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Design Document
Target Ship Date: 2026-01-16

OVERVIEW:

Our project will be a simple farming incremental simulation game using text, including farming tools and crops.

FEF: Tailwind:

Chosen for the team's prior experience and ease of use. We plan on using features like its transitions & animation, boxes, borders, and hover/focus/active state.

APIs:

Plant API: Has information on several plant species. We will use this to get the plant data.

COMPONENT MAP:

`init.py:`

Configures the Flask app and handles routing, sessions, and user actions.

`build_db.py:`

Builds the database and populates it with crop and tool data from APIs.

`data.db:`

SQLite database storing users, crops, tools, and progress.

`home.html:`

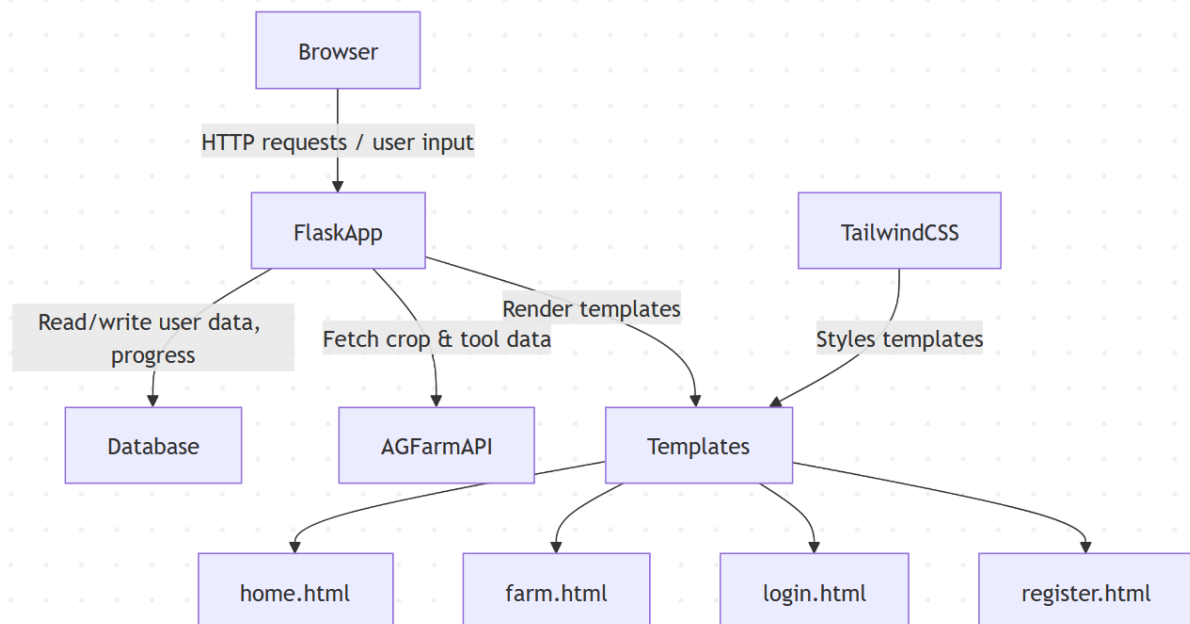
Main hub page linking to the farming game and displaying user progress.

`farm.html:`

The text-based incremental farming game interface.

`login.html` & `register.html:`

User authentication pages.



SITE MAP:

Login:

All pages should be able to go to Login. Login sends the user back to the previous page.

Create Account:

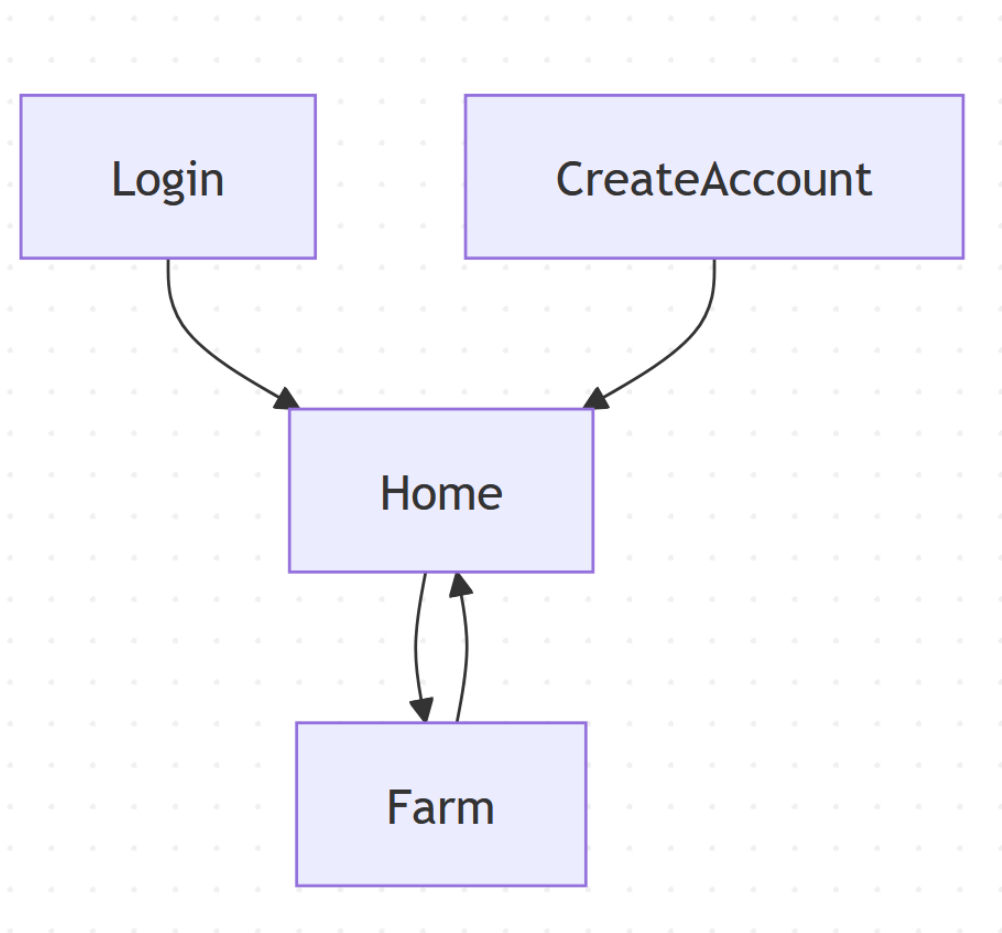
For creating an account if you don't already have one. Only routes from Login.

Home:

Main page of the site. Routes to the farming game.

Farm:

The text-based incremental farming game. Routes back to Home.



DATABASE MAP:

Users

- user_id
- username
- password_hash

Crops

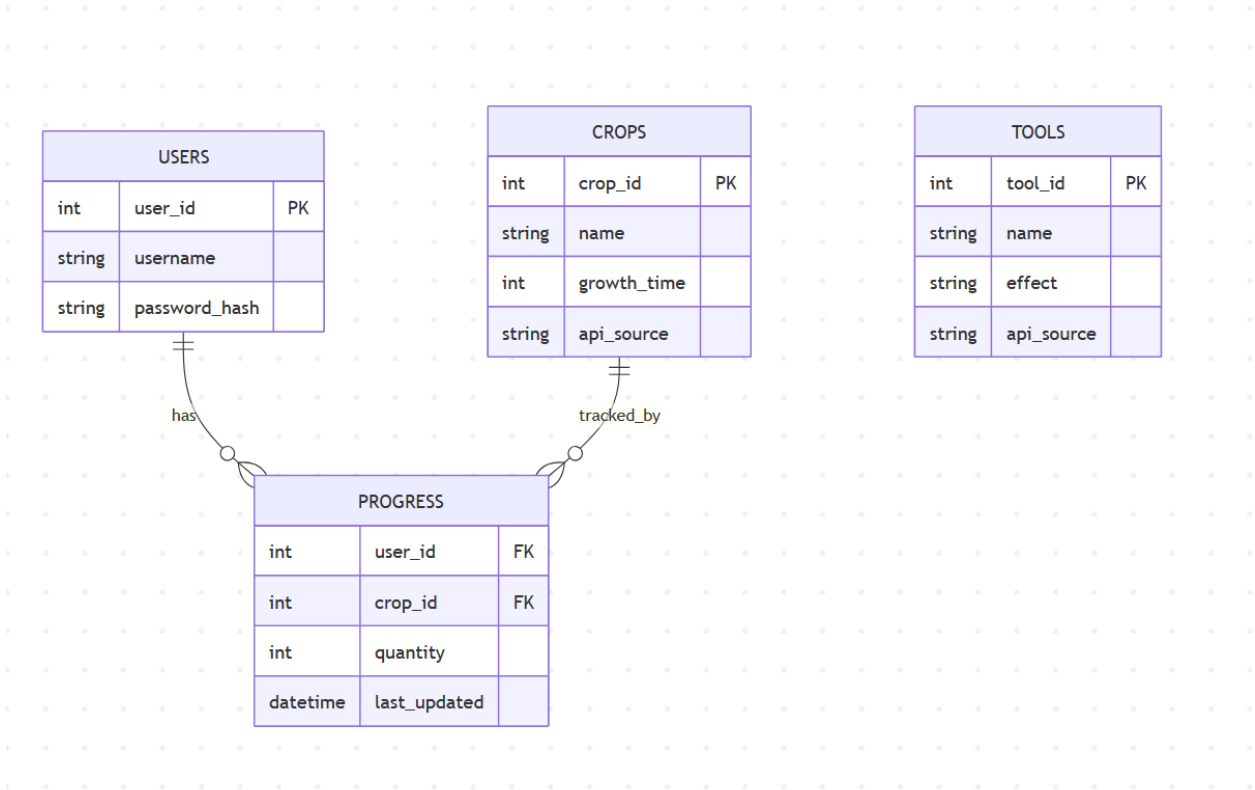
- crop_id
- name
- growth_time
- api_source

Tools

- tool_id
- name
- effect
- api_source

Progress

- user_id
- crop_id
- quantity
- last_updated



Tasks:

Project Manager (Wesley):

Manages timeline and coordination.

Implements login and authentication system.

Creates Home page and user progress display.

Developer 2 (Lucas):

Implements text-based incremental farming logic.

Handles crop growth, timers, and updates.

Developer 3 (Evis):

Handles API requests and database population.

Integrates crop and tool data into gameplay.

Developer 4 (Sophia):

Implements Tailwind CSS styling.

Improves layout, transitions, and overall UI consistency.