MyCookbook Development Roadmap

**Notes to Self:**

* This application is slightly uncharted territory in a lot of ways… take 1 step at a time and focus on 1 component at a time, and try not to get overwhelmed by thinking about every component at once!!
* Past projects can be guides (my old React portfolio, old mycookbook PHP app, etc)
* DO NOT worry about the styling until functionality has been hammered out. Style isn’t an afterthought, but it won’t be the difficult part of creating this application…
* HAVE FUN with this!

1. ~~Develop this final project plan and have plan approved~~
   1. ~~Modify if needed to fit scope of class~~
2. Create wireframe for project
   1. Map out UI using tool like Figma
   2. Map out likely components needed in React
   3. Map out database elements
   4. Map out API routes and Lambda functions necessary to tie things together
3. Create a sandbox environment to experiment with the database and AWS design.
   1. Take notes on the setup for the actual setup
   2. Experiment with CRUD operations on the DynamoDB database
   3. Mess with other AWS services
   4. Mock out navigation and a header with authorization applied (What is in the header??? Depends on if a user is logged in!!)
   5. Mock out other nav bars
   6. Mess with the database from the user interface – get CRUD working with a workable database
   7. Prototype out the input forms for ingredients and instructions…
4. Create the initial Amplify application and begin to create the application
   1. Create the React application
   2. Add whatever basics are necessary to get started
5. Begin database/backend development in AWS
   1. Create the DynamoDB database for the application
   2. Set up user login/log out
      1. Use AWS Cognito to authenticate users for the application.
   3. Set up Lambda for DynamoDB
   4. Set up API Gateway connection for database connection
   5. Make sure everything works with the authentication
   6. Test the CRUD operations to make sure everything works properly.
6. Begin front end development
   1. Set up the frames for the basic components that will be needed for the application…
      1. Home page
      2. User Console page
         1. User categories menu
      3. User main recipe view/search page
      4. Single Recipe Page
      5. Create Recipe Page
      6. Update Recipe Page
      7. Delete Recipe Page
7. Set up create category
   1. Create necessary components to allow a user to create a category
   2. Create necessary components to allow a user to update a category
8. Set up recipe creation
   1. Create necessary components to allow a user to create a recipe
   2. Make sure new recipes properly display
9. Set up recipe updates
   1. Create components necessary to allow a user to update a recipe
10. Set up recipe/category deletes
    1. Create components necessary to allow a user to delete a recipe.
    2. Create components necessary to allow a user to delete a category. This may cascade to a categories recipes – TBD
11. Set up styles
    1. Set up basic styling to have the site be good enough to go live
12. Touch up any bugs and test the website
    1. Make sure everything runs smoothly for the MVP
13. Deploy the MVP using amplify
    1. Deploy the application
    2. Test the application after deployment
    3. Get a better URL to use for the website
14. Consider and plan for advanced feature development…..
    1. Custom colors/themes
    2. Add images to recipes
    3. Search engine optimization
    4. Print recipes
    5. Think about deploying to another AWS environment – with a different IAM user specifically for this. This will make this project more maintainable, and open to adding other devs 😊

Important Development Notes

**Steps I’ve Taken so Far (Copy these)**

The steps are all over the place at this point. Here are the COMPONENTS of the application though…

* The UI (CSS)
* The Components (React)
* The database (DynamoDB)
* The deployment space (Amplify)
* The API keepers (API Gateway and Lambda)
* The authenticator (Cognito)
* The routing (React-Router) 🡪 <https://hygraph.com/blog/routing-in-react>

**DynamoDB Notes**

DynamoDB is schemaless…. This makes development in it a little bit interesting… and adds extra challenges! But it’s WAY more dynamic. There is actually pretty much no structure. Here is my schema:

**Partition Key: userID 🡨 Will eventually be taken from cognito/the user**

**Sort Key: recipeID 🡨 Generated by UUID**

The partition key and sort key form a composite primary key. They are both needed for a record to be entered.

Interestingly, there is NO auto increment feature for key fields!!! That means that one must be manually provided/used. The user ID will come from Cognito eventually… but for the recipes, there will need to be some way to automagically generate a unique ID

**Enter the UUID npm package**. **I’ll be using this to generate a recipeID**

**Instructions from GPT/UUID NPM:**

* npm install uuid
* Use the docs to use the tool, it looks super simple.

<https://www.npmjs.com/package/uuid> <-- This is the package from npm. It has an insane amount of downloads so I can only imagine it is totally safe.

**Lambda/API Gateway Notes:**

* There is going to need to be some kind of code to reference DynamoDB in the app.js part of the function/API

**Auth/Cognito Notes**

* It IS possible to trigger an event on user sign up! Or so ChatGPT says…. So, on user sign up, part of the plan is going to be adding some base level categories to the user table.
  + Looks like there is a variable called “sub” or something to tap into.
* Here is a note to protect protected routes:
  + import {withAuthenticator} from '@aws-amplify/ui-react'
  + The above needs to be imported…. And the export needs to be wrapped, perhaps like this:
  + export default withAuthenticator(Protected)

**WEEKS LEFT WORK: 5 ☹ AHHH WOW THAT ISN’T MUCH TIME!!**

1. Wireframing. Pay attention to the React BrowserRouter lectures. Get some working UI models put together. Need to get this all figured out to make things smooth!
2. Finish prototyping work for the UI and all the functionality. Build out the initial application, and create it to use mock data. Finish the BrowserRouter work EARLY so it can be used.
3. Do the DynamoDB modules very early, and get these hooked up to the website right away. This week should be spent hammering out the Database and CRUD components.
4. Finish the websites functionality, and get either close to or completely finished with the styling
5. Do any touch ups and make a final report. Test the application. This week is also going to be chock full of work from other classes so it is vital that there isn’t much to do left.

Daily Workflows

**4/11/2025**

Prototyping and wireframing.

* Work on the Figma design.
* Work on prototyping the create recipe functionality
  + CRUD on the JSON file
* Work on experimenting with the Auth
  + Get the userID out of the Auth
  + Display content based on Auth
  + Run some commands once Auth is logged in

**4/7/2025**

More prototyping and wireframing today. Experiment with the BrowserRouter a little bit. Work on a logo. Get more UI features taking in mock data

* Work on a logo
* Work on the Figma design for the darned mobile Nav components, which are going to be annoying to figure out I think….
* Proto more in the React applicaton
  + Think about the DB connections and all of that kind of stuff and how that is going to work with the JS and the DynamoDB connection…
  + MAKE THE navigation a <ul>/<li> situation! Duh.

**4/6/2025**

Wireframing. Work out the color scheme, and also the mock site design components.

* ~~Color~~
* ~~Figma designs~~
* Logo design?
* ~~Mock some proto UI code as well if there is time. (should have started WAY earlier)~~

**4/5/2025**

Switching gears today. Working on Wireframing and database design

* ~~Writing out paper wireframes~~
* ~~Configuring database design ideas~~
* Starting to mock in Figma
* Working on mock logo
* Working on picking colors
* ~~Compiling list of tech stack, database design, and color choices (easy grab)~~

**NOTE:** At end of workday…. LOL I really am not getting an insane amount of my goals done! This research process is REALLY hard to estimate the time it will take.

**4/4/2025**

Here is a breakdown of the goals I have for this evening, working from 7:45PM – 11:45PM

* A rework of yesterdays work. I learned a lot yesterday, but I need to get some data cracked out of the database…
  + Work on the DynamoDB database and just GETTING data out of it
    - Check the Cloud for devs class notes
    - Check out the old AWS database from that class
  + May need to refactor/restart and bomb the current sandbox… the code might be corrupted
* If there is time, take a look at wireframing…
  + Pages
  + Menus
  + Nav Components
* **NOTE:** Nothing is working. For development tomorrow, start with the crypto app project that already works…. In this way, some troubleshooting can be done. I have no idea what’s going on with this setup but I am tired and frustrated.

**4/3/2025**

Here is a breakdown of the goals I have this evening, working from 6:30 – 10:30PM

* Get the DynamoDB database connected with the React application through Lambda and API gateway.
  + DO NOT worry about authorization first. Just worry about connecting the components together
  + Make CRUD operations, if possible
  + Touch on Authorization once that is all put together
  + Think about how to make sure a user is going to see only their particular recipes…. Stressing on this might be for another day though
* **Focus on the basic DynamoDB connection and CRUD operation setup.**
* Give some thought into the wireframes
  + Pages
  + Menus
  + Nav components