

3. External Interface Requirements

3.1 User Interfaces

- Parking Rules display
- Parking indicators for space availability
- Parking time display: Car Settings for the amount of time to park
- Register Car in the system

3.2 Hardware Interfaces

The hardware components of the parking lot application include a Central Computer System, Client Computer, a parking screen, parking camera, user smartphone, etc. Each component plays an important role in delivering the system.

The Central Computer System is a server based system which holds data. A computer is used to store the data which contains parking lot information and pictures that is gathered from the camera over WIFI. So internet connection is required to gather the data.

A parking camera is placed above the parking lot which has a total view of the parking space so that they can be recorded and stored by sending the pictures to the computer over the internet.

The parking screen is the screen that is used to monitor the parking lot if space is available. When available the system communicates to the Parking screen at the entrance that space is available in this parking lot.

Client and smart phone interfaces to access and view parking lot information and provide user services.

3.3 Software Interfaces

The software interfaces used 14, Caffe, C++ libraries, Python 2.7, simulator, etc. The simulator displays the parking layout, detects the available spaces and their positions to be stored in the database. The server needs to support concurrent access since the web servers have a capability to handle multiple simultaneous requests to display the available spaces.

3.4 Communications Interfaces

The communication interfaces are client connection through web browser, HTTP, email etc.