Setting up Ammo.js / Three.js

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This is a comprehensive guide to set up a blank install of Ammo.js / Three.js. It will cover both Windows with Google Chrome and Mac with safari. This guide is based on the Workspace setup section from the article - https://medium.com/@bluemagnificent/intro-to-javascript-3d-physics-using-ammo-js-and-three-js-dd48df81f591.

All the required links to files are provided and a finished version can be found within the "Blank" Folder of the GitHub: https://github.com/mattr862/Ammo.js-Three.js

1. Download file from https://threejs.org/build/three.js called "three.js"
2. Download the repo from https://github.com/kripken/ammo.js
3. Create a folder and name it for this example I called it "project folder".
4. Then create a subfolder within your folder and call it "js".
5. Copy the file from step one "three.js" into your "js" subfolder.
6. Step 2 should download a folder called ammo.js-master. Look in this for a "builds" folder. Within this there should be a file called "ammo.js". Copy and paste this into your "js" subfolder.
7. Create a simple txt document and name it "index.html"
8. Using a text editor or IDE of your choice copy and paste the code at the end of the document into "index.html" Taken From: https://gist.githubusercontent.com/BlueMagnificent/55a2fcaa847197a6225c122b4d9da41e/raw/b1cc741b762d959a100be22b1399af133c2e962b/index.html

    a. For **Mac** I used the IDE XCode. Note - you may prompted to download extra addons to edit html.
    b. For **Windows** I used the IDE visual studio 2019

9. After saving and exiting the IDE open this file using a web browser. This simply produces a blank webpage.

    a. For **Mac** I used safari.
    b. For **Windows** I used Chrome.

At this point you now have a blank canvas with ammo.js and three.js loaded onto it. You can look at the code running by using "inspect element" (note - if you are missing this option see the side note on inspect element on the next page) under the source section you can see the code running and the console can be used to interact with the program if you require.

Editing / debugging Your program:

This can be done in two different ways.

1. IDE, as mentioned before you are able to edit the code with an IDE. Saving the code essentially rebuilds it and reloading the webpage will load the newest version of the code.
2. Browser Development tools, these can be used to effectively debug your program using both breakpoints and error checking.

For more details about Chrome development tools have a look at -
https://developers.google.com/web/tools/chrome-devtools

Side note on inspect element

This is usually available by right clicking on the page and looking for an option called “inspect element”. This is used to look at all the different items u will be adding into the simulation.
For safari on mac you need to enable this option so don’t worry if it didn’t appear. This may also be the case for other browsers.
To enable it select safari in the top left and go to “preferences” then go to the “advanced” tab then tick the box for “show Developer menu n menu bar”.

Index.html code

```
<html>
    <head>
        <meta charset="utf-8">
        <title>JS 3D Physics</title>
        <style>
            body { margin: 0; }
        </style>
    </head>
    <body>
        <script src="js/three.js"></script>
        <script src="js/ammo.js"></script>
        <script>

            //variable declaration

            //Ammojs Initialization
            Ammo().then( start )

            function start(){

                //code goes here

            }

        </script>
    </body>
</html>
```

Brief explanation of the code:

The blank canvas code is marked into three areas by comments.

1. Variable declaration, this is used to define any objects.
2. Ammo.js Initialization, this initialises the libraries and simulation.
3. The start function, this equivalent to the main and runs in a loop, we use this to call functions.

If you want to check out some more guides using Ammo.js / Three.js see my GitHub:
https://github.com/mattr862/Ammo.js-Three.js