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Software Engineering Assessment Use Case

TG is seeking to develop a web-based application to manage parking slot reservations exclusively for Car Park 1, located in the basement of the TG premises at the Esher office. Car Park 1 is highly popular among employees due to its convenience but has limited capacity, making it essential to implement an efficient booking system.

The objective of this assessment is to design and implement a RESTful Web API that enables TG employees to:

- Log in securely (simulate user authentication)
- View available parking slots for a specific date or date range
- Book a parking slot for a selected date

This test focuses on backend development and API design. You are not required to build a full user interface. Instead, you should demonstrate the functionality of your API using either:

- A simple CLI (Command-Line Interface) script, or
- A Postman collection with sample requests and responses

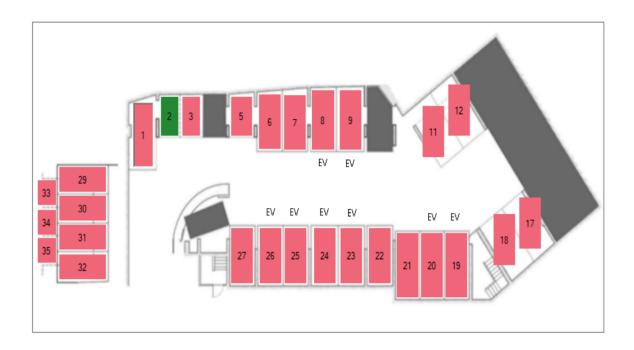
A pre-populated SQLite database is provided with adequate data for users, parking slots, and bookings. You may use this database directly or adapt it as needed for your solution.

Submit your source code by pushing it to a GitHub or GitLab repository and sharing the link. Alternatively, you may upload the project via email or a file-sharing service.

Please ensure your submission includes clear setup instructions and any necessary documentation to run and test the application.



Car Park 1 Layout;



Please use the following link to download the database;

 $\frac{https://drive.google.com/file/d/12inHYHqr2at7skWUXwGtFEVPSYzvos9V/view?usp=drive_li_nk}{nk}$