Portfolio Phase 1: CosFormulator application

Core idea: CosFormulator is a web application designed to help cosmetic chemists to efficiently manage and develop their own formulations. Users can input cosmetic ingredients with concentrations (percentages) and the application will dynamically calculate totals. Users will be able to save their unique formulations, allowing for easy access or modification.

Target group: Individuals interested in cosmetic chemistry, including DIY enthusiasts, students and formulators seeking an organized, interactive platform for managing their formulas.

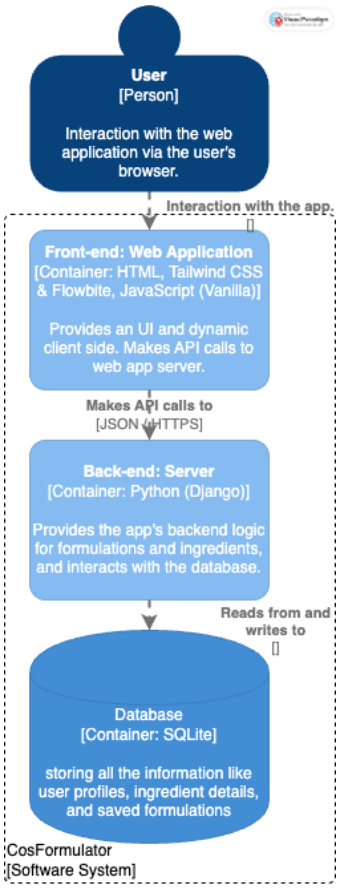
Features: live percentage calculation, dynamic addition/removal of ingredient rows, dynamic creation of a new ingredient, dynamic update of the ingredient selection dropdown, user authentication

Technical Components:

- **Frontend:** HTML, Tailwind CSS & Flowbite, JavaScript (Vanilla) for responsive UI and dynamic interactions.
- **Backend:** Python (Django framework) for user accounts, business logic, and API communication.
- **Database:** SQLite for persistent storage of users, ingredients, and formulations.

Container diagram

Figure 1: C4 model diagram



Source: VisualParadigm Online, 2025