

A row of various colored cars parked in a lot. The cars are parked in a line, and the background shows a building with large windows.

SMART PARKING MANAGEMENT SYSTEM

Proposed By
CYBERCINATICS PRIVATE LIMITED

About Cybercinatics

- * Startup recognized by Department of Industrial Promotion and Policy - "Startup India"
- * Member of IT Association of Andhra Pradesh (ITAAP)
- * Located in Visakhapatnam, Andhra Pradesh

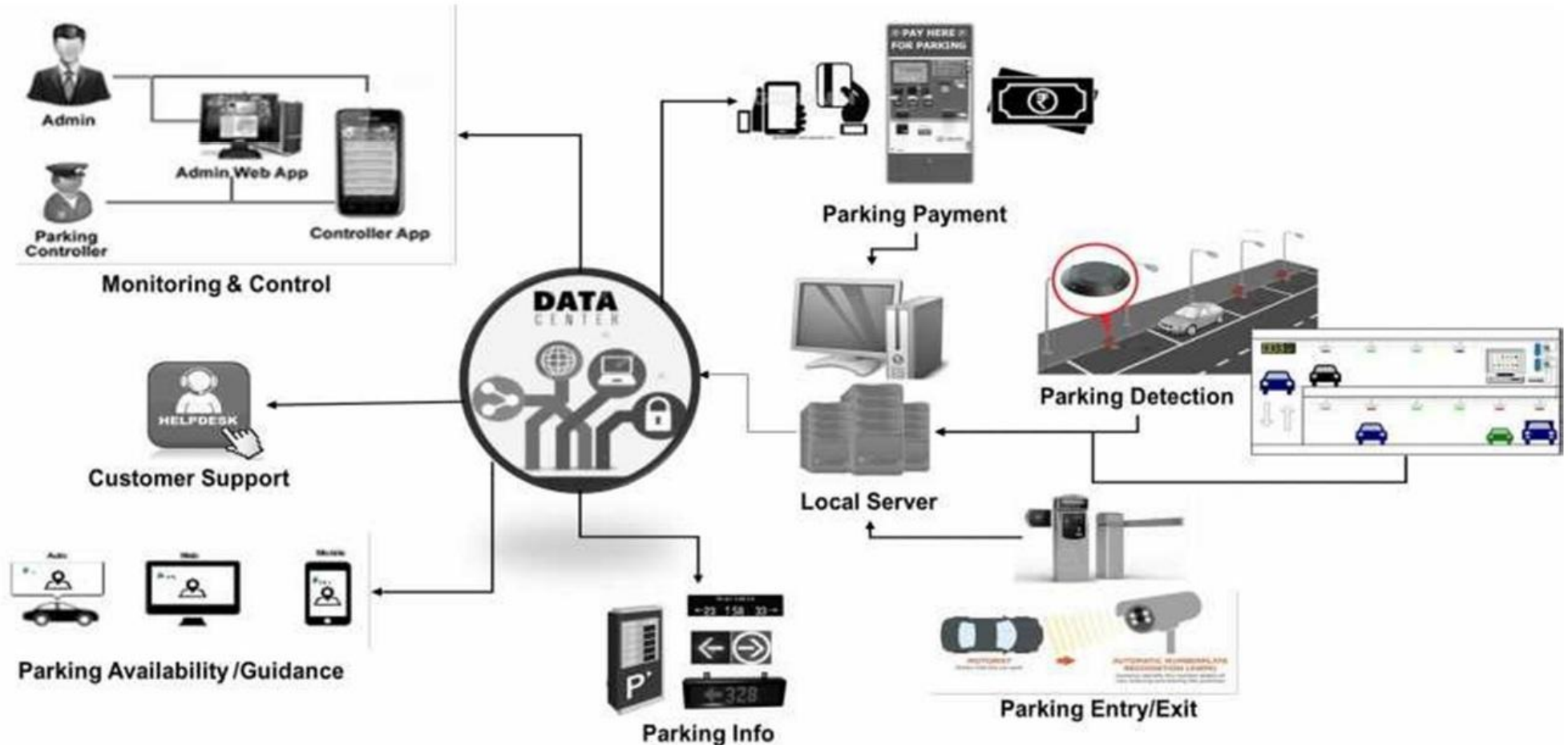
Working Areas:

- * Smart Cities
- * Internet of Things (IoT)
- * Industrial automation
- * System Integration
- * Image analysis and processing systems
- * Android and iOS applications

Smart Parking Management System

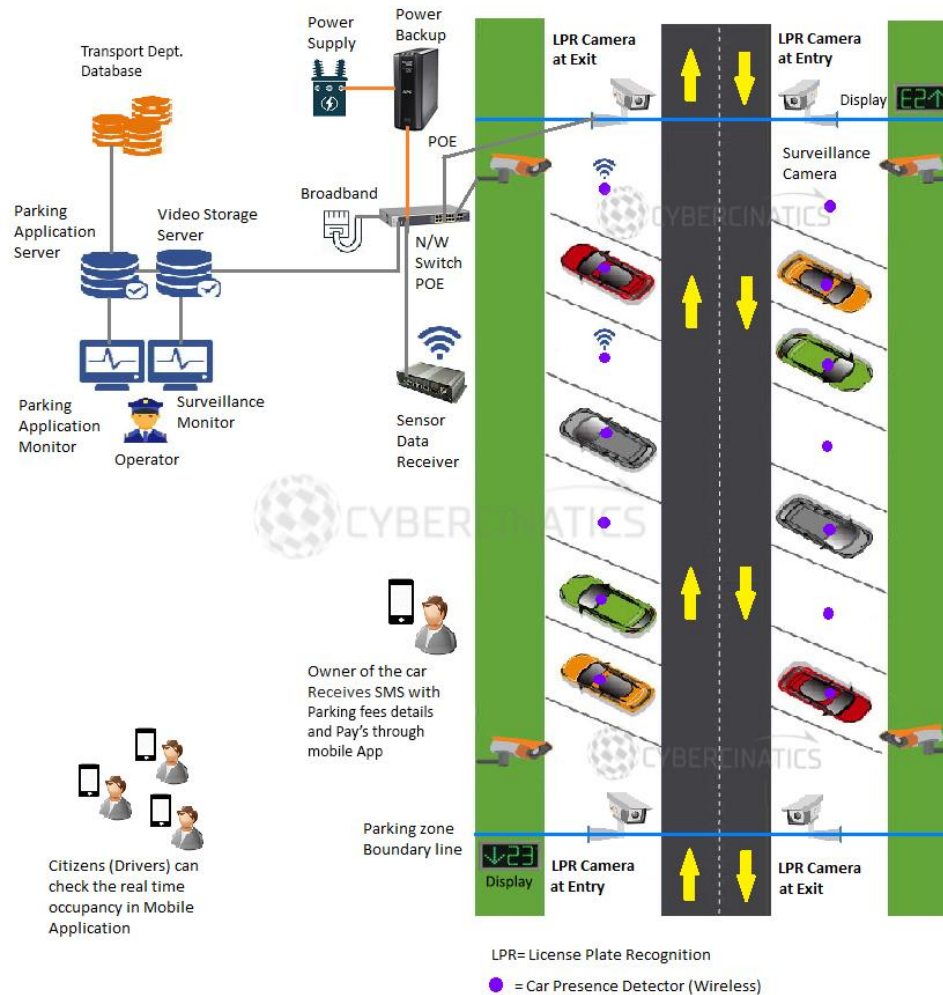
- * Proposing a Customized Automated Vehicle Parking System.
- * Suitable for On street, Off street and Multi-level parking Lots.
- * Public can know the availability of parking vacancies in Real-time through mobile application.
- * Governance bodies can monitor the system from their Remote command and Control center.
- * Parking fees will be charged as per parking time.
- * Surveillance to provide security.
- * Recognize violation and charge them with penalty.
- * Entire System is according to the new parking guidelines for smart cities.
- * Readily Deployable System.

System Architecture



Architecture of Smart Parking System

System Architecture



Architecture of On-Street Parking System

Smart Parking Zone Features

- Access the real time occupancy of individual parking Lots.
- Parking Management Software, Mobile App for users, Web-Portal for resource management.
- Real time location based view to citizens about availability of parking space.
- one-to-one mapping with parking sensors
- Captures & Stores the number plate images of vehicles entering and exiting parking lot.
- Generation of parking receipts at the parking Lot.
- Hardware failure can be reported & tracked through portal
- Various reports like payment status, check-in vehicle list, check-out vehicle list, hardware active status, payment pending list etc.,
- Provision for Manual Entry incase the cameras do not recognize the vehicle.
- Surveillance cameras at the Parking lots provide secured monitoring.

Parking Zone Status Displays

- Parking Zone should be allocated either On-street or Off-street.
- The parking zone is identified by Sign boards.
- The On-Street Parking Zone will have no obstructions on road.
- LED Signboards will be installed at the entry point of the parking Zone.
- Real time vacancy availability will be displayed on LED Signboards at the entry.



LEVEL	SPACES AVAILABLE
4	052
3	090
2	084
1	124



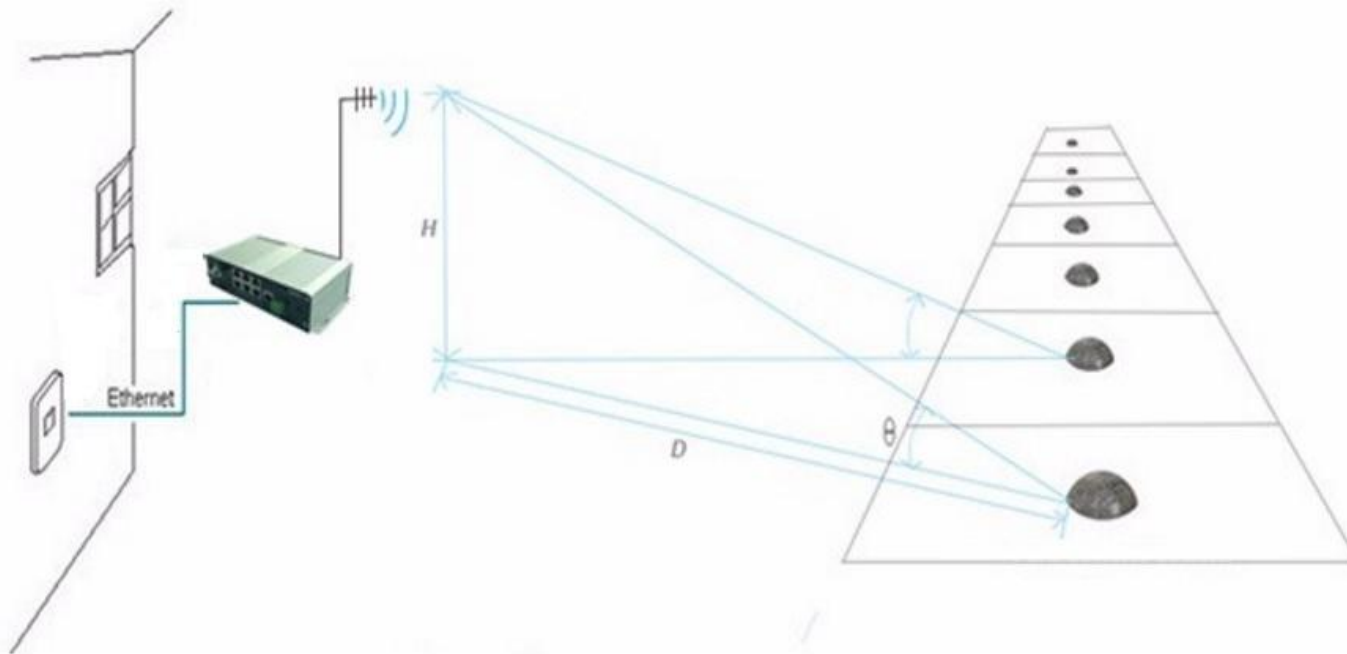
Vehicle Occupancy Detector

- Vehicle Occupancy Detectors installed on the ground; one number each for a parking slot.
- The Vehicle Detector is battery operated and will continuously sense the presence of vehicle in the slot and sends the data to the receiver wirelessly.



Vehicle Occupancy Data Receiver

- The receiver (works in 865Mhz to 867Mhz ISM Band) updates this Occupancy data to the server in control center through the internet using wired Network.



ANPR Camera

- Automatic Triggering & Detection of Vehicles.
- In-Built Recognition software.
- HD 1280X720.
- Day/Night Modes.
- PoE, Ethernet, 14-25W, -30°C – 55°C, IP67.



Automatic Number Plate Recognition Camera

Parking Management Software

P
Smart Parking Software
User Name : Vinay Logout

PARKING ZONE DETAILS

Name : Dondaparthu

Address : near Railway New Colony

Coordinates : 17.727235,83.302100

Gateway ID : GW-1

Last Time Received : 10-05-2018 16:06:41

Last ANPR Received : Exit Camera 1

Last ANPR Received SNO : 001157006

Sensors Occupied : 6

Sensors Vacant : 3

Vehicles Checked-In (ANPR) : 7

Payment Pending Vehicles : 4

Last Occupied Sensor : 16BA4F95

Last Vacated Sensor : 16BA4F97

PARKING ZONE : Dondaparthu

Slot	Sensor ID	Side	Slot	Sensor ID	Side
1	16BA2F71		26	16BA4F71	VACANT
2	16BA2E71		27	16BA3271	
3	16BA2C71	VACANT	28	16BA2D71	
4	16BA3371		29	16BA3171	
5	16BA3571	VACANT	30	Sensor Not Installed	Data not received
6	Sensor Not Installed	Data not received	31	Sensor Not Installed	Data not received
7	Sensor Not Installed	Data not received	32	Sensor Not Installed	Data not received
8	Sensor Not Installed	Data not received	33	Sensor Not Installed	Data not received
9	Sensor Not Installed	Data not received	34	Sensor Not Installed	Data not received
10	Sensor Not Installed	Data not received	35	Sensor Not Installed	Data not received
11	Sensor Not Installed	Data not received	36	Sensor Not Installed	Data not received
12	Sensor Not Installed	Data not received	37	Sensor Not Installed	Data not received
13	Sensor Not Installed	Data not received	38	Sensor Not Installed	Data not received
14	Sensor Not Installed	Data not received	39	Sensor Not Installed	Data not received
15	Sensor Not Installed	Data not received	40	Sensor Not Installed	Data not received
16	Sensor Not Installed	Data not received	41	Sensor Not Installed	Data not received
17	Sensor Not Installed	Data not received	42	Sensor Not Installed	Data not received
18	Sensor Not Installed	Data not received	43	Sensor Not Installed	Data not received
19	Sensor Not Installed	Data not received	44	Sensor Not Installed	Data not received
20	Sensor Not Installed	Data not received	45	Sensor Not Installed	Data not received
21	Sensor Not Installed	Data not received	46	Sensor Not Installed	Data not received
22	Sensor Not Installed	Data not received	47	Sensor Not Installed	Data not received
23	Sensor Not Installed	Data not received	48	Sensor Not Installed	Data not received
24	Sensor Not Installed	Data not received	49	Sensor Not Installed	Data not received
25	Sensor Not Installed	Data not received	50	Sensor Not Installed	Data not received

PAYMENT STATUS

Total Vehicles Used Today : 6

Vehicles Paid Today : 2

Payment Pending Today : 1

Current Check-In Vehicles : Check-In List

Pending Details : Pending List

History Details : Current History List

PAYMENT DETAILS

Enter Unique ID :

Check-IN-Table
 Payment Pending
 Payment History

Search
 Clear

UniqueID : 18052018170147
 Car Number : AP43AF3466
 Mobile Number : 9956894545
 Check-In Time : 2018.05.18 06:28:08.718
 Check-Out Time : 2018.05.18 07:28:08.718
 Amount : 20
 Created Date : 2018.05.18 17:07:12:111
 Table Name : Payment-History-Table

Print
 Send Reminder

ANPR ENTRY CAM - 1

▶ ⏸ ⏹

ANPR EXIT CAM - 1

▶ ⏸ ⏹

ANPR ENTRY CAM - 2

▶ ⏸ ⏹

ANPR EXIT CAM - 2

▶ ⏸ ⏹

Parking software with the Parking Zone details, Zone status, Payment status etc.

Parking Vacancy & Payment Status

P Smart Parking Software

PARKING ZONE DETAILS

Name : Dondaparthi
 Address : near Railway New Colony
 Coordinates : 17.727235,83.302100
 Gateway ID : GW-1
 Last Time Received : 10-05-2018 16:06:41
 Last ANPR Received : Exit Camera 1
 Last ANPR Received SNO : 001157006
 Sensors Occupied : 6
 Sensors Vacant : 3
 Vehicles Checked-In (ANPR) : 7
 Payment Pending Vehicles : 4
 Last Occupied Sensor : 16BA4F95
 Last Vacated Sensor : 16BA4F97

PARKING ZONE : Dondaparthi

Slot	Sensor ID	Side	Slot	Sensor ID	Side
1	16BA2F71		26	16BA4F71	VACANT
2	16BA2E71		27	16BA3271	
3	16BA2C71	VACANT	28	16BA2D71	
4	16BA3371		29	16BA3171	
5	16BA3571	VACANT	30	Sensor Not Installed	Data not received
6	Sensor Not Installed	Data not received	31	Sensor Not Installed	Data not received
7	Sensor Not Installed	Data not received	32	Sensor Not Installed	Data not received
8	Sensor Not Installed	Data not received	33	Sensor Not Installed	Data not received
9	Sensor Not Installed	Data not received	34	Sensor Not Installed	Data not received
10	Sensor Not Installed	Data not received	35	Sensor Not Installed	Data not received
11	Sensor Not Installed	Data not received	36	Sensor Not Installed	Data not received
12	Sensor Not Installed	Data not received	37	Sensor Not Installed	Data not received
13	Sensor Not Installed	Data not received	38	Sensor Not Installed	Data not received
14	Sensor Not Installed	Data not received	39	Sensor Not Installed	Data not received
15	Sensor Not Installed	Data not received	40	Sensor Not Installed	Data not received
16	Sensor Not Installed	Data not received	41	Sensor Not Installed	Data not received
17	Sensor Not Installed	Data not received	42	Sensor Not Installed	Data not received
18	Sensor Not Installed	Data not received	43	Sensor Not Installed	Data not received
19	Sensor Not Installed	Data not received	44	Sensor Not Installed	Data not received
20	Sensor Not Installed	Data not received	45	Sensor Not Installed	Data not received
21	Sensor Not Installed	Data not received	46	Sensor Not Installed	Data not received
22	Sensor Not Installed	Data not received	47	Sensor Not Installed	Data not received
23	Sensor Not Installed	Data not received	48	Sensor Not Installed	Data not received
24	Sensor Not Installed	Data not received	49	Sensor Not Installed	Data not received
25	Sensor Not Installed	Data not received	50	Sensor Not Installed	Data not received

Displays the Individual Parking Zone details and also the parking vacancy in the zone.

PAYMENT STATUS

Total Vehicles Used Today : 6
 Vehicles Paid Today : 2
 Payment Pending Today : 1
 Current Check-In Vehicles : Check-In List
 Pending Details : Pending List
 History Details : Current History List

PAYMENT DETAILS

Enter Unique ID :

Check-IN-Table
 Payment Pending
 Payment History

Search
 Clear

UniqueID : 18052018170147
 Car Number : AP43AF3466
 Mobile Number : 9956894545
 Check-In Time : 2018.05.18 06:28:08.718
 Check-Out Time : 2018.05.18 07:28:08.718
 Amount : 20
 Created Date : 2018.05.18 17:07:12:111
 Table Name : Payment-History-Table

Print
 Send Reminder

Displays the parking zone details like total entered cars of the day, total cars paid, payment pending cars and also we can get the single payment details of particular vehicle through the unique ID.

Vehicle Check-In into Parking Lot



Auto-generated vehicle number through the ANPR Entry camera to be confirmed by the operator

Check-In-List

CarNumber	UniqueID	CheckInTime	EntryCamID	Mobile
AMSAF4234	27022018110300	2018.05.09 11:28:08.718	001157006	9985899899
ANSAF4234	18042018115556	2018.05.09 11:28:08.718	001157006	9985899899
AP31CY7009	19032018182256	2018.05.09 11:28:08.718	001157006	9985899899
AP35AF4234	10052018121504	2018.05.17 03:00:08.718	001157006	8807550969
APP30CL4567	28022018180026	2018.05.09 11:28:08.718	001157006	00112233
IND00UP1122	02052018151939	2018.05.09 11:28:08.718	001157006	00112233

Check-In cars List in the Parking Software.

Vehicle Check-Out from Parking Lot



Auto-generated vehicle number through the ANPR camera at the exit of the parking zone

The screenshot shows a software window titled "Pending Details List" containing a table with the following data:

CarNumber	UniqueID	ExitCamID	EntryCamID	Amount	CheckOut Time	CheckIn Time	Mobile	ImageID
AP31AF4234	28022018180120	001157006	001157006	40	2018.05.09 12:38:08.718	2018.05.09 11:28:08.718	9985899899	1509639067306
IND78UP1122	11052018172659	001157006	001157006	20	2018.05.17 03:00:08.718	2018.05.17 02:00:08.718	0011223344	1511757962811
APTRYUUIUIU	100001	1001	10001	20	2018.05.08 12:23:333	2018.05.08 02:23:333	100000001	100000000001
AP31CY7009	123411122222	001157006	001157006	40	2018.05.15 12:10:111	2018.05.15 10:10:111	9998999990	1511757962811

Vehicles will be added to Payment Pending list once the vehicle leaves the Parking Zone. Payment mode can be cash or mobile to be selected by the operator. Automatically cleared from list once payment is done.

Management Panel

The screenshot displays a web application window titled "Management Panel". The interface is organized into several functional areas:

- Navigation Menu:** A vertical column of five buttons on the left side: "User Rights", "Manual Check-IN Entry", "Manual Check-OUT Entry", "View Sensor Excel Details", and "Redirect To Challan Form".
- Get Images From Camera:** A section on the right containing a dropdown menu for "ANPR Camera" (set to "--SELECT CAMERA--"), two date-time input fields for "From Date" and "To Date" (both set to "05-03-2018 11:46:56"), and a "Get Images" button.
- Payment Pending Reports:** A section at the bottom left with two date-time input fields for "From Date" and "To Date" (both set to "05-03-2018 11:46:56"), and two buttons: "View Details" and "Export to Excel".
- Payment History Reports:** A section at the bottom right with two date-time input fields for "From Date" and "To Date" (both set to "05-03-2018 11:46:56"), and three buttons: "View Details", "Export to Excel", and "Delete".

Management panel for User Management, Manual check-in & check-out entries, payment reports etc.,

Vehicle Parking Challan Generation



Parking Challan Form

Date : 15-05-2018
Time : 15:20:48

Vehicle Image

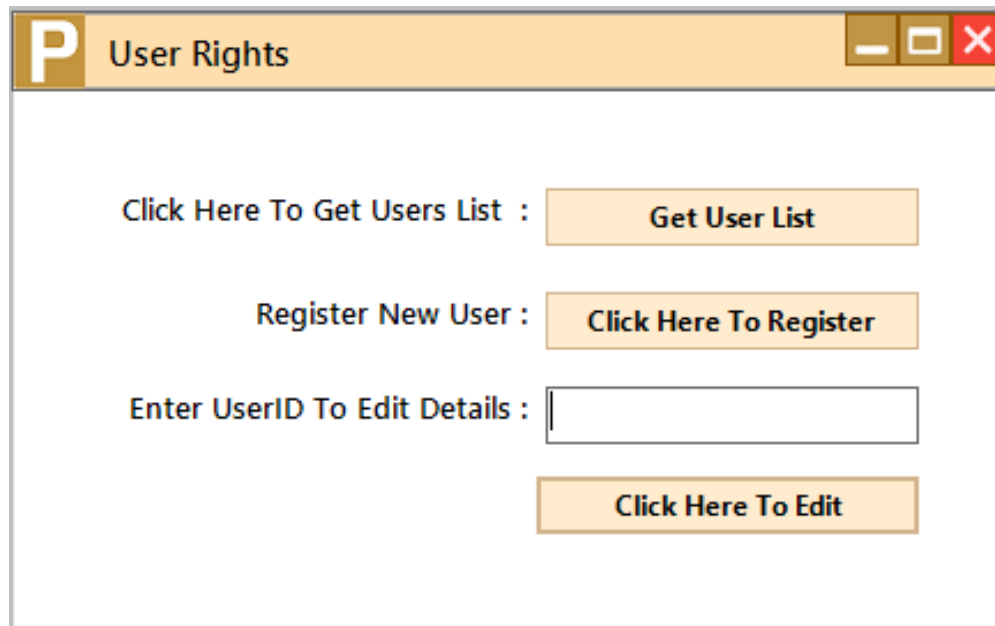


Parking Zone Name : Dondaparthi
Car Number : AP31CY7009
Unique ID : 123411122222
Check-IN-Time : 2018.05.15 10:10:11
Check-Out-Time : 2018.05.15 12:10:11
Parking Fee : ₹ 40
Image ID : 1511757962811
Mobile : 9998999990
Parking Fee + Penalty : ₹ 40 + ₹ 1000
Due Date : 30-05-2018

Authorized Signature

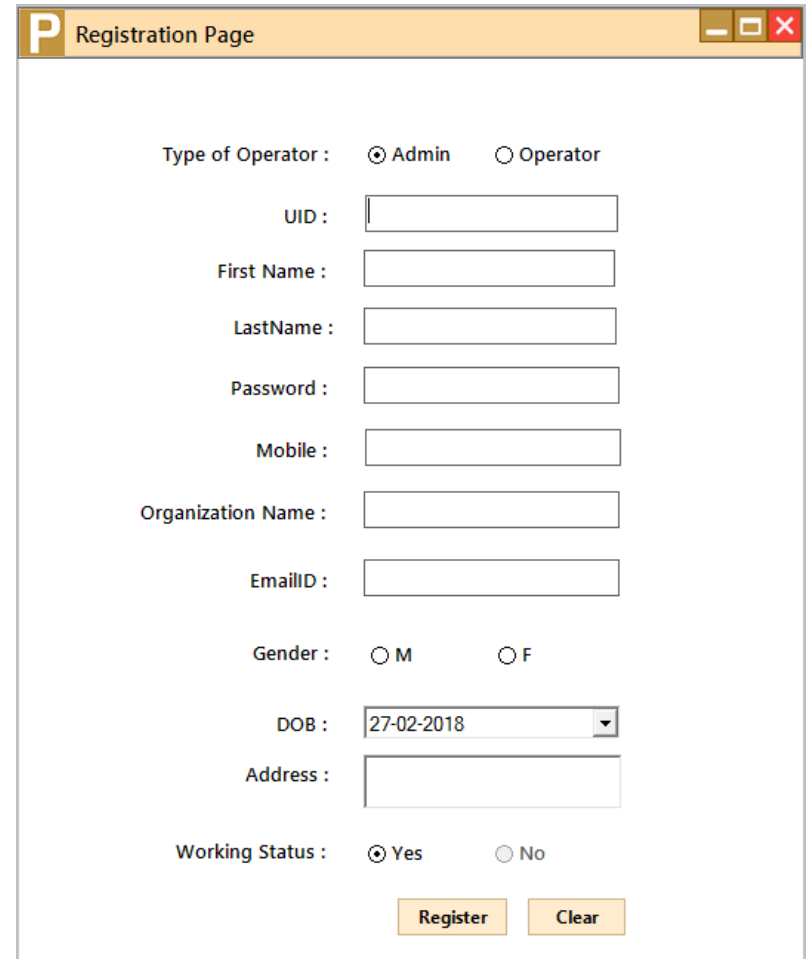
Generated Challan for a Payment Pending vehicle

Software Users Management



The 'User Rights' window features a title bar with a 'P' icon and standard window controls. The main content area includes three interactive elements: a 'Get User List' button preceded by the text 'Click Here To Get Users List :', a 'Click Here To Register' button preceded by 'Register New User :', and a 'Click Here To Edit' button preceded by an input field for 'Enter UserID To Edit Details :'. All buttons are orange with black text.

Software users management i.e. Admin & Operators



The 'Registration Page' window has a title bar with a 'P' icon and window controls. The form contains the following fields and controls: 'Type of Operator' with radio buttons for 'Admin' (selected) and 'Operator'; 'UID' with a text input; 'First Name' with a text input; 'LastName' with a text input; 'Password' with a text input; 'Mobile' with a text input; 'Organization Name' with a text input; 'EmailID' with a text input; 'Gender' with radio buttons for 'M' and 'F'; 'DOB' with a date dropdown menu showing '27-02-2018'; 'Address' with a text input; and 'Working Status' with radio buttons for 'Yes' (selected) and 'No'. At the bottom right, there are 'Register' and 'Clear' buttons.

Registration Page for software users

Manual Check-In & Check-Out

The screenshot shows a window titled "Manual Check-In-Entry Form" with a yellow header bar containing a "P" icon and window control buttons. The form contains the following fields and buttons:

- Select ANPR Camera : --SELECT CAMERA-- (dropdown menu)
- Camera ID : (text input field)
- Car Number : (text input field)
- Check-In-Time : 2018-05-15 01: 14: 08 (time selection field)
- Check - IN (button)
- Clear (button)

Manual check-in of vehicle entering into the parking Zone

The screenshot shows a window titled "Manual Check-Out-Entry Form" with a yellow header bar containing a "P" icon and window control buttons. The form contains the following fields and buttons:

- Select ANPR Camera : --SELECT CAMERA-- (dropdown menu)
- Camera ID : (text input field)
- Car Number : (text input field)
- Check-Out-Time : 2018-05-15 01: 15: 01 (time selection field)
- Check - OUT (button)
- Clear (button)

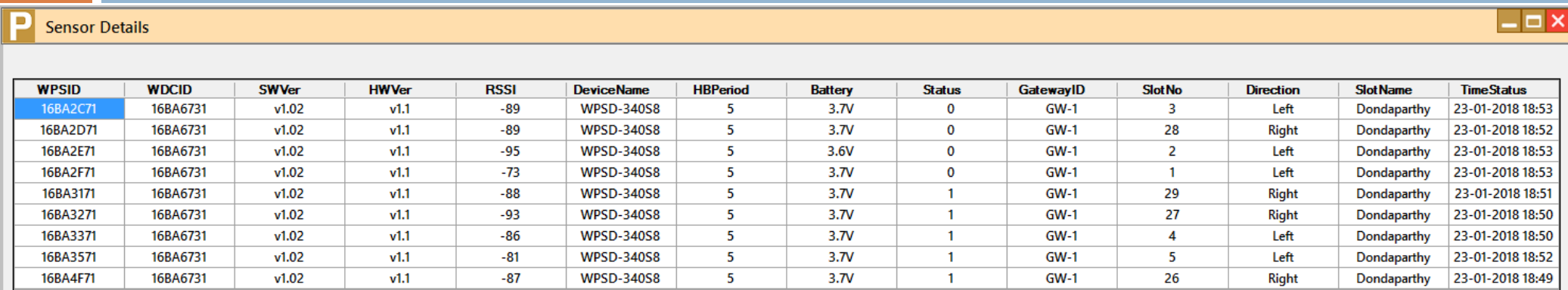
Manual check-out of vehicle leaving from the parking Zone

Vehicles Transaction History

History Details From '27-02-2012 12:24:43' To '27-02-2018 12:24:43'										
CarNumber	Payment_ID	Amount	Receipt_No	Unique_ID	Created_At	Mobile	CheckInTime	CheckOut Time	EntryCamID	ExitCamID
AP31HY1235	payid_AP 31 HY 1235	20	rcpt_AP 31 HY 1235	06022018095722	2017.11.17 17:36:08.718					
AP31HY1235	payid_AP 31 HY 1235	20	rcpt_AP 31 HY 1235	06022018095722	2017.11.17 17:36:08.718					
AP31HY1235	payid_AP 31 HY 1235	10	rcpt_AP 31 HY 1235	06022018095722	2017.11.17 17:36:08.718					
AP53UP3135	payid_06022018095803	150	rcpt_06022018095808	06022018095808	2017.11.17 19:56:08.581					
AP53UP3141	payid_06022018095802	50	rcpt_06022018095802	06022018095802	2018.02.17 12:56:08.581					
AP31HY1235	payid_AP 31 HY 1235	10	rcpt_AP 31 HY 1235	06022018095722	2017.11.17 17:36:08.718					
AP53UP3131	payid_06022018095802	50	rcpt_06022018095802	06022018095802	2018.02.19 19:56:08.581					
AP31HY1235	payid_AP 31 HY 1235	20	rcpt_AP 31 HY 1235	06022018095722	2017.11.17 17:36:08.718					
AP31HY1235	payid_AP 31 HY 1235	20	rcpt_AP 31 HY 1235	06022018095722	2017.11.17 17:36:08.718					
AP30CL4567	06022018095902	5	06022018095902	06022018095902	2018.02.19 11:54:08.718					
IND00UP1122	06022018095832	10	06022018095832	06022018095832	2018.02.19 12:25:08.718	00112233	2017.11.17 14:56:09.647	2017.11.17 16:06:09.647	001157006	
IND00UP1122	06022018095832	0	06022018095832	06022018095832	2018.02.19 12:25:08.718	00112233	2017.11.17 14:56:09.647	2017.11.17 16:06:09.647	001157006	
AP53UP3131	06022018095802	9	06022018095802	06022018095802	2018.02.19 12:33:08.718	1234567890	2017.11.17 14:56:08.581	2017.11.17 14:56:08.581	001157006	
AP53UP3131	06022018095802	4	06022018095802	06022018095802	2018.02.19 12:36:08.718	1234567890	2017.11.17 14:56:08.581	2017.11.17 14:56:08.581	001157006	
AP	14022018115138	30	14022018115138	14022018115138	2018.02.20 12:25:08.718	00112233	2017.11.17 14:56:05.248	2017.11.17 14:56:05.248	001157006	001157006
AP	14022018115138	10	14022018115138	14022018115138	2018.02.20 12:25:08.718	00112233	2017.11.17 14:56:05.248	2017.11.17 14:56:05.248	001157006	001157006
AP30CL4567	06022018095902	5	06022018095902	06022018095902	2018.02.20 12:02:08.718	00112233	2017.11.17 14:56:09.581	2017.11.17 15:46:09.581	001157006	
AP30CL4567	06022018095902	5	06022018095902	06022018095902	2018.02.20 12:02:08.718	00112233	2017.11.17 14:56:09.581	2017.11.17 15:46:09.581	001157006	
AP30CL4567	06022018095902	1	06022018095902	06022018095902	2018.02.20 12:17:08.718	00112233	2017.11.17 14:56:09.581	2017.11.17 15:46:09.581	001157006	
AP30CL4567	06022018095902	1	06022018095902	06022018095902	2018.02.20 12:17:08.718	00112233	2017.11.17 14:56:09.581	2017.11.17 15:46:09.581	001157006	
AP31HY1235	payid_AP 31 HY 1235	20	rcpt_AP 31 HY 1235	06022018095722	2017.11.17 17:36:08.718					
AP31HY1235	payid_AP 31 HY 1235	20	rcpt_AP 31 HY 1235	06022018095722	2017.11.17 17:36:08.718					
AP35AF4234	14022018130326	10	14022018130326	14022018130326	2018.02.20 13:42:08.718	8807550969	2018.02.14 13:03:36.596	14-02-2018 13:03:42	1	2
AP30CL4567	06022018095902	10	06022018095902	06022018095902	2018.02.19 11:44:08.718					
AP30CL4567	06022018095902	2	06022018095902	06022018095902	2018.02.19 11:57:08.718					
AP	14022018115138	10	14022018115138	14022018115138	2018.02.20 12:25:08.718	00112233	2017.11.17 14:56:05.248	2017.11.17 14:56:05.248	001157006	001157006
AP00IN1122	14022018130326	4	14022018130326	14022018130326	2018.02.20 12:48:08.718	00112233	2018.02.14 13:03:36.596	14-02-2018 13:03:42	1	2
AP00IN1122	14022018130326	10	14022018130326	14022018130326	2018.02.20 13:15:08.718	00112233	2018.02.14 13:03:36.596	14-02-2018 13:03:42	1	2
AP35AF4234	14022018130326	50	14022018130326	14022018130326	2018.02.20 13:21:08.718	8807550969	2018.02.14 13:03:36.596	14-02-2018 13:03:42	1	2
AP35AF4234	14022018130326	15	14022018130326	14022018130326	2018.02.20 13:24:08.718	9985878021	2018.02.14 13:03:36.596	14-02-2018 13:03:42	1	2
IND00UP1122	06022018095832	20	06022018095832	06022018095832	2018.02.19 12:25:08.718	00112233	2017.11.17 14:56:09.647	2017.11.17 16:06:09.647	001157006	
AP53UP3131	06022018095802	4	06022018095802	06022018095802	2018.02.19 12:36:08.718	1234567890	2017.11.17 14:56:08.581	2017.11.17 14:56:08.581	001157006	
AP35AF4234	14022018130326	15	14022018130326	14022018130326	2018.02.20 13:24:08.718	9985878021	2018.02.14 13:03:36.596	14-02-2018 13:03:42	1	2
AP35AF4234	14022018130326	10	14022018130326	14022018130326	2018.02.20 13:24:08.718	8807550969	2018.02.14 13:03:36.596	14-02-2018 13:03:42	1	2
IND00UP1122	06022018095832	0	06022018095832	06022018095832	2018.02.19 12:25:08.718	00112233	2017.11.17 14:56:09.647	2017.11.17 16:06:09.647	001157006	
AP30CL4567	06022018095902	2	06022018095902	06022018095902	2018.02.20 12:02:08.718	00112233	2017.11.17 14:56:09.581	2017.11.17 15:46:09.581	001157006	

History of all vehicles used the Parking Zone.

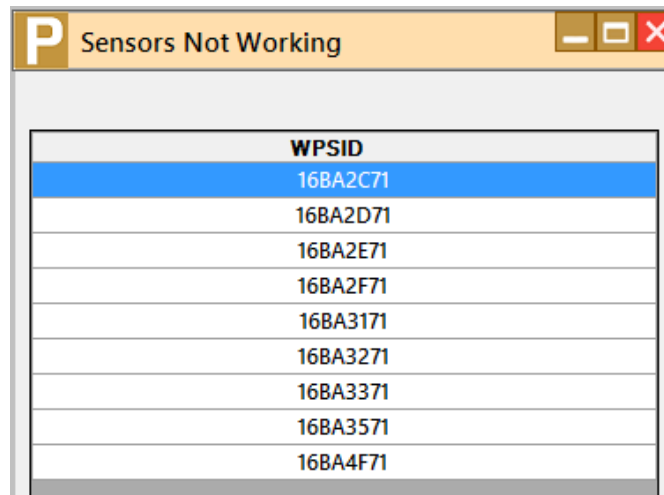
Sensor details at Parking lot



The screenshot shows a window titled "Sensor Details" with a table containing 14 columns: WPSID, WDCID, SWVer, HWVer, RSSI, DeviceName, HBPeriod, Battery, Status, GatewayID, SlotNo, Direction, SlotName, and TimeStatus. The table lists 12 sensors with their respective IDs, versions, signal strengths, device names, heartbeat periods, battery levels, status, gateway IDs, slot numbers, directions, slot names, and time statuses.

WPSID	WDCID	SWVer	HWVer	RSSI	DeviceName	HBPeriod	Battery	Status	GatewayID	SlotNo	Direction	SlotName	TimeStatus
16BA2C71	16BA6731	v1.02	v1.1	-89	WPSD-340S8	5	3.7V	0	GW-1	3	Left	Dondaparth	23-01-2018 18:53
16BA2D71	16BA6731	v1.02	v1.1	-89	WPSD-340S8	5	3.7V	0	GW-1	28	Right	Dondaparth	23-01-2018 18:52
16BA2E71	16BA6731	v1.02	v1.1	-95	WPSD-340S8	5	3.6V	0	GW-1	2	Left	Dondaparth	23-01-2018 18:53
16BA2F71	16BA6731	v1.02	v1.1	-73	WPSD-340S8	5	3.7V	0	GW-1	1	Left	Dondaparth	23-01-2018 18:53
16BA3171	16BA6731	v1.02	v1.1	-88	WPSD-340S8	5	3.7V	1	GW-1	29	Right	Dondaparth	23-01-2018 18:51
16BA3271	16BA6731	v1.02	v1.1	-93	WPSD-340S8	5	3.7V	1	GW-1	27	Right	Dondaparth	23-01-2018 18:50
16BA3371	16BA6731	v1.02	v1.1	-86	WPSD-340S8	5	3.7V	1	GW-1	4	Left	Dondaparth	23-01-2018 18:50
16BA3571	16BA6731	v1.02	v1.1	-81	WPSD-340S8	5	3.7V	1	GW-1	5	Left	Dondaparth	23-01-2018 18:52
16BA4F71	16BA6731	v1.02	v1.1	-87	WPSD-340S8	5	3.7V	1	GW-1	26	Right	Dondaparth	23-01-2018 18:49

Installed Sensor details monitored through the Parking Software



The screenshot shows a window titled "Sensors Not Working" with a list of WPSID values. The list contains 10 entries, with the first entry, 16BA2C71, highlighted in blue.

WPSID
16BA2C71
16BA2D71
16BA2E71
16BA2F71
16BA3171
16BA3271
16BA3371
16BA3571
16BA4F71

List of sensors not working, list generated based on real-time information

Report Generation through Software

ReportTemplate_20180227123325.xlsx - Microsoft Excel

CarNumber	UniqueID	ExitCamID	EntryCamID	Amount	CheckOutTime	CheckInTime	Mobile	ImageID
IND00UP1122	26022018135619	001157006	001157006	30	2017.11.17 16:56:28.748	2017.11.17 14:56:28.748	00112233	150006696666

HistoryReportTemplate_20180227123509.xlsx - Microsoft Excel

CarNumber	Payment_ID	Amount	Receipt_No	Unique_ID	Created_At	Mobile	CheckInTime	CheckOutTime	EntryCamID	ExitCamID
IND00UP1122	06022018095832	10	06022018095832	06022018095832	2018.02.19 12:25:08.718	00112233	2017.11.17 14:56:09.647	2017.11.17 16:06:09.647	001157006	
IND00UP1122	06022018095832	0	06022018095832	06022018095832	2018.02.19 12:25:08.718	00112233	2017.11.17 14:56:09.647	2017.11.17 16:06:09.647	001157006	
AP53UP3131	06022018095802	9	06022018095802	06022018095802	2018.02.19 12:33:08.718	1234567890	2017.11.17 14:56:08.581	2017.11.17 14:56:08.581	001157006	
AP53UP3131	06022018095802	4	06022018095802	06022018095802	2018.02.19 12:36:08.718	1234567890	2017.11.17 14:56:08.581	2017.11.17 14:56:08.581	001157006	
AP	14022018115138	30	14022018115138	14022018115138	2018.02.20 12:25:08.718	00112233	2017.11.17 14:56:05.248	2017.11.17 14:56:05.248	001157006	001157006
AP	14022018115138	10	14022018115138	14022018115138	2018.02.20 12:25:08.718	00112233	2017.11.17 14:56:05.248	2017.11.17 14:56:05.248	001157006	001157006
AP30CL4567	06022018095902	5	06022018095902	06022018095902	2018.02.20 12:02:08.718	00112233	2017.11.17 14:56:09.581	2017.11.17 15:46:09.581	001157006	
AP30CL4567	06022018095902	5	06022018095902	06022018095902	2018.02.20 12:02:08.718	00112233	2017.11.17 14:56:09.581	2017.11.17 15:46:09.581	001157006	
AP30CL4567	06022018095902	1	06022018095902	06022018095902	2018.02.20 12:17:08.718	00112233	2017.11.17 14:56:09.581	2017.11.17 15:46:09.581	001157006	
AP30CL4567	06022018095902	1	06022018095902	06022018095902	2018.02.20 12:17:08.718	00112233	2017.11.17 14:56:09.581	2017.11.17 15:46:09.581	001157006	

Generated Excel reports of pending payments, history of payments

Surveillance

- There will be surveillance cameras (Visible & Infrared based) with Zoom Capability situated at entry and exit points to monitor the parking zone.
- Any unauthorized vehicle entry which is not going through the Number Plate Recognition can be easily verified by the Operator through the Surveillance Monitor.
- Surveillance video is separately stored in NAS Storage, and can be accessed remotely.

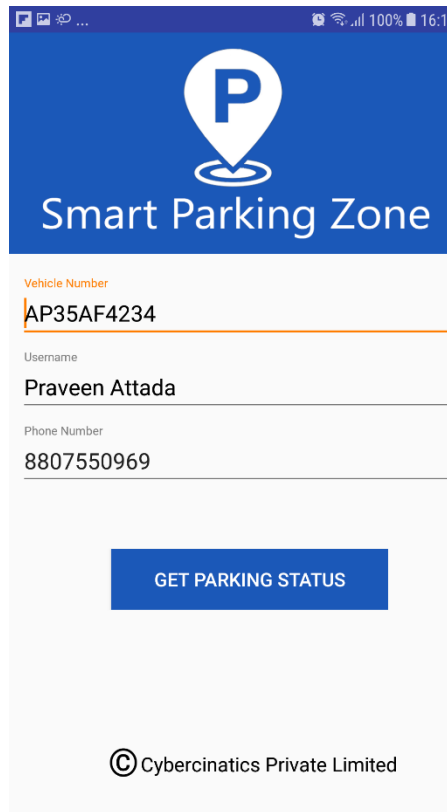


Mobile Application

- Public (Users) can check the availability of the parking zone through Mobile App installed in their mobiles
- Mobile App also shows the real time occupancy of the Parking Zones to the Users



Welcome Screen



App Registration

The image shows the parking zone list screen. It features a blue header with the text "SMART PARKING ZONE". Below the header, there is a table with two columns: "PARKING ZONE LIST" and "VACANT SLOTS". The table lists three parking zones: ARILOVA with 12 vacant slots, DONDAPARTHY with 03 vacant slots, and GURUDWARA JN with 05 vacant slots. The copyright notice "© Cybercinatics Private Limited" is visible at the bottom.

PARKING ZONE LIST	VACANT SLOTS
ARILOVA	12
DONDAPARTHY	03
GURUDWARA JN	05

Parking Zone List

Mobile Application

SMART PARKING ZONE

LEFT	RIGHT	DONDAPARTHY
1	26	Zone Status Total Slots : 9 Left Vacant : 2 Right Vacant : 1 Price : 20/Hr Vehicle Status Veh. No. : AP35AF4234 Zone : Dondaparthly Time : 13 : 14 Hrs Total : Rs. 270
2	27	
3	28	
4	29	
5		

PAYMENT **NAVIGATE**

Parking Availability List

Your location
Bhuvanewari Plaza

2 min 2 min — 4 min 2 min

2 min (350 m)
Best route

STEPS & MORE **START**

Navigation to Parking Zone

Smart Parking

Parking Fee
Rs. 60

PAY

Secure Payments by Razorpay

CYBERCINATICS

Payment Process

Web Portal – Login and Home Screen

- Admin or officials can know the status of the Parking Lots through the portal
- Operators can complaint an Issue about the hardware or software of Parking Lot & also track the details of resolved Issues.

SMART PARKING MANAGEMENT PORTAL

Login Page

Unique ID:

Password:

[Sign in](#)
Or
[Register](#)

Login Screen

CLICK BELOW TO PERFORM ACTIONS

- [Report an Issue](#)
- [Resolve an Issue](#)
- [Verify the resolved Issue](#)
- [List of open Issues](#)
- [Payment Pending Details](#)
- [Payment History Details](#)

Parking Zone Name : Dondaparthly

SMART PARKING VEHICLE STATUS			
SlotID	SensorID	Status	Direction
1	16BA2F71	Vacant	L
2	16BA2E71	Vacant	L
3	16BA2C71	Occupied	L
4	16BA3371	Vacant	L
5	16BA3571	Occupied	L
6	16BA3572	Occupied	L
7	16BA3573	Vacant	L
8	16BA2F72	Occupied	L

Total Payment Pending : 120 ₹
Total Payment History : 340 ₹
Total Transactions Done : 9

Web Portal with the Issue report details, issue resolve, payment pending etc.

Web Portal – Issue Report & Resolve

REPORT AN ISSUE

Select Location :

Select Issue :

Assigned By :

Assigned To :

Additional Notes :

Issue Reporting about a Parking Lot

RESOLVE AN ISSUE

Open Issue :

Ticket ID :

Location Name :

Issue :

Assigned To :

Resolved By :

Resolve Notes :

Update the resolved Issue details

Web Portal – Issue Verify & Open Issues List

VERIFY THE RESOLVED ISSUES

Open Issue :

-- Select Issue --

Ticket ID :

-- Select Ticket ID --

Location Name :

-- Select Location --

Issue :

Assigned To :

-- Select Operator --

Resolved By :

-- Select Staff --

Resolved Time :

dd-mm-yyyy

Resolve Notes :

Verified By :

-- Select Operator --

Save

LIST OF OPEN ISSUES FROM - 2018-03-02 'To' 2018-04-19

Back

Ticket_ID	Ticket_Status	Issue	LocationName	Reporting_Time	Assigned_By	Assigned_To	Issue_Notes	Resolved_By	Resolved_T
636570604269356163	2	Camera_Issue	AKKAYYAPALEM	19-03-2018 00:00:00	ADMIN	UID13	Entry cam not working	UID13	19-03-2018 00:00:00

Open Issues List between the selected dates

Web Portal – Payment Pending & History

PAYMENT PENDING DETAILS								
CarNumber	UniqueID	ExitCamID	EntryCamID	Amount	CheckOutTime	CheckInTime	Mobile	ImageID
AP31AF4234	28022018180120	001157006	001157006	40	2018.05.09 12:38:08.718	2018.05.09 11:28:08.718	9985899899	1509639067306
IND78UP1122	11052018172659	001157006	001157006	20	1970.01.02 2:14:21.757	1970.01.02 0:14:21.757	0011223344	1511757962811
APTRYUUIUIU	100001	1001	10001	20	2018.05.08 12:23:333	2018.05.08 02:23:333	100000001	10000000001
AP31CY7009	123411122222	001157006	001157006	40	2018.05.15 12:10:111	2018.05.15 10:10:111	9998999990	1511757962811

List of Payment Pending vehicles

PAYMENT HISTORY DETAILS FROM - 2018-05-01 'To' 2018-05-17										
CarNumber	Payment_ID	Amount	Receipt_No	Unique_ID	Created_At	Mobile	CheckInTime	CheckOutTime	EntryCamID	ExitCamID
APTR9882222	10000000003	40		28022018180120	2018.05.03 02:23:333	9985899899	2018.05.09 11:28:08.718	2018.05.09 12:38:08.718	001157006	001157006
APGY324SVVF	10000000002	40		28022018180120	2018.05.04 02:23:333	9985899899	2018.05.09 11:28:08.718	2018.05.09 12:38:08.718	001157006	001157006
APTR9881111	10000000003	40		28022018180120	2018.05.05 02:23:333	9985899899	2018.05.09 11:28:08.718	2018.05.09 12:38:08.718	001157006	001157006
APHU0723333	10000000002	40		28022018180120	2018.05.06 02:23:333	9985899899	2018.05.09 11:28:08.718	2018.05.09 12:38:08.718	001157006	001157006
APKU088222	10000000002	40		28022018180120	2018.05.07 02:23:333	9985899899	2018.05.09 11:28:08.718	2018.05.09 12:38:08.718	001157006	001157006

History of all vehicles used Parking Lot

Advantages

- Scalable Enterprise Architecture.
- Database Synchronization with Central Server.
- Highly customizable to any type of parking lot.
- ANPR Camera Detection works for vehicles travelling at high speed as well.
- Entire Parking and billing can be automated from customer's perspective.
- Dedicated Surveillance system which can store the video data of 2 months duration.
- Longest battery life of 3 yrs for the Wireless vehicle detection sensors.
- Less man-power to maintain the parking zone.
- Works in almost all weather conditions.
- Manual operation is possible incase of failure of network, hardware etc.

Limitations

- The Automated Number Plate Recognition algorithms and software detection efficiency is 97% in practice. i.e. 3 number plates data may be corrected by the operator for every 100 Cars under normal operating conditions.
- Operator should verify every car number even if the automatic number detection is correct.
- It is network dependant; A network failure will interrupt the functioning of the system. A Fall back connection should be used, Offline mode is possible with local server.
- Extreme weather conditions like heavy rain may decrease the detection efficiency of the cameras.

Project Development

- Cybercinatics will design, develop and deploy a customized Smart parking system as proposed here.
- Cybercinatics supplies the hardware, software and manpower to implement the system.
- Provides initial training to the operators and maintaining staff of the parking zone one time after integrating the whole system.
- Supports the System after Go-Live as per the project requirement.
- Follows required standards in every stage of the project.
- Total Time of Project Completion: 3 to 6 months

References

- ANPR Camera

<https://www.youtube.com/watch?v=LBrmElQinTc>

- ANPR Night Mode

<https://www.youtube.com/watch?v=IP0v2JggJOk>

- ANPR Benchmark Comparison

https://www.youtube.com/watch?v=j50K51Lu_II

Reach us at

Proposed by,

Praveen Attada,

Managing Director

Cybercinatics Private Limited

Visakhapatnam, India



Contact Us:

Tel: +91 9395550969, +91 8807550969.

praveenattada@cybercinatics.com

<http://cybercinatics.com>