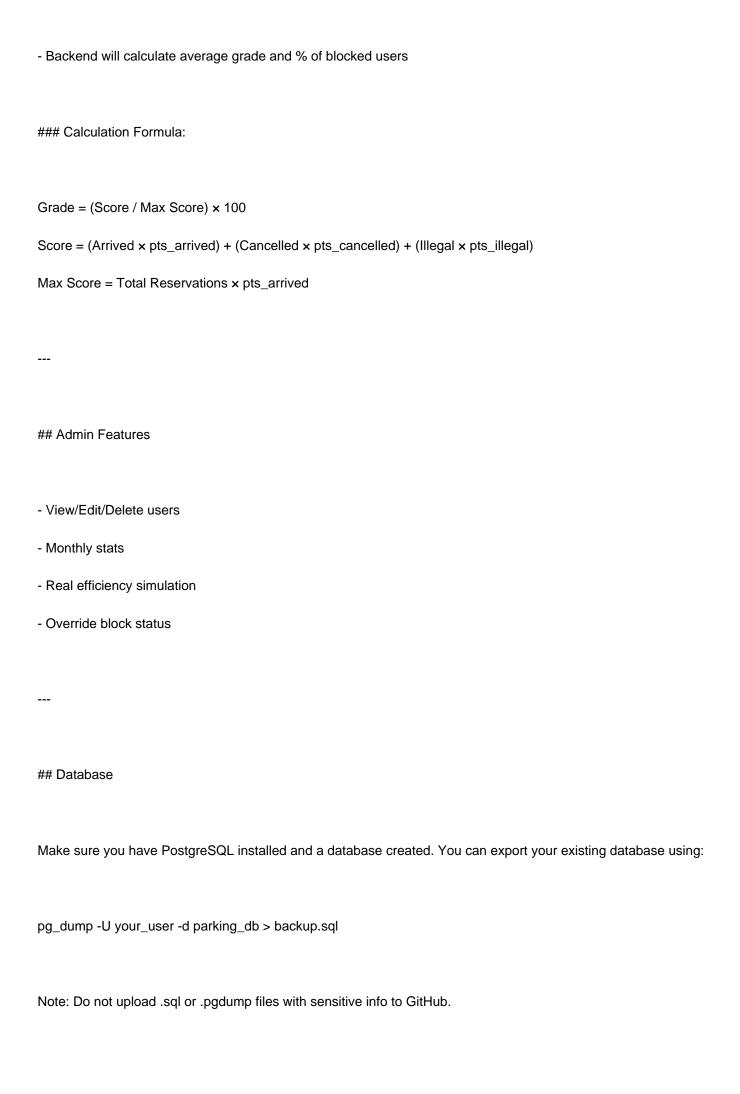
| # Smart Parking Management System - Final Project |
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| This project provides a smart parking management solution for colleges using Flutter (frontend) and Flask (backend), |
| integrated with a PostgreSQL database. |
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| ## Project Structure |
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| - flutter_application_1/: Flutter mobile app for students, lecturers, and admin. |
| - app.py: Flask backend server (REST API). |
| - database.py: PostgreSQL connection and initialization. |
| - user_model.py: User data model. |
| - real_efficiency_with_params: Endpoint for evaluating efficiency with adjustable scoring. |
| - README.md: Project documentation. |
| - requirements.txt: Python dependencies. |
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| ## Getting Started |
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| ### 1. Clone the repository |
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| git clone https://github.com/shadymansour9/final_project.git |
| cd final_project |
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| ### 2. Backend Setup (Flask + PostgreSQL) |

| 1. Install Python packages: |
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| pip install -r requirements.txt |
| 2. Make sure PostgreSQL is running and configured. Update your connection string in database.py. |
| 3. Run the backend server: |
| python app.py |
| By default it runs on: http://127.0.0.1:5000 |
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| ### 3. Frontend Setup (Flutter) |
| cd flutter_application_1 |
| flutter pub get |
| flutter run |
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| ## Simulation Tool |
| Inside the app, go to the Simulation Screen. |
| You can: |
| - Adjust scoring for arrival, legal cancel, illegal cancel |
| - Press "Run Simulation" |



Contact

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