



UGANDA CHRISTIAN UNIVERSITY

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COURSE UNIT: SOFTWARE CONSTRUCTION

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This project implements a **modular architecture** using **Django (backend)** and **React (frontend)**. The backend is built with Django REST Framework (DRF), which exposes API endpoints for managing users and tasks. The frontend is structured with reusable components, hooks, and services, allowing efficient data fetching using Axios. The React app interacts with the backend via RESTful API calls, displaying user and task information dynamically.

To enhance modularity, the backend is divided into separate Django apps (users/ and tasks/), while the frontend follows a structured folder organization with components/, hooks/, and services/. The project ensures maintainability, scalability, and ease of integration.

Challenges Faced & Solutions

- **CORS Issues:**

Initially, the React frontend couldn't fetch data from Django due to CORS restrictions. This was resolved by installing `django-cors-headers` and adding `CORS_ALLOW_ALL_ORIGINS = True` in `settings.py`.

- **Module Not Found Errors:**

Several components (`UsersPage.js`, `TaskList.js`, etc.) were not being found. This was fixed by ensuring the correct file paths and folder structure.

- **Axios Network Error:**

The frontend was unable to connect to the backend due to the Django server not running. Restarting the server and verifying API URLs (`http://127.0.0.1:8000/users/`) resolved the issue.

- **Duplicate `rest_framework` Entry:**

The backend failed to start due to multiple `rest_framework` entries in `INSTALLED_APPS`, which was fixed by removing duplicates.

The work can be found at [Github](#)