# Advance Parking Management

## 📌 Overview

The **Advance Parking Management System** is a Python-based project that helps manage parking spaces efficiently. It provides functionality for generating QR codes for vehicles and handling backend operations, making parking management smarter and more organized.

## 🚀 Features

* Vehicle registration with backend support.
* Automatic **QR code generation** for each vehicle.
* Organized codebase with modular design (backend.py, QR code generation.py).
* Can be extended for payment, parking space availability, and real-time monitoring.

## 🛠️ Requirements

Make sure you have the following installed:

* Python 3.8+
* Required libraries:
* pip install qrcode[pil]  
  pip install pillow
* *(More dependencies may be added depending on project extensions.)*

## 📂 Project Structure

Advance Parking management/  
│  
├── backend.py # Handles backend operations for parking management  
├── QR code generation.py # Generates QR codes for vehicles

## ▶️ How to Run

1. Clone or download this repository.
2. Open a terminal inside the project folder.
3. Run the backend:

* python backend.py

1. Run QR code generation:

* python "QR code generation.py"

1. Follow the prompts to register vehicles and generate QR codes.

## 📖 Usage Example

* Register a vehicle in the system.
* Generate a unique QR code for the vehicle.
* Use the QR code for quick check-in/check-out at the parking facility.

## 🔮 Future Enhancements

* Integration with **databases** (MySQL, SQLite, MongoDB).
* Mobile app interface for scanning QR codes.
* Real-time parking availability tracking.
* Online payment system.

## 👨‍💻 Author

Developed as a Python-based project for efficient parking management.

✨ Contributions and suggestions are welcome!