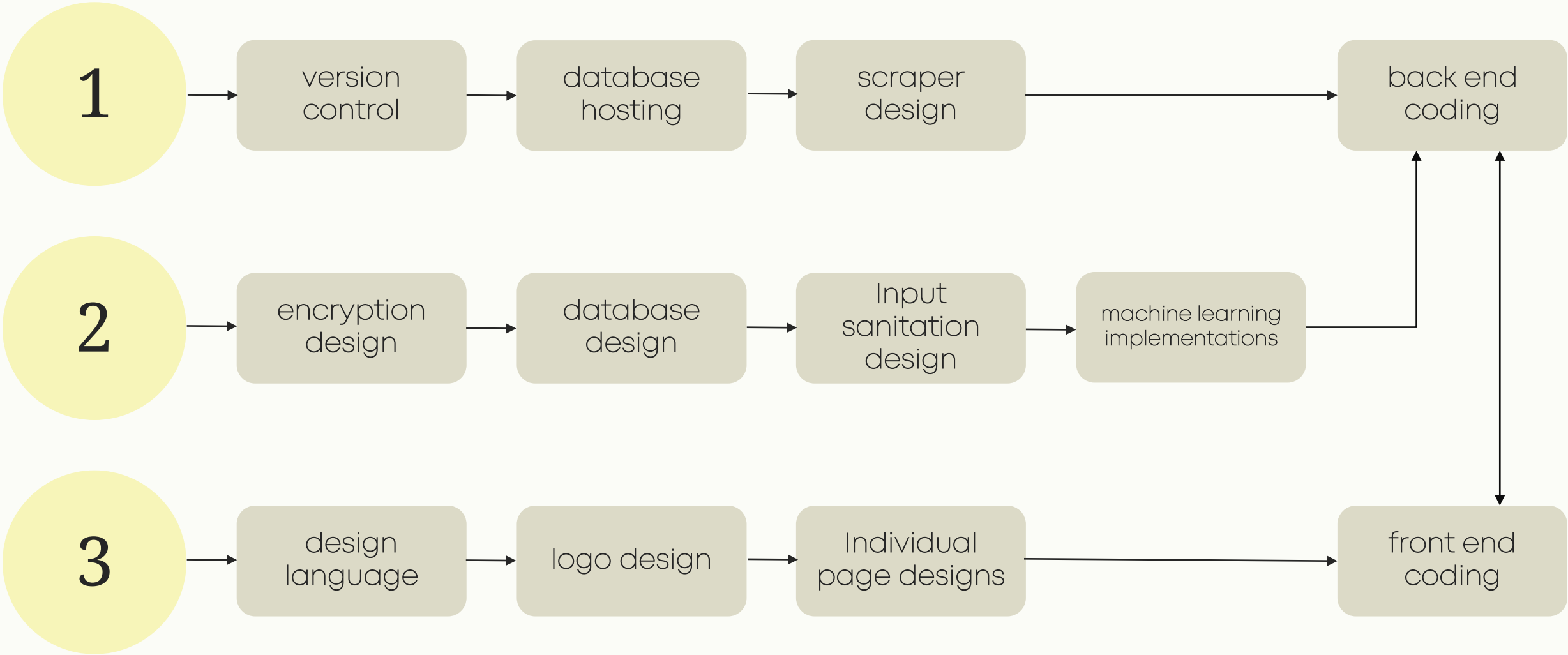
CSCI-455 Senior Project
Midsemester Report

Aloysius Arno Wiputra	1244139
Hetul Patel	1250935
Ruchira Bunga	1262634

CookBook

Your little black book of recipes

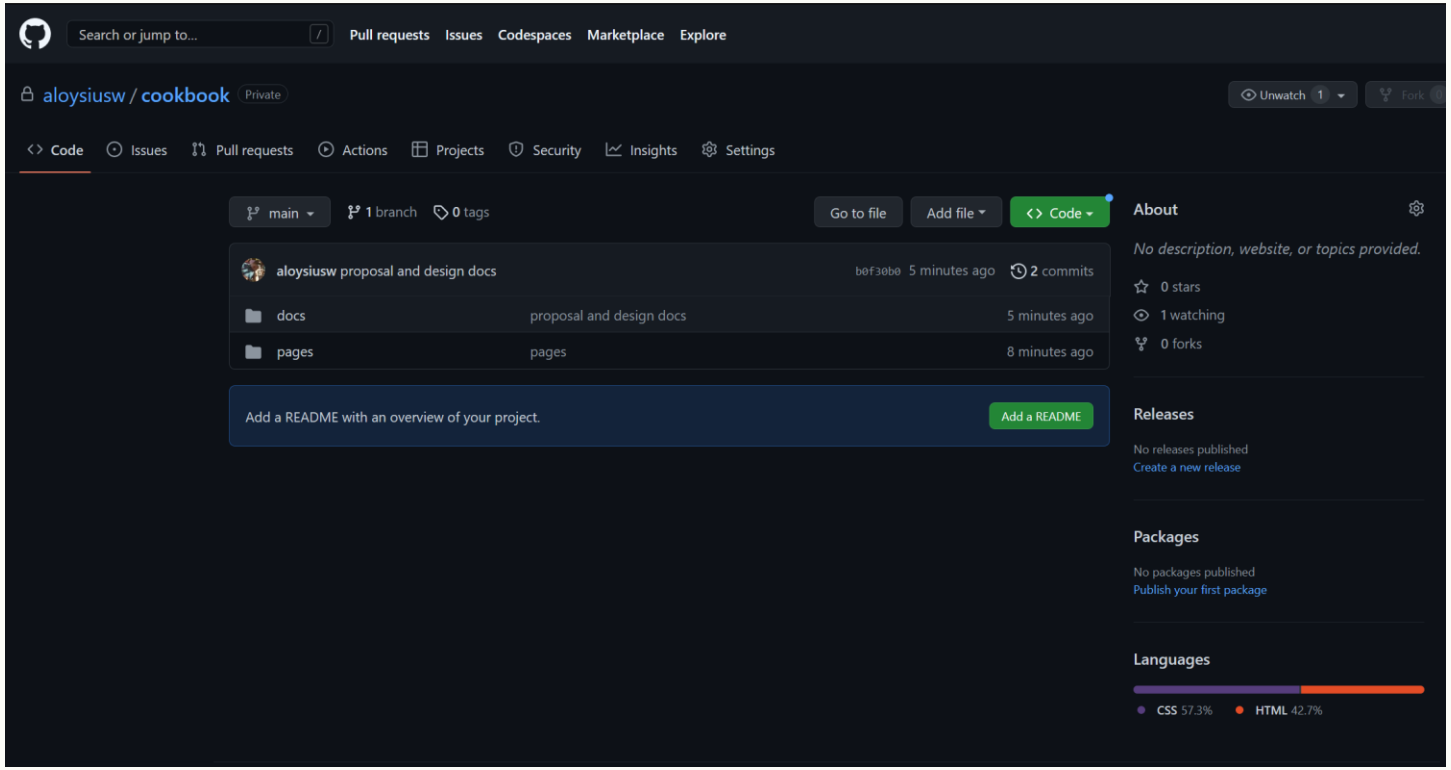
summary of tasks

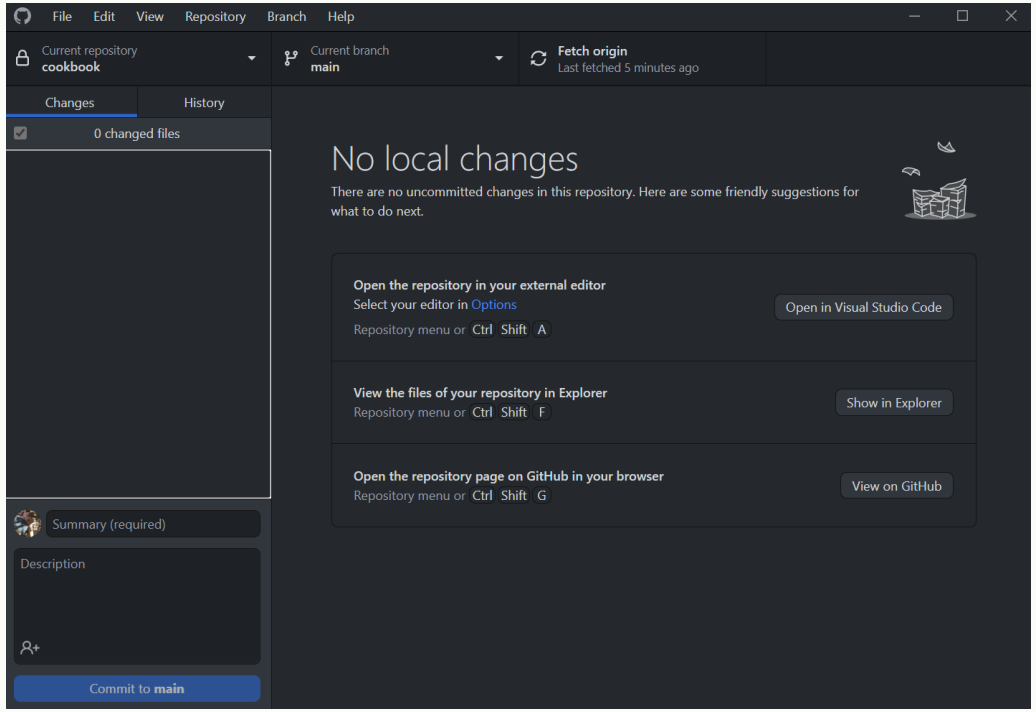


1 progress report

version control

- Currently version control is being hosted in GitHub
  - https://github.com/aloysiusw/cookbook
- Using a tool called “GitHub Desktop”
- Need to be shared with project members

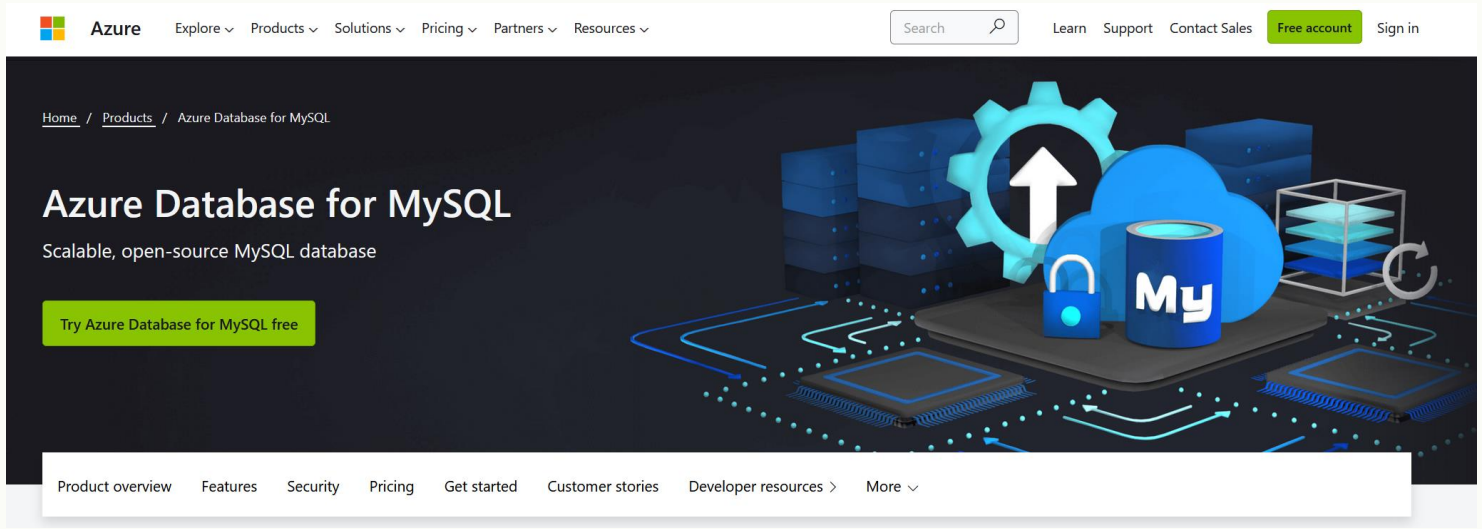


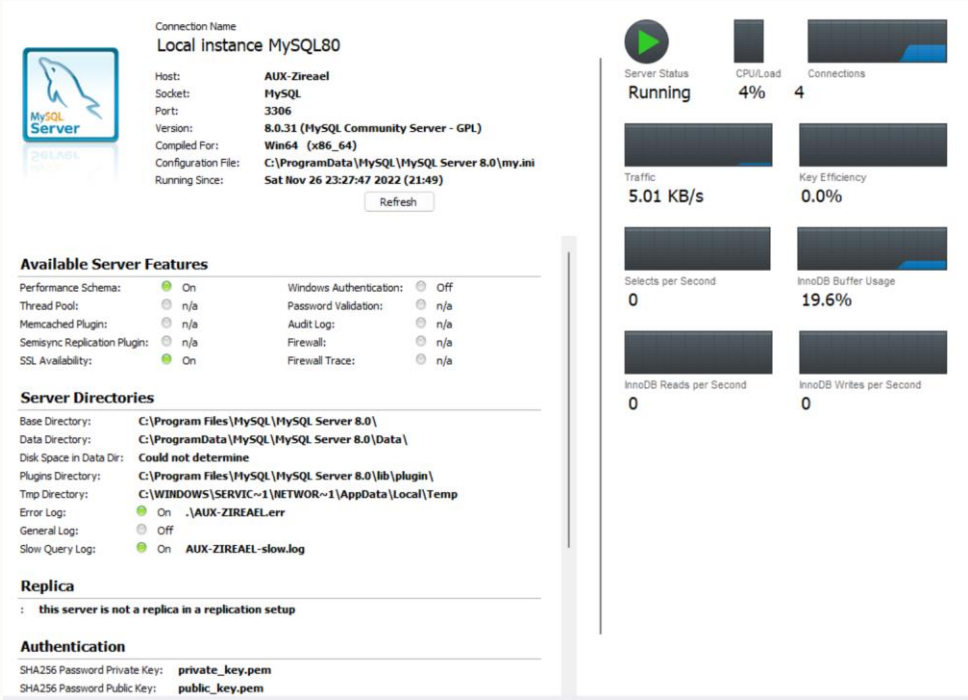


1 progress report

database hosting

- Current plan is to use Azure for hosting, services will start once we have the finalized database design to avoid overcharge
- Currently using local machine instance

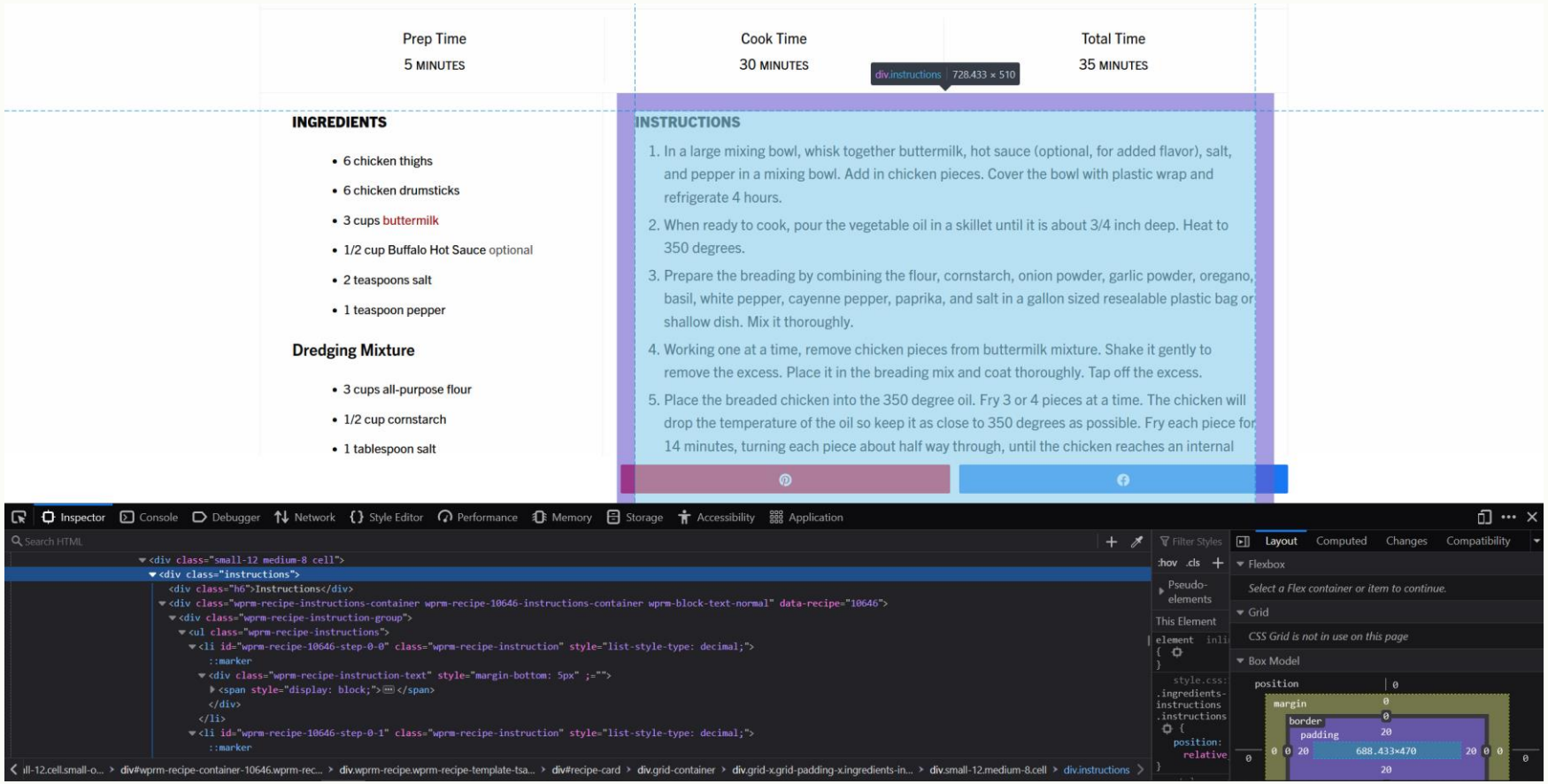


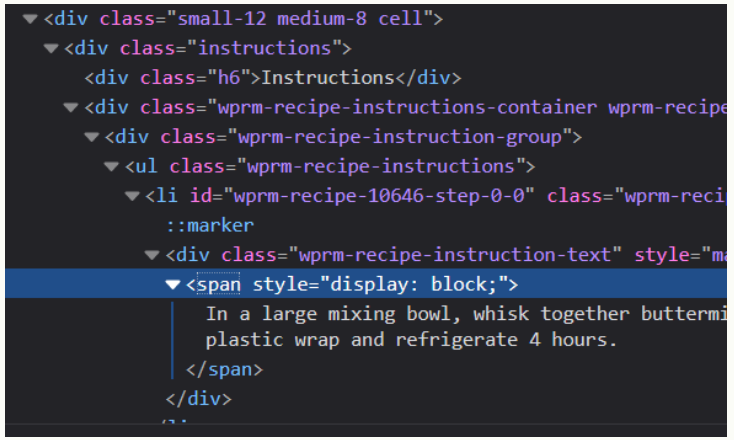


1 progress report

scraper design

- Current idea is to have whitelisted domains from a preset list
- Each domains have a specific method to scrape



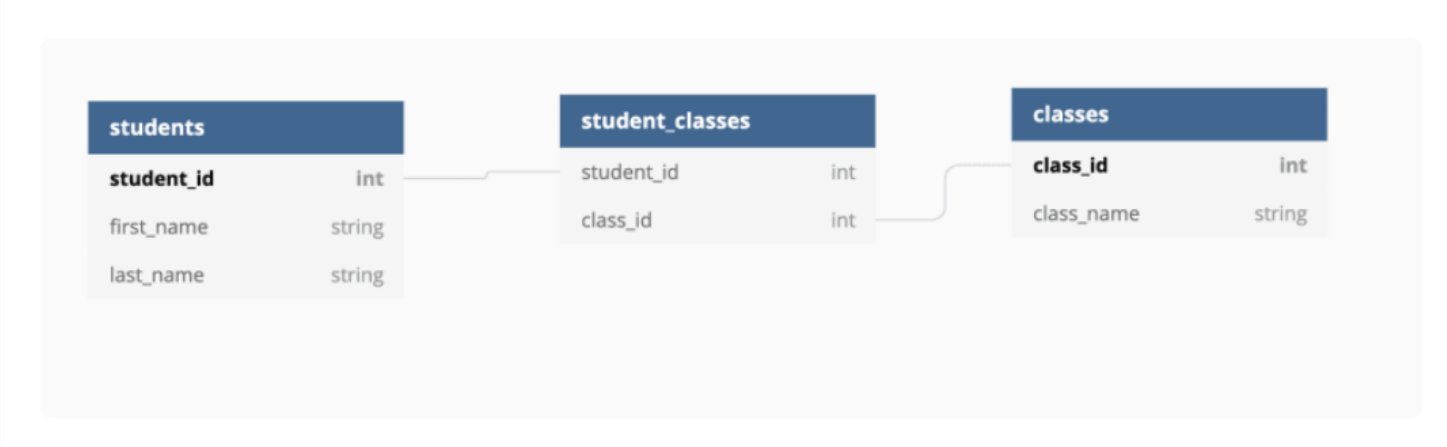


https://thestayathomechef.com/fried-chicken/

2 progress report

database design

- basic relational database concept research done



https://dev.to/amckean12/designing-a-relational-database-for-a-cookbook-4nj6

```
CREATE TABLE `recipe` (
  `recipe_id`    INT(10) UNSIGNED NOT NULL AUTO_INCREMENT,
  `name`         VARCHAR(128) NOT NULL,
  `description`  TEXT,
  `instructions` TEXT,
  PRIMARY KEY (`recipe_id`)
)

CREATE TABLE `ingredient` (
  `ingredient_id` INT(10) UNSIGNED NOT NULL AUTO_INCREMENT,
  `label`         VARCHAR(64) NOT NULL,
  `sort`          INT(10) UNSIGNED NOT NULL DEFAULT 0,
  PRIMARY KEY (`ingredient_id`)
  UNIQUE KEY `ingredient_label_uk` (`label`)
)

CREATE TABLE `unit` (
  `unit_id` INT(10) UNSIGNED NOT NULL AUTO_INCREMENT,
  `label`   VARCHAR(64) DEFAULT NULL,
  `sort`    INT(10) UNSIGNED NOT NULL DEFAULT 0,
  PRIMARY KEY (`unit_id`),
  UNIQUE KEY `unit_label_uk` (`label`)
)

CREATE TABLE `recipe_ingredient` (
  `recipe_ingredient_id` INT(10) UNSIGNED NOT NULL AUTO_INCREMENT,
  `recipe_id`            INT(10) UNSIGNED NOT NULL,
  `ingredient_id`        INT(10) UNSIGNED NOT NULL,
  `unit_id`              INT(10) UNSIGNED NOT NULL,
  `amount`               DECIMAL(4, 2) DEFAULT NULL,
  `sort`                 INT(10) UNSIGNED NOT NULL DEFAULT 0,
  PRIMARY KEY (`recipe_ingredient_id`)
)
```

2 progress report

encryption design

- encryption methods has been researched, appropriate design for our implementation is still being looked at

What is RSA encryption and how does it work?

Interested in learning more about RSA encryption? We explain how RSA encryption was developed, how it works and the biggest security issues involved.

JOSH LAKE - SPECIALIST IN SECURITY, PRIVACY AND ENCRYPTION
UPDATED: March 18, 2021

WHAT'S IN THIS ARTICLE?

RSA encryption is a system that solves what was once one of the biggest problems in cryptography: **How can you send someone a coded message** without having an opportunity to previously share the code with them?

This article will teach you everything you need to know about **how RSA encryption was developed**, **how it works**, **the math behind it**, **what it is used for** as well as some of the **biggest security issues that it faces**. Learning about RSA will give you some foundational

Trap door functions

RSA encryption works under the premise that the algorithm is **easy to compute in one direction, but almost impossible in reverse**. As an example, if you were told that 701,111 is a product of two prime numbers, would you be able to figure out what those two numbers are?

Even with a calculator or a computer, most of us wouldn't have any idea of where to start, let alone be able to figure out the answer. But if we flip things around, it becomes much easier. What's the result of:

907 x 773

If you were bored enough, you would have been able to whip out your phone or maybe calculate it in your head to discover that the answer is the previously mentioned 701,111. This 907 and 773 are the prime numbers that answer our first question, which shows us that certain equations can be easy to figure out one way, but seemingly impossible in reverse.

Another interesting aspect of this equation is that it is simple to figure out one of the prime numbers if you already have the other one, as well as the product. If you are told that 701,111 is the result of 907 multiplied by another prime number, you can figure it out the other prime with the following equation:

701,111 ÷ 907 = 773

Since the relationship between these numbers is simple to compute in one direction, but incredibly hard in reverse, the equation is known as a **trap door function**. Be aware that while the above example is hard for people to figure out, computers can do the operation in a trivial amount of time.

Because of this, RSA uses much larger numbers. The size of the primes in a real RSA implementation varies, but in 2048-bit RSA, they would come together to make keys that are 617 digits long. To help you visualize it, a key would be a number of this size:

What is RSA encryption?
How does RSA encryption work?
RSA security & attacks
Is RSA encryption safe for the future?
Will quantum computing affect RSA?

https://www.comparitech.com/blog/information-security/rsa-encryption/

3 progress report

design language

- Extensive design language document done, with individual page designs and color palette

Senior Project

CookBook

Design Language

I. Color Palette

II. Font

Mont Thin

Noto Serif

III. Languages
   a. HTML
   b. CSS

3 progress report

logo design

- Logo and banner designed with the aforementioned color palette and font

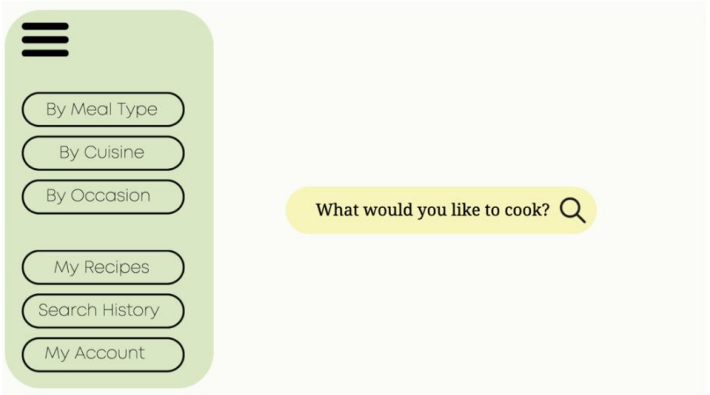
3 progress report

Individual page designs

- Design document included the drafts of the individual page designs

a. Entry Page –

b. Left side drop down menu



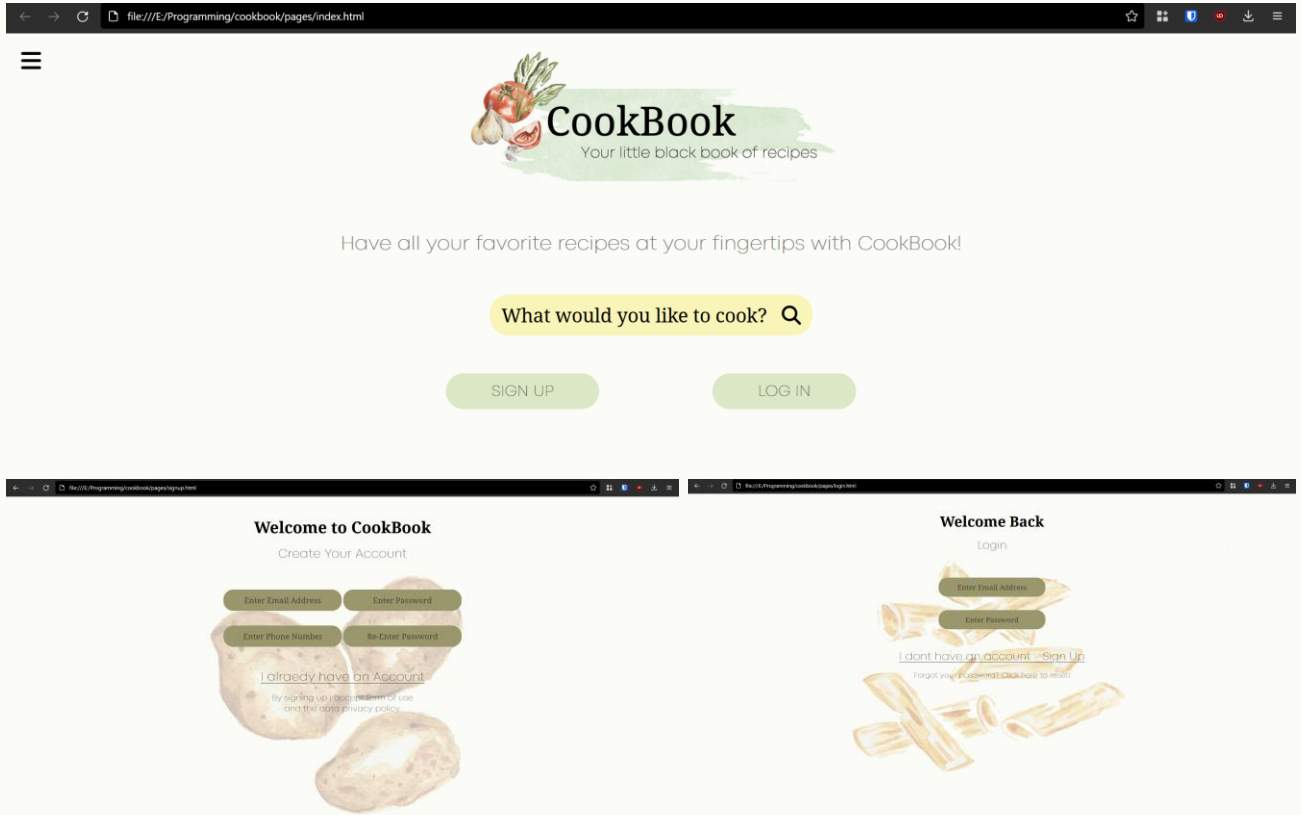
c. My Recipes page

d. Create Account page

3 progress report

front end coding

- Codebase for the designs with html and css has been started




```
<html>

<head>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.2.1/css/all.min.css">
    <link rel="stylesheet" href="css/style.css">
    <link rel="shortcut icon" href="images/favicon.png" type="image/x-icon">
    <title>CookBook</title>
</head>

<body>
    <div class="menu_btn">
        <a href=""><i class="fa-solid fa-bars"></i></a>
    </div>
    <main>
        <img src="images/logo.png" alt="logo">
        <p>Have all your favorite recipes at your fingertips with CookBook!</p>
        <button>What would you like to cook?   <i class="fa fa-search"></i></button>
    </main>

    <div class="buttons_wrapper">
        <a href="signup.html" class="button">Sign up</a>
        <a href="login.html" class="button">Log in</a>
    </div>
</body>

</html>
```

CookBook

Your little black book of recipes

THANK YOU