Goals

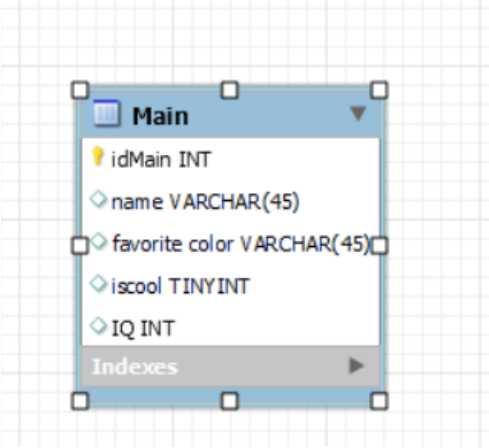
1. Create a sql database
2. Create a website using html and javascript
3. Allow interaction between database and website
4. Hopefully make it useful and user friendly

I know nothing about html, javascript, or sql

Day 1 - Installing software

I don't even know what software I am going to need, so I spend a few hours looking around
I download MySQL and visual studio for databases and html/javascript
I mess around with MySQL workbench just exploring tabs, and looking up what the different terms that I don't know mean

I create a test model



Day 2 - How on earth does SQL work

Everything tells me how to connect to a server but I don't know how to host a server

The MySQL workbench just crashes if I try to start a server, the command prompt just gives an error and I have no clue how the utility works

The secret was in the services thing that windows had that I never knew existed

Day 3 - How do I connect to the server from a website

I now have a usable grasp on how sql works. I can start a server, connect with mysql workbench and add tables and write stuff to that table, so it is now onto the website, first I need to know what language I should write in

I am finding it very challenging to find anything close to a straight answer
I got css and javascript, but then it said css is bad, and then it said javascript is bad too, but node js(whatever that is) is what I need

Node.js needs a restart so I will continue that tomorrow

Started looking into html to build a website
Also started a github project for this
https://github.com/The-ai123/Database

Day 4 - Creating the foundations for a website

The temporary goal will be a site that takes someones name and adds their favorite number to the database

Goals:

1. Getting the text on screen
2. Formatting the text
3. Make it look “nice” with some color and images
4. Get a box that you can type a name into
5. Get a box that lets you only type numbers
6. Add a button that submits the entries
    a. Give feedback when pressed
    b. Only allow submission if both boxes are full
    c. Add submission to database

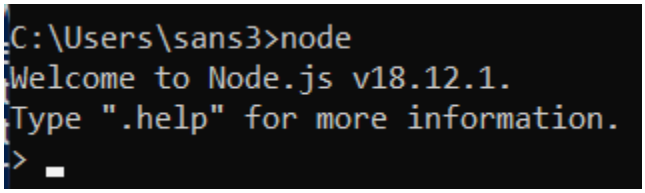
I got side tracked trying to connect to the server with visual studio and success!

I have no idea how to do this from javascript

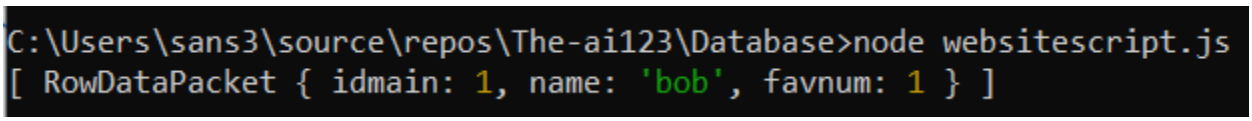
Anyways I'm messing with functions, how to write them in javascript, and then how to call them in html

Have a function that does something when a button is pressed

For some reason node.js wasn't working so I am reinstalling it



Finally!
I wrote a javascript thing that connects to a database and gets data from a table!



End of the day I have a very loose connection from javascript to sql, and javascript to html, so now it's just tying it all together which probably won't be easy

Day 5 - Website to database

Pretty much just picking up where i left off yesterday
So the goal is to run node.js from an html file, which it seems every source says I should get a server. So it would be

html → javascript → server → javascript(node.js) → database

This seems like it will be very hard

Day 6 - Making a website server

Goal is pretty straightforward, make a server to host a website, locally for now, because there are probably infinite vulnerabilities with the way i'm doing this

I think I hit a luck break with this tutorial
https://jasonwatmore.com/post/2016/06/22/nodejs-setup-simple-http-server-local-web-server
As it has already got a local server, this might not be as bad as I thought it would be

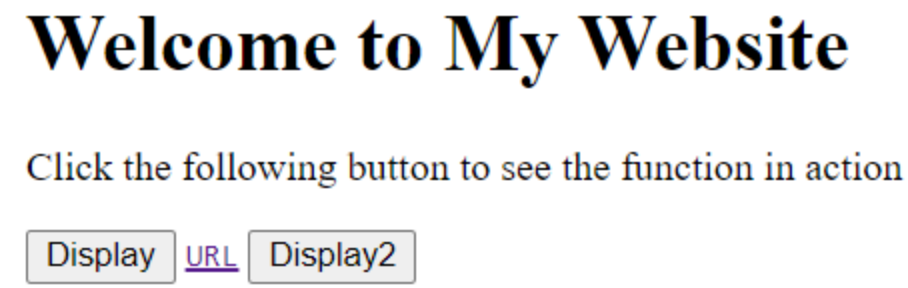
I created a bat file to start the server
I am having an error when trying to query the server, it seems to be connecting fine though

I got it to work! I have an html file that has a button, and that button sends a request to an express server, and the express server adds data to the table in sql!

This is the bulk of the minimum I wanted for this project, I just need to get text boxes, but hopefully that won't be too hard

I should have plenty of time to make things much cleaner and prettier, I'm going to think of the practical uses

I still intend to only have this be local because there is zero security in this server, but anyone on the same ip as me should be able to use this, so I might try to make something for my family to 'use'



When url is pressed it goes to this link
http://127.0.0.1:3200/699/fred

```
C:\Users\sans3\source\repos\The-ai123\Database>node index.js
Example app listening on port 3200
The solution is:  2
```

Which makes a request to the index server

```
app.get('/:number/:name', (req, res) => {
    var number = req.params.number
    var name = req.params.name
    connection.query("INSERT INTO `main`.`main` (`name`, `favnum`) VALUES ('" + name + "', '" + number + "')")
    res.send('Hello World!' + number)
})
```

The server then sends a query with the name and number in the url to the database

Result Grid

	name	favnum
▶	bob	1
	fred	2
	fred	9
	fred	8
	fred	10
	fred	17
	"fred"	69
	fred	69
	fred	699

(don't question my choice of number i was lazy)

I asked my family if they had any ideas, and they suggested I make some kind of inventory system so we know how much food and ingredients we have, so this is my new goal

Day 7 - Making the html for the website

I will now begin working on the new goal of making a local website to keep track of how much food is stocked up in our house

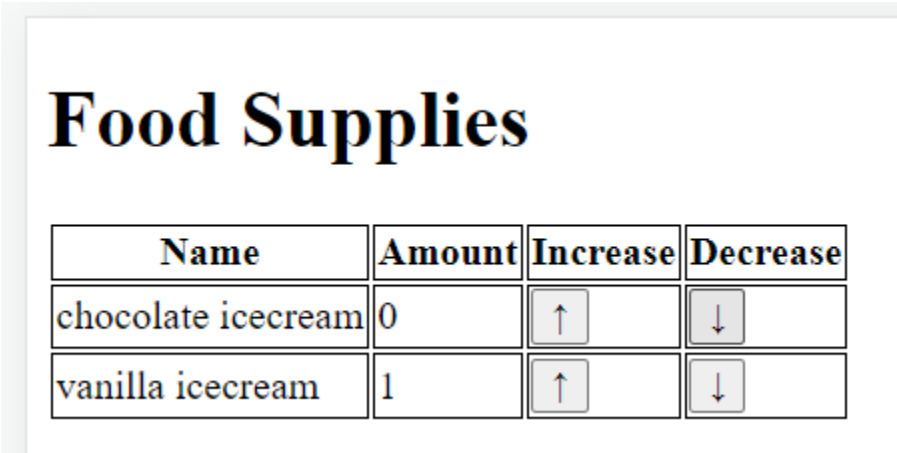
Started off by cleaning up the folder for the project

Now I'm just reading through a html tutorial site

Having trouble with cors

```
Access to XMLHttpRequest at 'http://127.0.0.1:3200/requestfoodlist' from index.html:1
origin 'http://localhost:51593' has been blocked by CORS policy: No 'Access-Control-
Allow-Origin' header is present on the requested resource.
```

I was getting so much progress done today I didn't really log a whole much, but I have made huge progress!

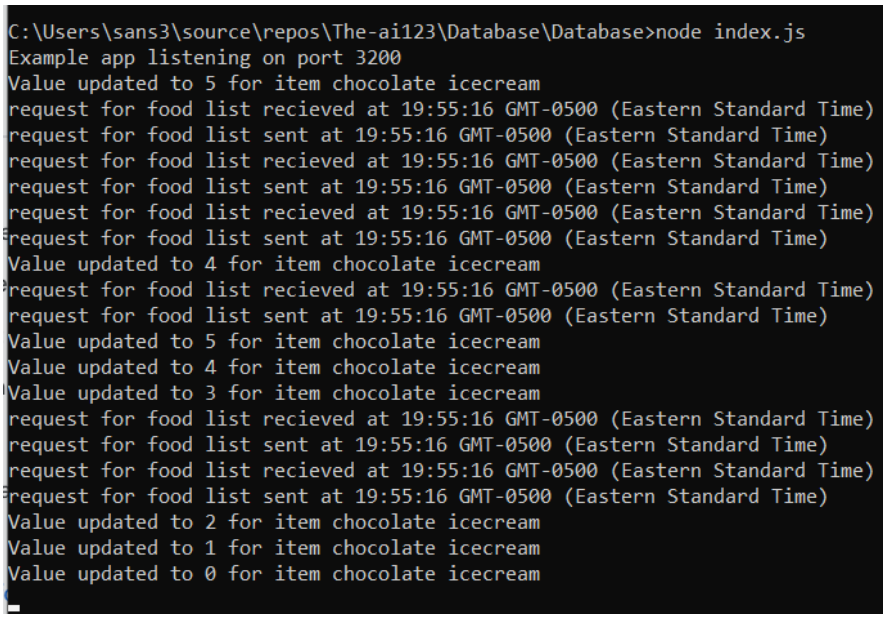


It looks ok, and everything shown functions as intended!

- The table is auto generated based on what is in the database, so it is fully scalable
- The increase and decrease buttons update both the table and the value in the database

The server that handles the connection between the database and the website has been cleaned up and I'm working on making some better logging for it (I was playing around with time functions, I'll fix that soon)

The default file loaded by the website server is the html



I just showed my mom with positive and constructive feedback

New Goals:

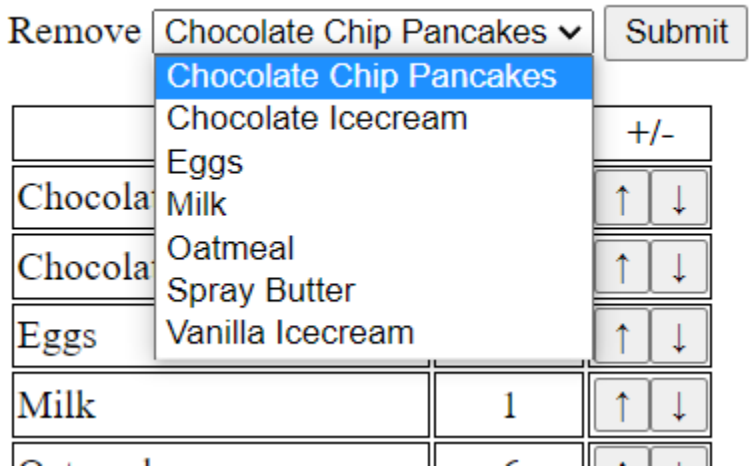
- Ability to add and remove new items to the list
- Create a ‘target list’ where we assign how much of something we want stocked up, and if the value in the main table falls below that threshold, it automatically adds it to a shopping list
- An auto generated shopping list
- Warning scary! Port forwarding it so it can be used outside our house. My current plan is to host this on a server, probably a csh one, then make it so only people on select IP addresses or people with a password can have access to edit the values in the database, but also allow the shopping list to be accessed without a password, with editing permission limited
- Make it usable on a phone

Side note - I am very happy with how things are turning out, and I’m genuinely excited to see how far I can take this

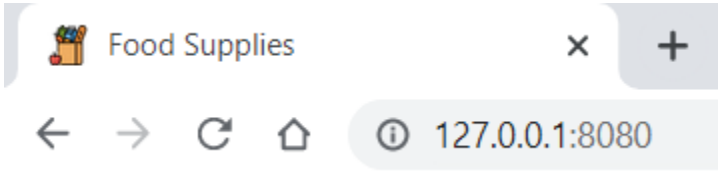
Day 8 - Constructive criticism and Starting the Target List

I put my javascript code into the major projects channel in slack to ask for suggestions and @Cinnamon suggested I replace my xml request with a fetch, as well as use templates and @fish suggested I use const instead of let

First I replaced the xmlhttp request with the fetch which is much nicer
…
So it's the end of the day and I got a ton of work done



```
Value updated to 2 for item Chocolate Chip Pancakes at 1/4/2023 12:14:07 AM
Value updated to 3 for item Chocolate Chip Pancakes at 1/4/2023 12:14:07 AM
Value updated to 4 for item Chocolate Chip Pancakes at 1/4/2023 12:14:08 AM
Value updated to 3 for item Chocolate Chip Pancakes at 1/4/2023 12:14:08 AM
Value updated to 2 for item Chocolate Chip Pancakes at 1/4/2023 12:14:08 AM
Value updated to 1 for item Chocolate Chip Pancakes at 1/4/2023 12:14:08 AM
Added Spray Butter to storage at 1/4/2023 12:14:24 AM
Value updated to 1 for item Spray Butter at 1/4/2023 12:14:28 AM
Value updated to 2 for item Spray Butter at 1/4/2023 12:14:28 AM
Request for food list recieved at 1/4/2023 12:14:30 AM
Added mistake to storage at 1/4/2023 12:14:36 AM
Request for food list recieved at 1/4/2023 12:20:17 AM
Request for food list recieved at 1/4/2023 12:20:19 AM
Removed mistake from storage at 1/4/2023 12:20:23 AM
Request for food list recieved at 1/4/2023 12:23:48 AM
Added mistake to storage at 1/4/2023 12:23:53 AM
Removed mistake from storage at 1/4/2023 12:23:56 AM
Request for food list recieved at 1/4/2023 12:24:21 AM
Added mistake to storage at 1/4/2023 12:24:27 AM
Removed mistake from storage at 1/4/2023 12:24:31 AM
```



- I made a ‘secret’ file that is not on github that has my ip so I can switch from loopback to that. This allows me to go on the site from any device in my house.
- I changed the layout of the table for better optimization and clarity
- New foods can be added and removed from the website, and the table and the selector for removing items are updated properly and automatically
- The database server log is much cleaner
- (side note, I just noticed the database seems to be automatically sorting alphabetically, this is really nice, but also annoying because when I update the screen I don’t refresh the whole table which may unfortunately have to change to match the rest of the table)
- There is an icon in the tab title

At this point I want to go back and try to go through everything I have learned so far

- I started with no knowledge of sql, javascript, or html
- I found the software I needed to use
- I learned how to use mysql workbench
- How to locally host a sql database, an express server, and a website server and how to connect them
- Basically learned html and javascript from the ground up

- Still working on getting used to mysql syntax, as while html is very easy and javascript is very similar to other languages I've used, mysql is completely unique and I don't know all the keywords
- I'm learning a lot about how http works and how websites and servers interact and share data
- Overall the biggest thing is that I feel I have passed through the barrier of entry of both html and javascript, and I'm almost through mysql as well. This project may not be very complex, but 3 things I was scared to try I now feel comfortable with, and that's everything

Lastly, goals for the future

- **Target list**
- **Shopping list**
- Port forwarding on a server, my friend had 3 small computers that were 10 years old and about to be thrown away, so they donated them to me so I can now host the server at my home, probably wont do it permanently until summer, as its over halfway through winter break and I have other priorities sadly
- Phone friendly