# Design Considerations

## Assumptions

<Describe any assumptions or dependencies regarding the software and its use. These may concern such issues as related software or hardware, operating systems, end-user characteristics, and possible and/or probable changes in functionality.>

Our software depends on the performance of the server, internet connection, and user device in order to be operational. The software shall operate on the assumption that the server and UCO WIFI are operational. The server must be able to support the volume of users, which could increase the longer the software is available to the UCO community. The UCO WIFI or user device 3G or 4G capability will also be a dependency that the software will depend upon in order to be functional. In addition, the software operates with the assumption that UCO has parking lots that have handicapped parking spaces. If for whatever reason these were removed, the software would not be usable. The software shall operate under the assumption that UCO is still an operating institution, since the software genesis occurred to serve UCO faculty, staff, and students. This software operates on the assumption that only handicapped UCO faculty, staff, and students will park in the handicapped parking spaces. Individuals have only one account, so only one reservation will be made at any one time by a user. This software is designed under the assumption that mini-browsers are usable by Android, iOS, and desktop computers.

## Constraints

<Describe any global limitations or constraints that have a significant impact on the design of the system's software. Such constraints may be imposed by any of the following (the list is not exhaustive): hardware or software environment, end-user environment, availability or volatility of resources, standards compliance, interoperability requirements, interface/protocol requirements, data repository and distribution requirements, security requirements (or other such regulations), memory and other capacity limitations, performance requirements, network communications, and other requirements described in the requirements specification.>

The software’s usefulness is directly tied to user input, which means that the user is the ultimate constraint on the software. Although all parking reservations are cleared and all parking spots are marked open at midnight every day, the users help maintain the accuracy of the system during the hours in which the system would be most frequently utilized. The software is further constrained by the volume of user traffic that the server can handle. The software has the physical constraint of the number of handicapped parking spaces that are available in each lot. Although there are many parking lots on the UCO campus that have handicapped parking spaces, not all of these lots are present on the software. The user is constrained to reserving parking spots in the lot(s) that are in the database.

## Goals and Guidelines

<*Describe any goals, guidelines, principles, or priorities which dominate or embody the design of the system's software. Such goals might be: the KISS principle ("Keep it simple stupid!"), emphasis on speed versus memory use, or working, looking, or "feeling" like an existing product. For each such goal or guideline, unless it is implicitly obvious, describe the reason for its desirability.*>

This software has three goals in mind; namely usability, scalability, and accuracy. First, the software must be easily utilized by the end-user or this software serves no purpose. This software needs to make parking for handicapped individuals more efficient and painless, not more difficult. Secondly, the software needs to be scalable, meaning that it could be expanded to multiple parking lots or even multiple campuses. Thirdly, this software needs to be accurate so that users are able to depend on the data in the system. With these goals in mind, this software shall be designed to serve the handicapped community at UCO.