THEKAO: A Multi-Service Super Application

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1. Project Summary:

Thekao is a **web-based service application** developed using Django for the graphical user interface and SQLite (db.sqlite3) for database management.

The main purpose of this project is to provide **multiple services within a single platform**, including **user login, user registration, driver registration, ride sharing, food ordering, and parcel delivery**.

The application starts with a **secure login system** using email and password. After successful authentication, users are redirected to the Thekao Dashboard, where they can access and perform various services based on their roles.

This project demonstrates the **practical use of Django-based user interfaces, Django ORM for database connectivity, secure database operations, and event-driven user interactions** in a real-world web application.

2. Introduction:

Thekao is developed using Django to build an intuitive and responsive graphical user interface. The project uses SQLite (db.sqlite3) as the backend database to ensure efficient data storage, retrieval, and management. Through features such as **user authentication**, **service management**, and **secure data handling**, Thekao demonstrates the core concepts of database connectivity and user interaction.

This project aims to help students gain **hands-on experience with Django integration**, understand the **architecture of service-based applications**, and apply **theoretical knowledge to a practical software solution**. Thekao serves as an educational model for learning **web-based application development** using **Django and SQLite** in a real-world context..

3. Objectives:

The main objectives of the Thekao project are:

•To design a secure **login system** using email and password
•To connect Django with SQLite (db.sqlite3)
•To securely **store and retrieve data** from the database
•To provide **multiple services on a single platform**, including:

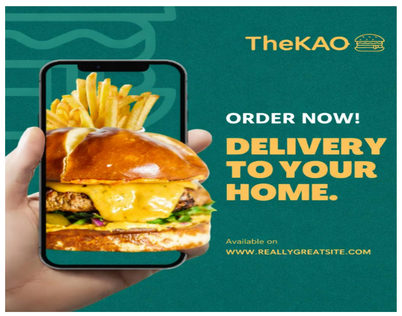
- User Registration
- Driver Registration
- Ride Sharing
- Food Ordering
- Parcel Delivery

4. Working Procedure

4.1. Working Procedure(visual representation):

1. **Ride-Sharing:**

2. **Food Ordering :**



3. **Parcel Delivery:**

4.2. Working Procedure:

The working process of the Thekao system is described step by step below:

1.Application Start:
➢The program starts and connects to the **db.sqlite3 database** using Django ORM .

2.Login System:
➢User enters **name and password**.
➢If the email already exists, the password is verified.
➢If the email does not exist, it is saved as a **first-time login**.

3.Dashboard Display:
➢After successful login, the **Dashboard** is shown.
➢Dashboard uses **CardLayout** for smooth screen switching.

4.User Registration:
➢User provides name, phone, email, gender, and password.
➢Data is stored in the **PersonUser table** in **db.sqlite3** .

5.Driver Registration:
➢Driver information is collected and saved in the **db.**sqlite3 .

6. Ride Booking:
➢User enters user ID and driver ID.
➢Ride details such as pickup, drop location, distance, and fare are stored in the **rides table**.

7. Food Ordering:
➢Food order details are saved in the **food_orders table**.

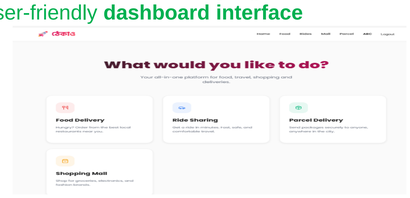
8. Parcel Delivery:
➢Parcel information is stored in the **deliveries table**.

All operations are handled using **PreparedStatement** to ensure secure database access

5. Results:

After successful execution, the Thekao project provides the following results:
➢ Secure **login system with name and password validation**

➢ Successfully connected **Django with db.sqlite3**
➢ User-friendly **dashboard interface**



➢ Data stored correctly in database tables:
1.personUser
2. Drivers
3.Rides
4. Food order
5.Deliveries
Real-time confirmation messages for:
➢ Registration
➢ Ride booking
➢ Food ordering
➢ Parcel delivery

The application runs smoothly in **VS Code,PyCharm** without using Maven.

6. Conclusion:

The **Thekao project** successfully demonstrates a complete Web Service application using **Django** and **db.sqlite3**
This project helps in understanding how a real-world service-based system works with database integration.
Through this project, knowledge of **Django GUI design,, SQL** queries, and event-driven programming has been gained.

In the future, this system can be improved by adding features like **password encryption, admin panel, online payment, and mobile support**.
Overall, Thekao is a simple yet effective project for learning **Django**.