unity

invisible layer painted solid color, but the filling range is different.

Fill the center rectangular area delimited by two vertical and two horizontal lines of the sprite editor in Unity.

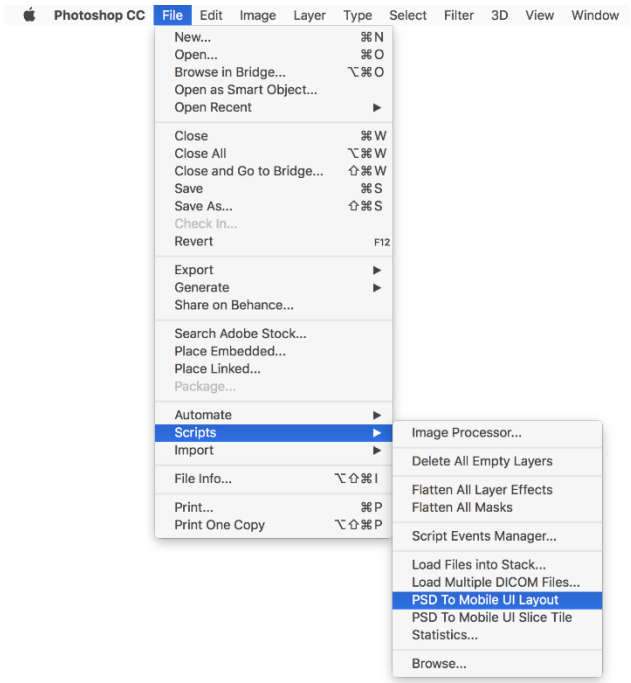
Tile

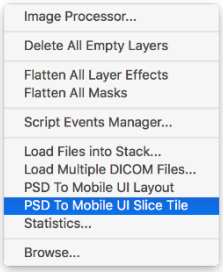


You can set tiles by creating a layer named @tile. The way to make it is exactly the same as @bounds, its name is just different.

Make JSON file

To export a JSON file for layout, open the PSD file for layout and open file menu "File/Scripts/PSD To Mobile UI Layout". Then the script is executed and the JSON file is exported to the same directory as the PSD file. "_layout" suffix is added to the file name of the JSON file.





For Slice / Tile, select "PSD To Mobile UI Slice Tile". Suffix of JSON file is _slicetile ".

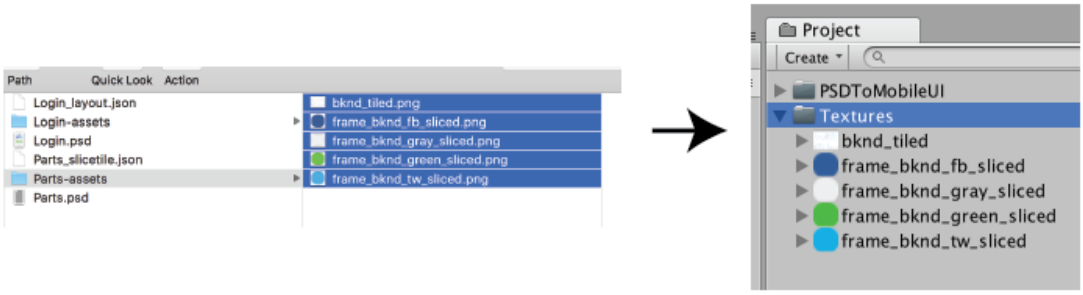
Create new scene in Unity

Bring assets into Unity

PNG files

Prepare a folder for placing textures in Unity project.

PNG files are in the folder with the suffix "- assets" in the same hierarchy as the folder containing the PSD. Copy it to the texture folder.

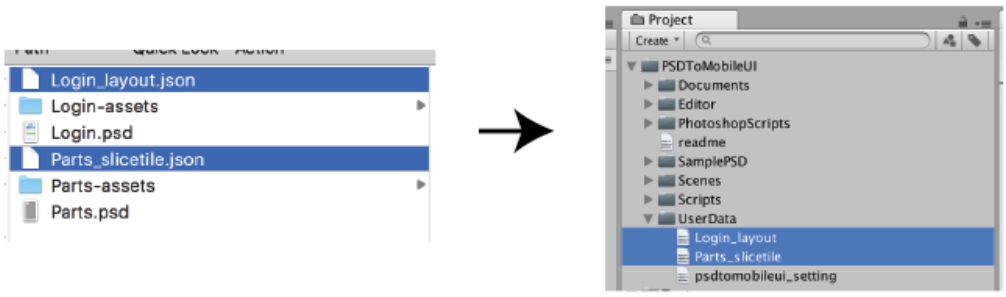


Copy PNG for both 'For layout' and 'For slice / tile'. Be careful that PNG for 'slice / tile' is not overwritten by 'for layout' because it contains the same filename.

The PNG file name must be unique within the Unity project. Do not put textures with the same name in different folders.

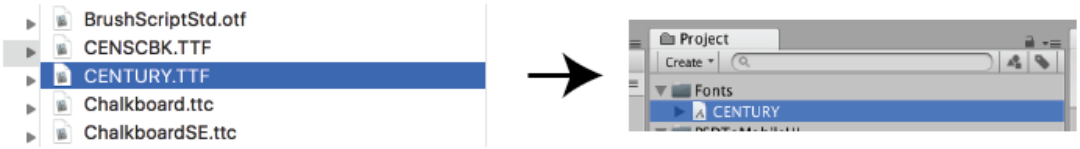
JSON files

Copy the JSON file for layout and slice/tile into the 'Assets/PSDToMobileUI/UserData' of the Unity project.



Font files

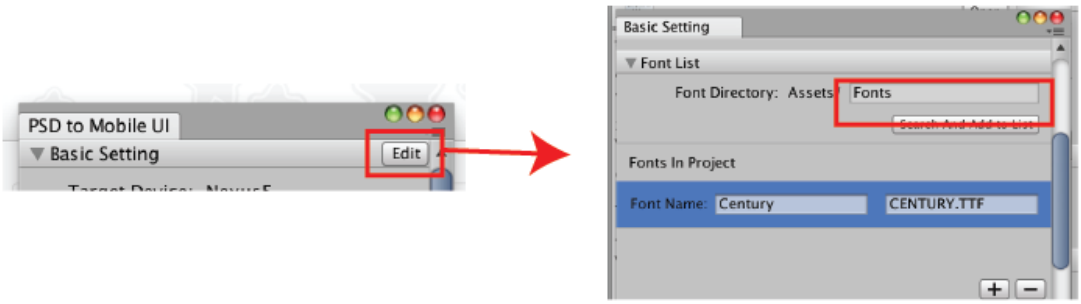
If you want to specify a font other than Arial for the font of the layout PSD text, prepare a folder to put fonts in Unity and copy the font file.

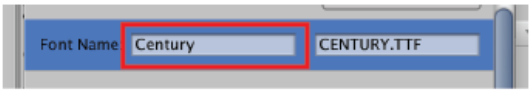


By default, Assets / Fonts is a folder for fonts, but if you want to change to another folder, change it with Basic Setting.

Basic Setting opens with the "Edit" button in the upper right of the main panel. Set in the "Font Directory" of the "Font List" and save with "Save Setting" button.

If you put a font file in the font folder or press the “Search And Add To List” button, font files will be automatically added to the “Font List”.

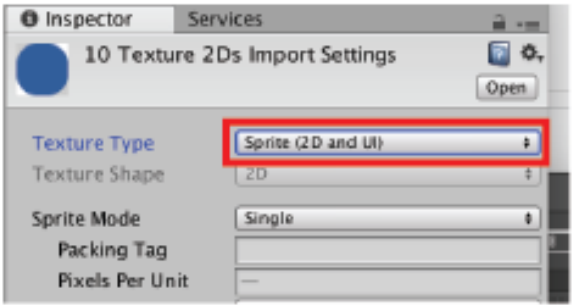


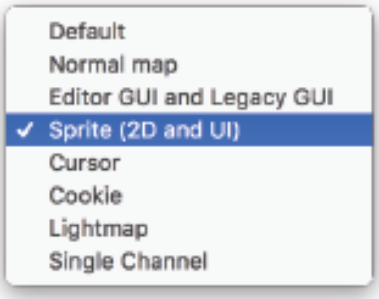


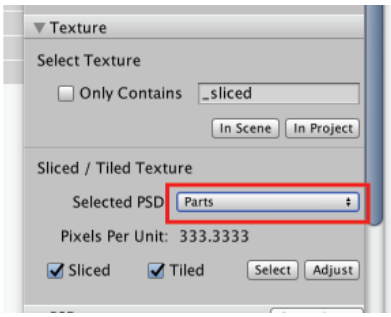
The font name may differ from the font name imported into Unity and the font name in Photoshop. If there is a difference, set the font name same as in Photoshop in the font list.

Adjust texture

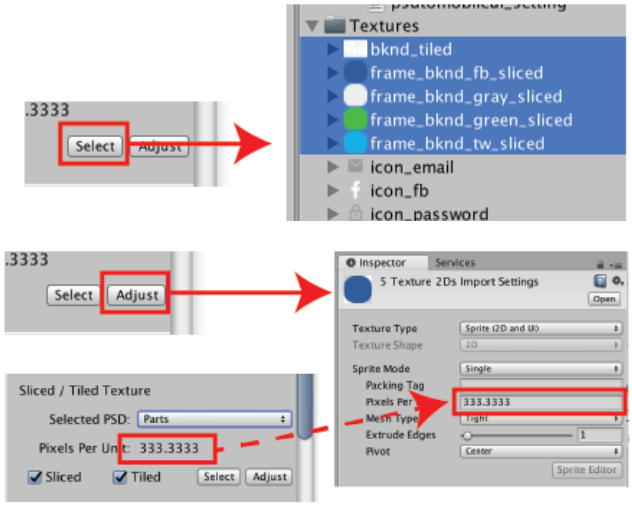
Texture for UI must be set the texture type “Sprite (2D and UI)”. If “Default Behavior Mode” of “Editor Setting” is 3D, change the texture type.







Adjust "Pixels Per Unit" value of the sprite so that the 9slice and tile textures match the resolution of the device.



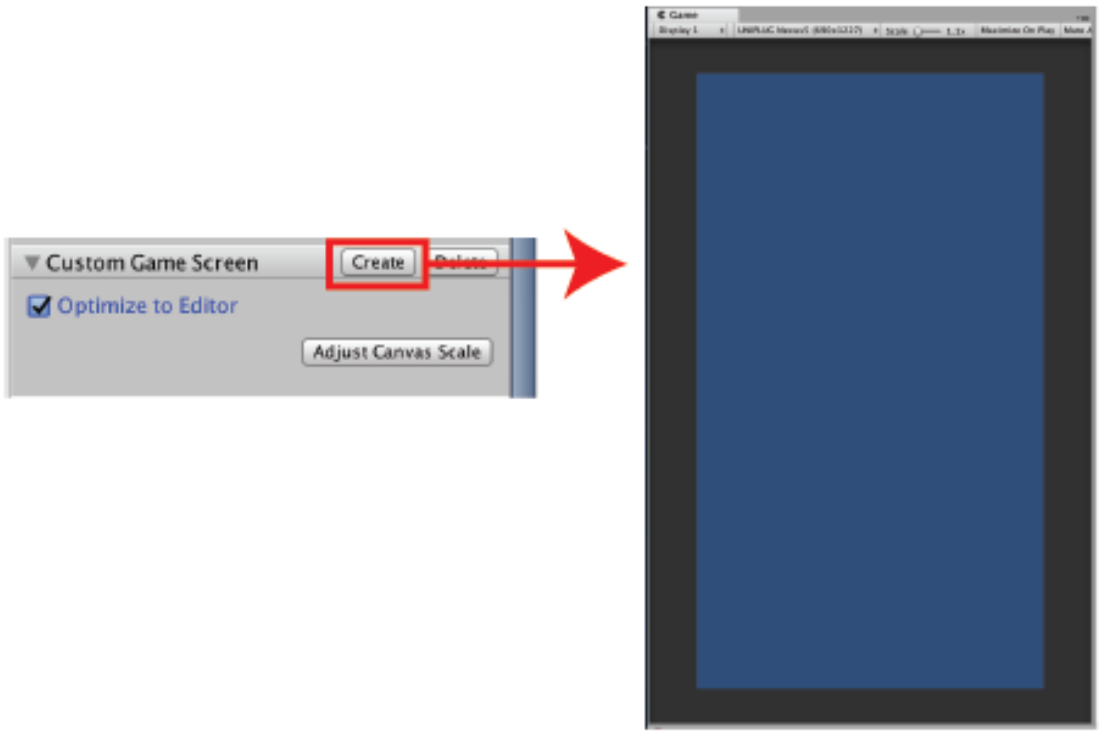
In the pane of “Texture” / “Sliced / Tiled Texture”, select “Selected PSD” and press “Select” button. The corresponding texture in the project is selected.

Confirm that the texture is selected, and press the “Adjust” button. The value of “Pixels Per

Unit” of the selected texture is updated.

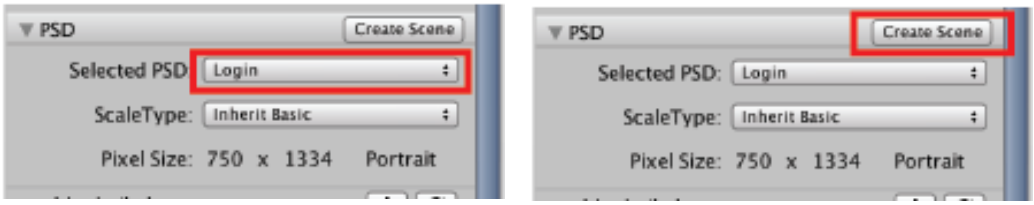
Create Custom Game Screen

Create a game screen so that it looks the same as on the device. By pressing the "Create" button on the “Custom Game Screen” pane, game screens suitable for the devices registered in the Basic Setting is created.

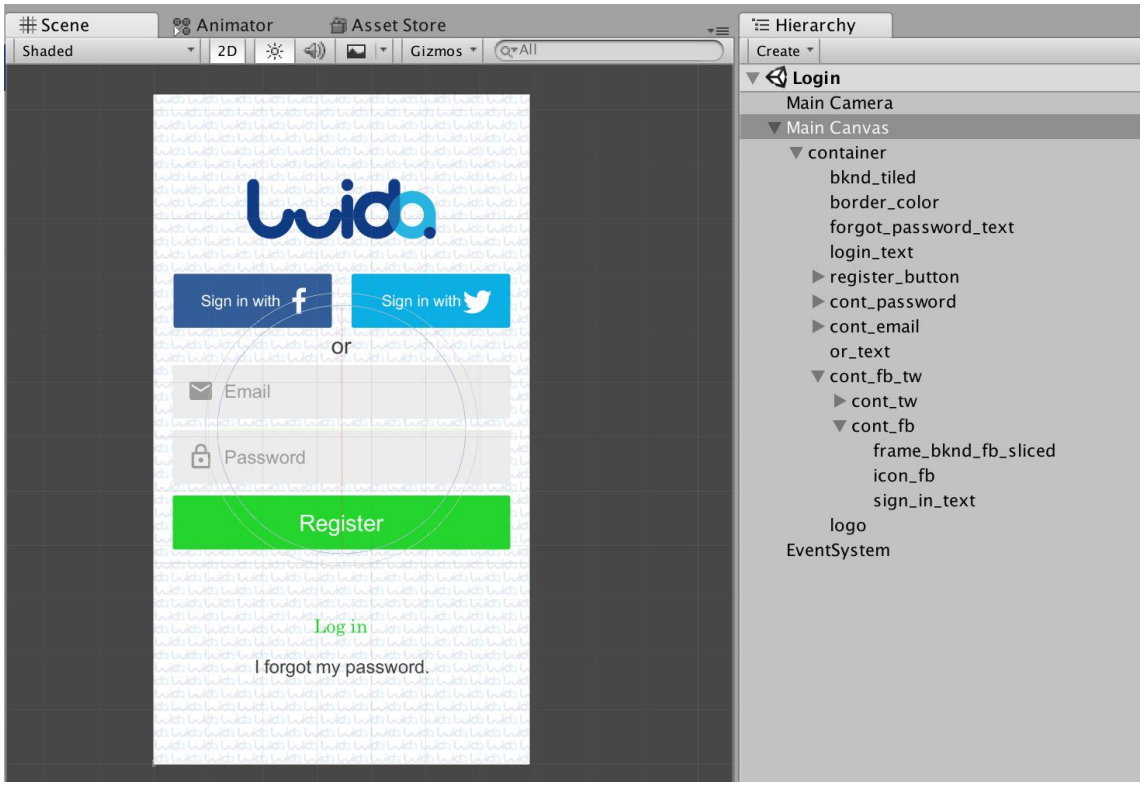


Create Scene

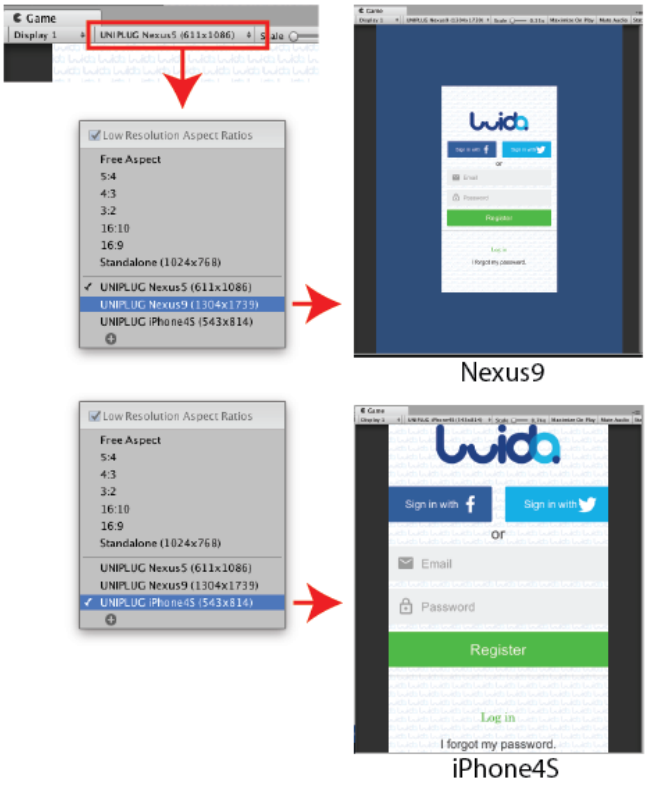
In the PSD pane, select the PSD of the scene you want to create and press the "Create Scene" button.



A new scene is created with the UI parts arranged.



After scene creation

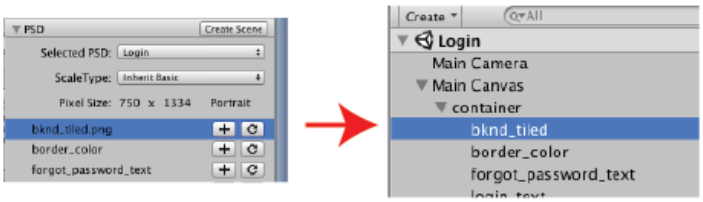


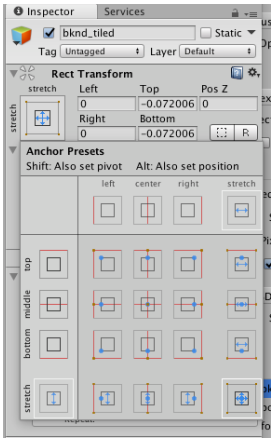
Looking at the automatically generated scene, it looks like it was completed. However, if you switch the game screen to another screen size device, you can see the margin on a big screen like Nexus9, and you cannot display all the screen on a small screen like iPhone4S.

Adjust the Rect Transform of the UI part so that it looks good on every device.

If you select a PSD layer in the main panel, the node with the same name in the hierarchy of the scene is selected.

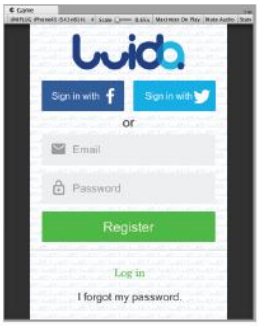
Adjust Rect Transform with Inspector. We will do this for all





necessary UI parts.

Nexus9



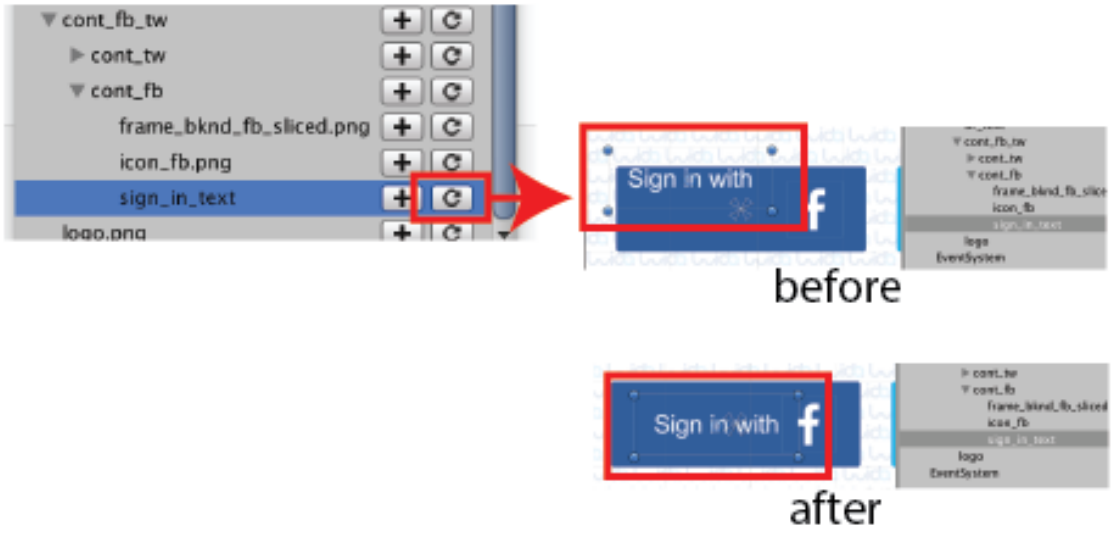
iPhone4S

After the adjustment, the UI will be visible properly on any device.

Update design

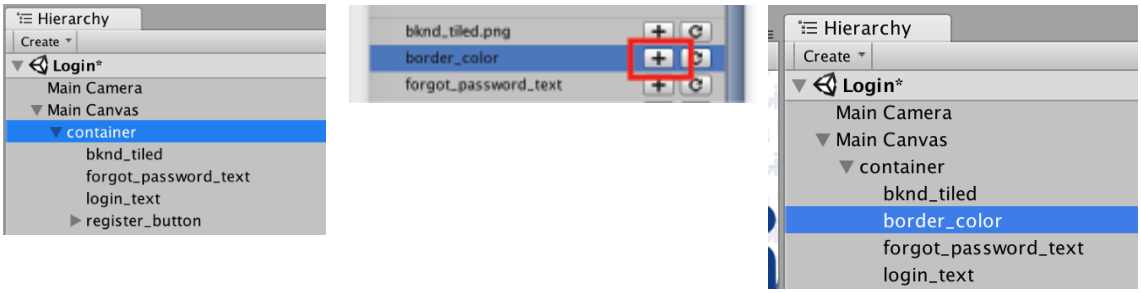
Adjust position and scale of UI parts

It is common for designs to be modified after creating scenes. If you want to adjust the position and size, select the PSD layer and parts of the scene and press the adjust button.



Add new UI parts

If you want to add a new part, select the node you want to place the part from the scene and press the add button on the PSD layer.



Other

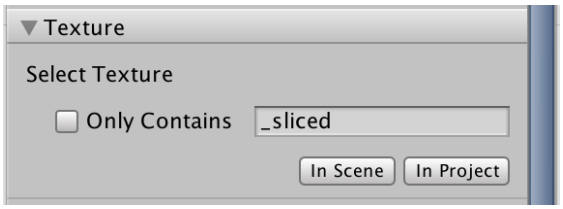
Specify scale type and orientation for each scenes

If you want to set a scale type of a certain scene different from the basic setting, select it individually from the PSD scale type.

Select Texture

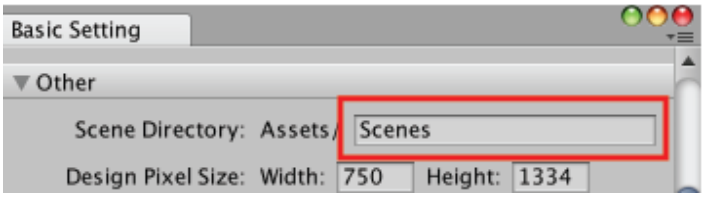
'Select Texture' in the main panel is a tool to select texture in the project.

You can select only the textures used in the current scene or containing the specified word in the name.



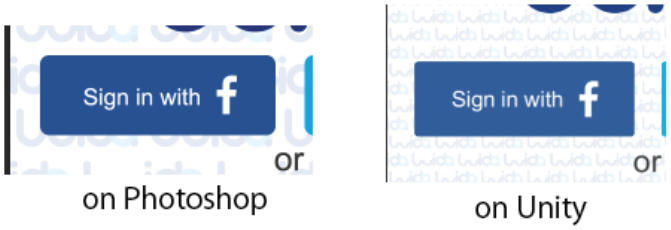
Scene Directory

Newly created scenes are saved in Assets / Scenes, but if you want to save them in other directories, you can change the directory in 'Scene Directory' on Basic Setting.



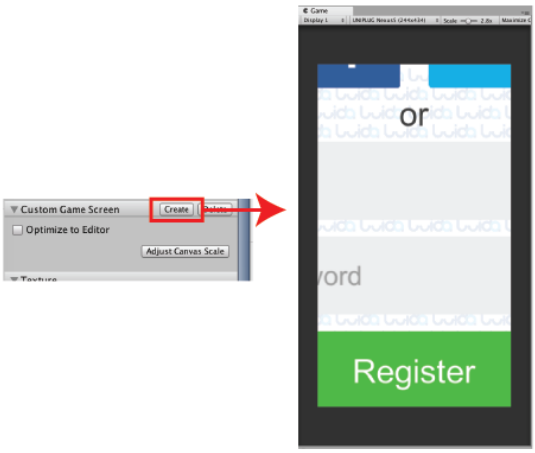
‘Optimize to Editor’ in Game Screen

Looking at 9 slices and tiling, there is a difference between appearance on Photoshop and on the game screen.



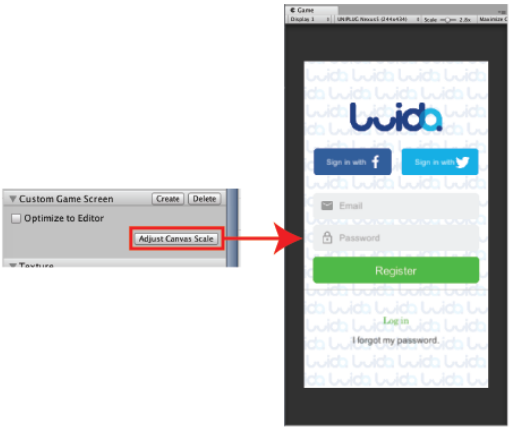
This is related to measures to keep the resolution high in the game view. Originally Physical Unit of Canvas is Points, but it is being adjusted as Millimeters.

If you set it to Points, 9 slices and tiling will look the same as Photoshop, but the resolution on the editor will be low, making the layout work harder. For this reason it is set like this.



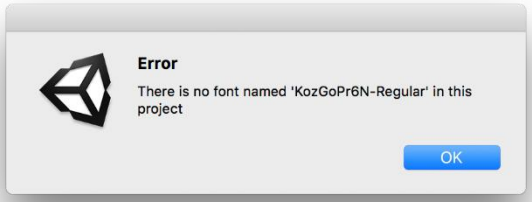
If you want to check the physical size of the canvas as Points and check it on the game screen, uncheck Optimize to Editor and press the Create button to recreate the game screen.

However, since the physical units of the canvas do not match, press ‘Adjust Canvas Scale’ to adjust.

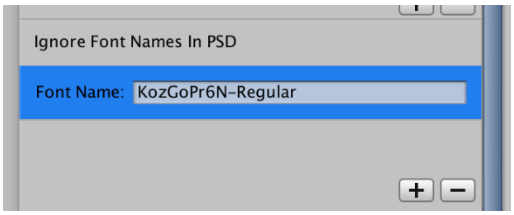


By the way, Physical Scale can be either Points or Millimeters. It will be changed to Points when it is executed on the actual device by the component 'PTMCanvasAdjuster' added to the GameObject of Canvas.

Ignore font names

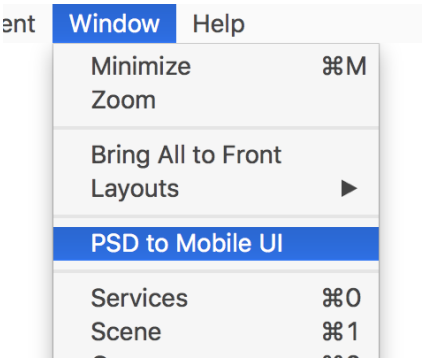


If you want to specify the system font, you can use Arial for English, but for other languages, an error will appear because there is no font when creating the scene.



In Ignore Font Names in PSD of the basic setting, register the font name you want to skip the existence check, the error dialog will not be displayed.

Open Main Panel



If you want to open the main panel again after closing, you can do it from 'Window / PSD to Mobile UI' in the menu bar of Unity.