**Mechanism of Smart Car Parking System (Using Arduino):**

1. **Sensors Detection**:
   * **Ultrasonic sensors** or **IR sensors** are placed at each parking slot.
   * These sensors detect whether a car is present or not by measuring distance or blocking of the sensor beam.
2. **Arduino Microcontroller**:
   * The Arduino collects real-time data from the sensors.
   * It processes this data to determine which parking slots are occupied and which are free.
3. **Display System**:
   * The status of each slot is shown on an **LCD** or **LED display** (e.g., "Slot 1: Free", "Slot 2: Occupied").
   * Optionally, it can also be displayed on a mobile app or web dashboard via Bluetooth/Wi-Fi modules (e.g., ESP8266).
4. **Entry Control (Optional)**:
   * A **servo motor** or barrier gate can be controlled by the Arduino to allow or restrict vehicle entry based on availability.
5. **Power Supply**:
   * The entire system runs on a DC power source or batteries.

**✅ Benefits:**

* Reduces time spent finding parking.
* Real-time monitoring and management.
* Can be scaled for large parking lots.