# Motivation

When parking in a parking garage there is always the risk that the parking garage is full and that there are no spots left anymore. This is highly impractical since you can only find this out when arriving at the parking garage and this problem is even worse when having to regularly park at a garage. Because of this there is a need of being able to reserve a parking spot in a parking garage.

# Type of system

The system must consist of:

* A database storing the user and access information
* Software communicating with the RFID chips and with the database
* Software to enable a user to reserve a spot in the garage

# Goal of the system

To enable the customer of the garage to reserve a spot and enable the owner of the garage to earn money on these reservations.

# Exclusion

There won’t be:

* A web interface to reserve places yet
* An option to get in if you didn’t reserve even if there is still a spot free

# Approach

The system will register which customer has reserved a spot. It will register the start time/date and end time/date, and this information will be saved in the database.

When a customer wants to enter the garage the system will compare the identity of the customer’s card to the database and see if the customer has reserved a spot at the current time. If this is the case, the customer is let in and if not the system won’t allow the customer in.

When a customer wants to leave the garage, the system will compare the identity of the customer’s card to the database to see if the customer leaves the garage before the end of his reservation. If he leaves on time the costs of the reservation will be payed and if he leaves too late the customer will be given a fine on top of the normal payment.