Creating structures with ammo.js and three.js project blog

**Introduction**

This project I started as a part of my module computer science challenges it is a course which you learn and produce a project using technology you have never used before, I ended up choosing a topic robotics and manufacturing to learn about the technologies involved in it, Because of this I was assigned the structures project :

**Model cheaply purchasable components e.g., 2x4 planks, nuts and bolts and create them in three.js/bullet with appropriate physics properties, including weight, friction. Objects should include costs and links for purchase.**

**Create models of physical parts with appropriate bending, twisting and breaking effects (model that they can occur) so that structures of suitable strength can be developed and limitations under forces can be incorporated into the design of machines.**

**Creating models of physical attachments e.g. nuts and bolts, nails, glue etc. that have parameters and can replicate plausible behaviours when subject to physical forces within a physics engine (including vibration)**

**Project overview**

**Project resources**

To build this project I was assigned to use JavaScript and two JavaScript libraries three.js and ammo.js, three.js being a graphics engine and ammo.js being a physics engine and a direct port of a c physics engine bullet physics. I have no previous knowledge of any of these whether it be the libraries I am using of the language. Therefore, I had to learn how to do this so I had to learn a ide that supports JavaScript being visual studio code and of course learn the language itself. To do this I used tutorials online like this tutorial series: <https://www.youtube.com/watch?v=W6NZfCO5SIk>, The fundamentals of javascript where easy enough to learn since I have programmed before the fundamentals are similar to the other languages I have done I then moved on and started learning how to use the three.js library using <https://www.youtube.com/watch?v=YKzyhcyAijo&list=PLRtjMdoYXLf6mvjCmrltvsD0j12ZQDMfE>, Finally once I had done some sample projects and felt comfortable enough with three.js I moved onto ammo.js here I ran into some issues as ammo.js is not well documented. Therefore I had to do some digging and could not find any video tutorials on ammo, I did however find a blog tutorial which helped me get started <https://medium.com/@bluemagnificent/collision-detection-in-javascript-3d-physics-using-ammo-js-and-three-js-31a5569291ef>.

**Project layout**

**Goals**

**The goal of the project**

**Plan of how it can be achieved.**