



Introduction to JanusVR Lesson 2

HOW TO ADD TEXT TO A ROOM



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This instructional guide is designed to teach some of the fundamental skills needed to create virtual reality spaces using JanusVR.

This second lesson explains how to display text, and builds on the room made in lesson one.

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1. Adding the Text to the Room

To add text to a space in JanusVR we add the attribute `<Text>` to the `<Room>` section. Inside of the `<Text>` attribute we define the features of the text (size, colour, orientation etc.), and the text to be displayed.

In the example below, the position of the text in the room (`pos=" "`) is 4 metres forward from the centre of the room (which is the default entrance position), and 2 metres above the ground.

The orientation of the text (`xdir`, `ydir` and `zdir`) is rotated 180 on the y-axis so the image faces you when you first enter the room.

The colour of the text (`col=" "`) is red.

The scale of the text (`scale=" "`) is 2 2 2 (twice default size in all 3 directions)

The text to be displayed is "Hello World"

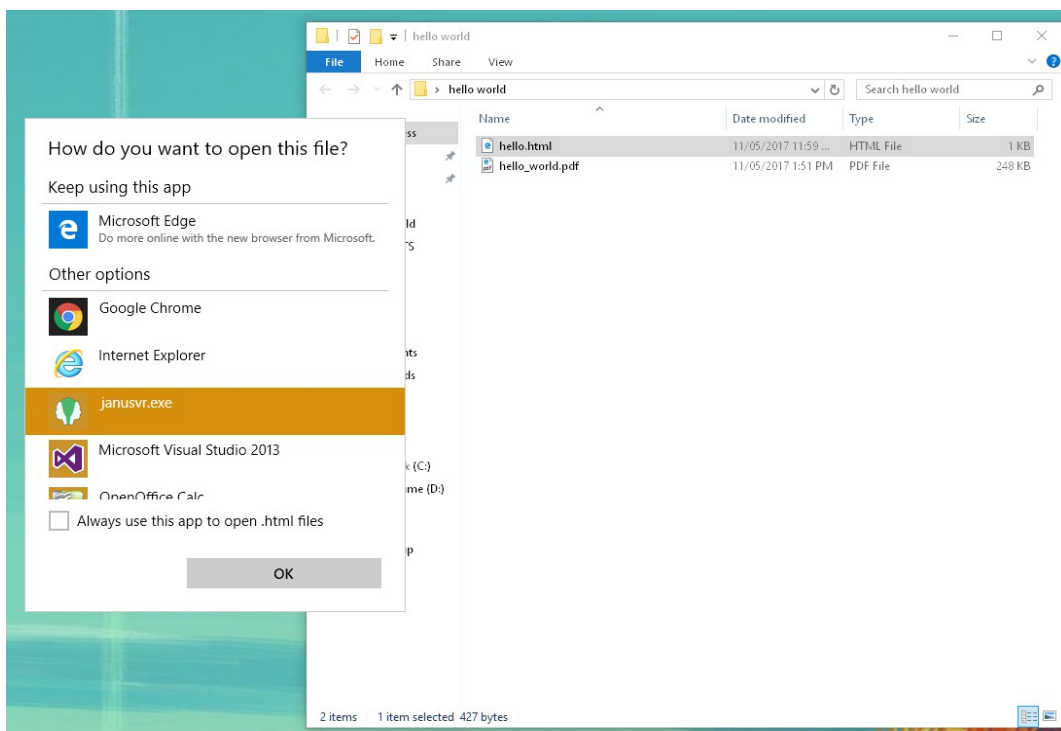
```
<html>
<head>
<title>Hello World!</title>
</head>
<body>
<FireBoxRoom>
<Assets>
</Assets>
<Room use_local_asset="room_plane" >
<Text pos="0 2 4" xdir="-1 0 0" ydir="0 1 0" zdir="0 0 -1" col="red"
scale="2 2 2" >Hello World!</Text>
</Room>
</FireBoxRoom>
</body>
</html>
```

2. Viewing your Room

Save the file on your local drive as a .html.

There are 2 ways to see the room you have just made:

- i. Right click on the file and select 'open with' (Windows), select 'Choose another app' – scroll down and find JanusVR.
- ii. Start JanusVR and press 'Tab' – type or copy/paste the local file path for the .html file (c:\helloworld\hello.html for example). To paste a link in JanusVR desktop mode press 'Tab', click on input box and press Control-V



You now know how to display an image in a JanusVR room.

The next section has some exercises to help you get more familiar with displaying text, and a list of all the options for displaying text. Have fun!

Exercises:

Change the col="" to see your text in different colours.

Swap:

```
<Text pos="0 2 4" xdir="-1 0 0" ydir="0 1 0" zdir="0 0 -1" col="red" scale="2 2 2">Hello World!</Text>
```

To:

```
<Text pos="0 2 4" xdir="-1 0 0" ydir="0 1 0" zdir="0 0 -1" col="0.5 0.8 0.5" scale="2 2 2">Hello World!</Text>
```

Change the size of the text by changing the scale="" attribute.

Swap:

```
<Text pos="0 2 4" xdir="-1 0 0" ydir="0 1 0" zdir="0 0 -1" col="red" scale="2 2 2">Hello World!</Text>
```

To:

```
<Text pos="0 2 4" xdir="-1 0 0" ydir="0 1 0" zdir="0 0 -1" col="red" scale="2 5 5">Hello World!</Text>
```

Change orientation of the text by changing the xdir ydir zdir

Swap:

```
<Text pos="0 2 4" xdir="-1 0 0" ydir="0 1 0" zdir="0 0 -1" col="red" scale="2 2 2">Hello World!</Text>
```

To:

```
<Text pos="0 2 4" xdir="1 0 0" ydir="0 -1 0" zdir="0 0 1" col="red" scale="2 2 2">Hello World!</Text>
```

Defining Text in a Room

The Text tag allows the addition of 3D text to the room, the following attributes can be set for Text:

- **pos** (default "0 0 0") - specify the position (anchor point is centered horizontally, and at the bottom vertically)
- **fwd** (default "0 0 1") - specify the orientation (or use xdir, ydir, zdir, defaults "1 0 0", "0 1 0", "0 0 1")
- **col** (default "#ffffff") - Allows the user to change the colour of the associated element. The formatting is as follows:
 - #rgb/#rrggb/#rrrggbbb/#rrrrgggbbbbb where any valid hex color is accepted
 - r g b Where each value is from 0 to 1.
 - r g b a Where each value is from 0 to 1.
 - rgb(r,g,b) where r g and b are from 0 – 255
 - rgba(r,g,b,a) where r g and b are from 0 - 255, a is from 0 to 1.
 - hsl(h,s,l) where h is from 0 to 360, s & l are from 0 to 100.
 - hsla(h,s,l,a) where h is from 0 to 360, s & l are from 0 to 100, a is from 0 to 1.
 - Also, any legal web color name is accepted as input.
- **scale** (default "1 1 1") - scale the object along each of its x (horizontal), y (vertical) and z (forward) axes
- **locked** (default "false") - if "true", prevents modification of attributes
- **lighting** (default "true") - if "true", uses the default shading which includes diffuse and specular components
- **draw_layer** (default 0) - Allows the user to manually sort the depth order of an object. For instance, an object of depth 0 will draw above an object of depth 1. Priority may be negative. Each priority group is also sorted based on distance.

<http://www.janusvr.com/guide/markuplanguage/index.html#text>