

Current Trends in Parking Management System:

Smart Parking Solutions

Many modern parking systems incorporate **IoT (Internet of Things)** sensors to detect available parking spaces and provide real-time updates on space availability.

Mobile Integration

With the increasing reliance on smartphones, parking management systems now offer **mobile apps** that allow users to check availability, reserve spots, and make payments through their devices.

Contactless RFID Card Systems

RFID (Radio Frequency Identification) technology enables users to tap a card or tag at the entrance gate. The system automatically retrieves their profile and grants parking access, speeding up the process and improving security.

Current Trends in Software Development Tools:

Programming Language:

- **Java:** Java remains one of the most widely used programming languages for developing desktop applications, especially with frameworks like **Java Swing** for building graphical user interfaces (GUIs).

Current Trend: The trend in Java is towards microservices and cloud-native development.

Database Technologies:

- **MySQL (Relational Database)**
MySQL is an open-source relational database management system (RDBMS) commonly used for backend data storage in structured applications.

Current Trend: Databases are increasingly moving toward **cloud-hosted solutions** such as **Firebase, MongoDB, and Google Cloud SQL**, offering greater scalability and easier management.

User Interface (UI) / User Experience (UX):

- **JavaFX (Modern Desktop UIs)**
While **Java Swing** is traditional, **JavaFX** offers a more modern approach, allowing

developers to create richer, more interactive user interfaces with enhanced graphics and better user interaction.

Current Trend: UI frameworks like JavaFX are gaining popularity due to their **flexibility** and **support for modern design elements**, enabling smoother and more engaging user experiences.