This project is beneficial mostly for car parking areas in the public places, most of the places in the cities and public places are facing a big issue regarding with the vehicle parking system. This project could be helpful to the various public places as the complete process gets automated through implementing various techniques and devices. The central controlling team will be having the governance to the whole unit through sensors and tracking devices. As being completely automated system it does not require any kind of human surveillance. The software system allows the vehicles to allot the vacant parking slot and it displays all the occupied and vacant parking slots in the whole parking area. The central controlling system has overall rights over the system and can moderate the entire signals to the parking slots if something happens wrong by some technical issues. The system handles entirely the allotment of parking slots by knowing the Occupied and vacant slots. Also, the system displays total parking slots, occupied parking slots and available parking slots along with the respective charges. The best part about the system is that it automatically keeps track of the vehicles got entered into the parking slots and is able to auto generate the receipt with charges to the customer according to the time with respect to the charges.

**Modules:**

* Central controlling unit.
* Entry controlling system.
* CCTV surveillance.
* Notifications to the central authority.
* Auto ticket generating system for vacant parking slots.
* Customers can also give their quick feedback while taking the service receipt.
* The vehicle information will automatically be captured and recorded to the main systems. Thus by helping to improve accuracy and reduce human efforts.
* There will be automated service charges receipt generating system at the exit gate.

**Key features:**

* **Admin:**

1. Customers get better option over the time consuming traditional parking system.
2. Improves traffic disciplines.
3. Quick entrance and exit.
4. Reduced burden by keeping manual tracking and records.
5. Automatic charges receipt generation system.

* **Customers:**

1. Gets informed about vacant slots while entering the parking lot.
2. Helps to guide exact vacant slot in the multi storied buildings.
3. Improves safety by tracking vehicle and keeping records.
4. It enhances smart city idea.

**Advantages:**

* There will be no need of a person for guidance to the vehicle parking lots, its arrangement and surveillance. Customers will come to know themselves about the parking slots.
* The software system automatically detects the vacant or occupied slots and then assigns the vacant slot to the customer at its entrance.
* There is central controlling system to handle and keep tracking on the proper working functionality of the system.
* The customers can easily take entry in the parking lots without having trouble for finding the vacant slots and make exit by having payment receipt.
* This system reduces human efforts and maintains discipline.

**Features:**

* Display at the entrance.
* Automatic slots assigning system.
* Tracking for the vehicles got parked.
* Saves the time by knowing the slots.
* Automatically keeps the entry records and exit records.
* Serves the customers by sitting inside the vehicle.
* 24\*7 access.
* Easy to access.
* Reduced burden of manual slots arrangement team.
* Multiple automated functionality.
* Improving discipline and organized workings.

**Conclusion:**

This Smart parking system hence improves the whole vehicle parking as well as traffic issues making it easier for the vehicle owners not to disturb the entire vehicles in the traffic by having proper parking lots with the smart management system.