Universal WebGL template 1.3
- Now compatible with Unity 2020 -

Overview:

Easy to use and to implement with your web app:

Import the unity package in your project, select the universal WebGL template in the player settings window and build your project.

Warning : If you use Unity 2020 you have to disable compression in Project Settings / Player / Publishing settings / Compression Format before building.

Backward compatibility:

The universal WebGL template is compatible with Unity 2020.1 : choose the **Universal2020** template in the player settings window.

If your have an older version, choose the **Universal** template which is compatible with Unity 5.6 up to Unity 2019.4.

Description of the html file and WebGL incompatibility management in the Universal template:

keepRatio allows to maintain the interface to the same aspect-ratio even as the browser window scales.

```
 83      <div class="keepRatio">
 84
 85          <div class="webgl-content">
 89
 90
 91          <div id="loadingBlock">
122
123          <div id="errorBrowserBlock" style="display:none;">
140
141      </div>
```

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webgl-content is the element filled by Unity, it will contain the game.

```html
85      <div class="webgl-content">
86          <button id="fullScreenButton" onclick="ToggleFullScreen()"></button>
87          <div id="gameContainer"></div>
88      </div>
```

loadingBlock contains the logo, the subtitle and the progress bar. It also contains the warningBrowserBlock (internet browser incompatibility with webGL) and the warningMobileBlock (mobile incompatibility with webGL) if it needs to be displayed.

```html
91      <div id="loadingBlock">
92          <img class="logo" src="TemplateData/img/Logo.png"></img>
93          <span class="subtitle"> CATCHPHRASE <br>
94          Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
95          </span>
96
97          <div id="progressBar">
98              <div>LOADING ...</div>
99              <div class="centered">
100                 <div id="emptyBar"></div>
101                 <div id="fullBar"></div>
102             </div>
103         </div>
104
105         <div id="warningBrowserBlock" style="display:none;">
115         <div id="warningMobileBlock" style="display:none;">
120
121     </div>
```

errorBrowserBlock is displayed when the browser doesn't support WebGL and proposes redirections to download a compatible browser.

```html
123     <div id="errorBrowserBlock" style="display:none;">
124         <img class="logo" src="TemplateData/img/Logo.png"></img>
125         <span class="subtitle"> CATCHPHRASE <br>
126         Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
127         </span>
128
129         <div id="errorContent">
130             <div id="errorBrowserText">
131                 Your browser does not support WebGL. <br> You can download one of this popular web browsers.
132             </div>
133             <div class="browserIcons">
134                 <a href="https://www.mozilla.org/firefox" target="_blank"><img src="TemplateData/img/browser-firefox.png" alt="Firefox browser"></a>
135                 <a href="https://www.google.com/chrome" target="_blank"><img src="TemplateData/img/browser-chrome.png" alt="Chrome browser"></a>
136                 <a href="https://www.apple.com/safari/" target="_blank"><img src="TemplateData/img/browser-safari.png" alt="Safari browser"></a>
137             </div>
138         </div>
139     </div>
```

These **exceptions** and the blocks display are managed by the **CheckCompatibility** function in the script tag :

```javascript
40      function CheckCompatibility(gameInstance, onsuccess, onerror)
41      {
42          if (!UnityLoader.SystemInfo.hasWebGL) {
43              document.getElementById("errorBrowserBlock").style.display = "inherit";
44              onerror();
45          } else if (UnityLoader.SystemInfo.mobile) {
46              document.getElementById("warningMobileBlock").style.display = "inherit";
47              onsuccess();
48          } else if (["Firefox", "Chrome", "Safari"].indexOf(UnityLoader.SystemInfo.browser) == -1) {
49              document.getElementById("warningBrowserBlock").style.display = "inherit";
50              onsuccess();
51          } else {
52              onsuccess();
53          }
54      }
```

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Description of the html file in the Universal2020 template:

keepRatio allows to maintain the interface to the same aspect-ratio even as the browser window scales.

```
12    <div class="keepRatio">
13        <div id="gameContainer" class="unity-desktop webgl-content">
31    </div>
```

gameCanvas is the element filled by Unity, it will contain the game.

```
12    <div class="keepRatio">
13        <div id="gameContainer" class="unity-desktop webgl-content">
14            <button id="fullScreenButton" onclick="ToggleFullScreen()"></button>
15            <canvas id="gameCanvas"></canvas>
16            <div id="loadingBlock">
30        </div>
31    </div>
```

loadingBlock contains the logo, the subtitle and the progress bar. It also contains the warningBrowserBlock (internet browser incompatibility with webGL) and the warningMobileBlock (mobile incompatibility with webGL) if it needs to be displayed.

```
<div id="loadingBlock">
    <img class="logo" src="TemplateData/img/Logo.png"></img>
    <span class="subtitle"> CATCHPHRASE <br>
    Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
    </span>

    <div id="progressBar">
        <div>LOADING ...</div>
        <div class="centered">
            <div id="emptyBar"></div>
            <div id="fullBar"></div>
        </div>
    </div>
</div>
```

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Customize the design interface:

Images:

Just replace the images by yours in the TemplateData /img folder.

In order to have a good graphic quality we advise you to follow :

- Size of the background page image : 1920 x 1080 px

- Size of the progress bar images : 770 x 6 px (if you want a smaller progress bar be carefull to also modify the css file : *max-width* **should be the width of your image file)**

```
116    .centered{
117        height: 100%;
118        max-width:770px;
119        margin-left:auto;
120        margin-right:auto;
121    }
```

- Minimal height for your logo : 480 px

Style sheet:

In **style.css** file you can easily change :

Background :
background-color : set the hexadecimal code of the color (if you want a solid color not an image for the page background).

```
1    body{
2        margin:0px;
3        padding:0px;
4        position: absolute;
5        height:100%;
6        width:100%;
7        background-size:cover;
8        font-style: regular;
9        font-family:"Myriad Pro", Myriad,"Helvetica Neue", Helvetica, Arial, sans-serif;
10       background-color:#f0f0f1;
11   }
```

Comment line *background-image* to hide the image background :

```
62   #loadingBlock,#errorBrowserBlock{
63       /*background-image:url("../img/background.png");*/
64       background-size:cover;
65   }
```

Logo:
height : by default it's set to 25vh which means 25% of the viewport height.
width will be automatically calculated to maintain your logo aspect-ratio.

```
54   .logo{
55        height:25vh;
56        width:auto;
57        display: block;
58        margin:auto;
59        margin-top:2vh;
60   }
```

Subtitle:

color, font-size (in % of the viewport height again)

```
42   .subtitle{
43        color:#1896a7;
44        font-size:2.5vh;
45        padding-bottom:3vh;
46        padding-top: 3vh;
47        display: block;
48        height:15vh;
49        width:40vw;
50        margin:auto;
51        text-align: center;
52   }
```

Loading text:

color, font-size

```
90   #progressBar{
91        height:8vh;
92        color:#666666;
93        font-size:4vh;
94   }
```

Responsive web design:

Fullscreen mode:

This is the default mode. Content will take all the space available.
To get an optimal result your Unity game content should be responsive (it should fit different aspect-ratios).

Min max aspect-ratio mode:

If your game doesn't adapt to different aspect-ratios you can constraint the interface between a minimum and maximum aspect-ratios, uncomment the blocks @media (max-aspect-ratio: 4/3) and @media (min-aspect-ratio: 16/9) :

```css
/* When aspect-ratio is smaller than 4/3*/

/*@media (max-aspect-ratio: 4/3){

    .webgl-content{
        -webkit-transform: translate(0%, 0%); transform: translate(0%, 0%);
        -webkit-box-shadow: 0px 0px 29px 0px rgba(0,0,0,0.15);
        -moz-box-shadow: 0px 0px 29px 0px rgba(0,0,0,0.15);
        box-shadow: 0px 0px 29px 0px rgba(0,0,0,0.15);
    }

    .keepRatio{
        width:100%;
        padding-top: 75%;
        position: relative;
        top: 50%;
        transform: translateY(-50%);
    }

    [...]

    .browserIcons a{
        width:15vw;
    }

    .browserIcons a img{
        width:8vw;
    }

    .webgl-content,#loadingBlock,#errorBrowserBlock{
        border:1px solid #c6c9ca;
        width:calc(100% - 2px);
        height:auto;
    }
}*/
```

```
/*@media (min-aspect-ratio: 16/9){
    body{
        display:flex;
        flex-wrap:wrap;
        justify-content:space-between;
    }

    .keepRatio{
        width:178vh;
        height:100%;
        margin:0 auto;
    }

    .webgl-content,#gameContainer,canvas,#loadingBlock,#errorBrowserBlock{
        width: inherit;
    }

    .webgl-content{
    -webkit-box-shadow: 0px 0px 29px 0px rgba(0,0,0,0.15);
        -moz-box-shadow: 0px 0px 29px 0px rgba(0,0,0,0.15);
        box-shadow: 0px 0px 29px 0px rgba(0,0,0,0.15);
    }

    .subtitle,#progressBar,#warningBrowserBlock,#warningMobileBlock,#errorContent{
        width:100vh;
    }

    .webgl-content,#loadingBlock,#errorBrowserBlock{
        border:1px solid #c6c9ca;
        height:calc(100% - 2px);
    }
}*/
```

The first section is relative for screen ratios under 4:3, the second to screen ratios above 16:9. You can set your own minimal and maximal aspect-ratios.

In this mode, the size of all the interface elements adapt to the size of the viewport height or width. The interface maintains an aspect ratio of 4/3 for a viewport aspect-ratio smaller than 4/3 and an aspect-ratio of 16/9 for a viewport aspect-ratio bigger than 16/9.
Between the both the interface acts like in fullscreen mode and takes all the space available.

For aspect-ratios smaller than 4/3:

If your game doesn't adapt to different aspect-ratios you can constraint the interface between a minimum and maximum aspect-ratios, uncomment the blocks @media (max-aspect-ratio: 4/3) and @media (min-aspect-ratio: 16/9) :

width of the content equals to 100% of the viewport width
padding-top equals to 3/4 x 100 = 75%

```
135        .keepRatio{
136            width:100%;
137            padding-top: 75%;
138            position: relative;
139            top: 50%;
140            transform: translateY(-50%);
141        }
```
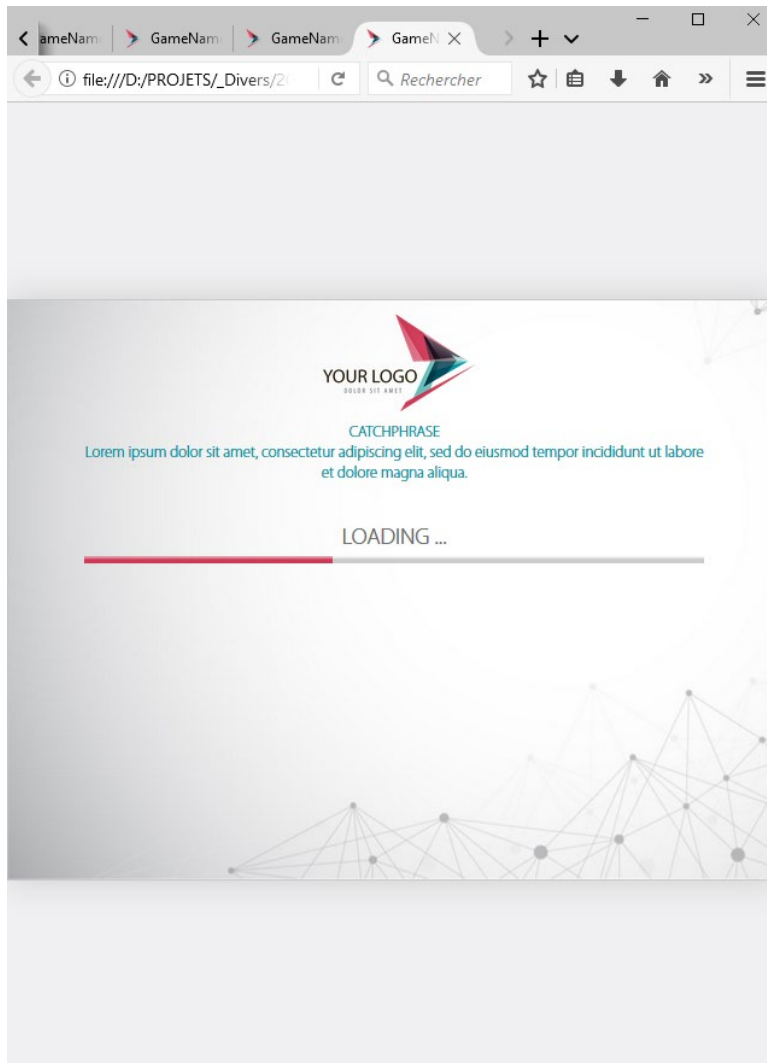
If you want to maintain the aspect ratio for example to 16/9 you have to set the padding-top to **9/16 x 100 = 56.25%**.

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All the font sizes and element sizes are relatives to the viewport width to fit the space in the browser window.

4/3 aspect-ratio is maintained for window browser resolution under 4:3.

For aspect-ratios bigger than 16/9:

width of the content equals to 16/9 x 100 = 178% of the viewport height
height equals to 100%

```
212    .keepRatio{
213        width:178vh;
214        height:100%;
215        margin:0 auto;
216    }
```

If you want to maintain the aspect ratio for example to 4/3 you have to set the padding-top to 4/3 x 100 = 133%.

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All the font and element sizes are relatives to the viewport height to fit the space in the browser window but maintaining the wanted aspect-ratio.
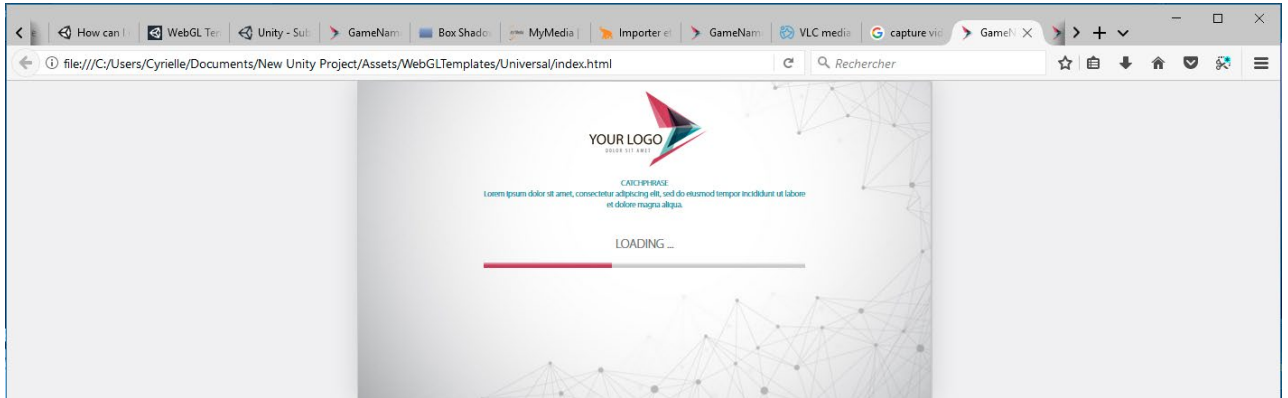
16/9 aspect-ratio is maintained for window browser resolution above 16:9.

Windowed / Fullscreen modes switch:

A button in the lower right corner of the unity webGL content allows to switch between the web browser windowed and default fullscreen modes.

If you don't want this feature you can just comment the button tag in the index.html file:

```
85      <div class="webgl-content">
86          <!--button id="fullScreenButton" onclick="ToggleFullScreen()"></button-->
87          <div id="gameContainer"></div>
88      </div>
```

You can modify the fullscreen button properties (position, size) in the #fullScreenButton selector in the css file and you can change the visual of the button updating the fullScreen_off.png and fullScreen_on.png files in the TemplateData/img folder.