

CASE STUDY:

QR Code Based Vehicle Parking System for Government Department (Uttar Pradesh)

Overview:

Government Departments faced challenges in managing vehicle parking due to increasing number of employees and visitors. The traditional parking system was manual, leading to inefficiencies such as long wait times, unauthorized parking, and difficulties in tracking their allotted parking space and few more.

To address these issues, the department decided to implement a QR code based vehicle parking system using .NET technology.

Challenges:

Challenges for the execution of successful QR Code based Vehicle Parking System:

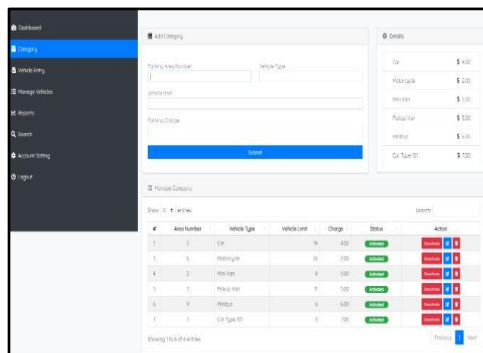
- **Integration with Existing Infrastructure:** Adapted the new system to work with the department's existing security and access control systems.
- **User Adoption:** Conducted training sessions and provided user manuals to facilitate smooth transition.
- **Data Security:** Implemented robust security measures to protect user data and prevent unauthorized access.

Technologies:

.NET Core, ASP.NET MVC, MS-SQL Server, QR Code Libraries etc.

Benefits Achieved:

- **User Satisfaction:** Improved user experience for employees and visitors
- **Efficiency:** Reduced wait times and streamlined parking process
- **Security:** Enhanced security through QR code verification
- **Scalability:** Easily scalable to accommodate more users and vehicles
- **Online System:** Reduced human interventions due to online system



Requirements of the project:

- **Streamline the parking process:** Reduce wait times and simplify parking management.
- **Enhance security:** Ensure only authorized vehicles access the parking facility
- **Improve tracking:** Maintain accurate records of parking space usage
- **User-friendly:** Provide a seamless experience for employees and visitors
- **Scalability:** Ensure the system can accommodate future growth

Approach:

Approach for the execution of successful QR Code based Vehicle Parking System:

The solution involved developing a web-based application using .NET technology, integrated with QR code scanning capabilities.

- Established clear communication & thought process with officials.
- Understand the requirements and accordingly identify technology.
- Identify real problems
- Determine Database Schema
- Unique QR Code generation
- On-going support maintenance.

