

# SWE Term Project

## Parking Garage System

### Purpose

As traffic in parking is one of the greatest problems in any public place in Egypt, we thought about proposing a website that makes it easier for both customers and employees working at the garage. Rather than customers (drivers) driving all the way to their desired location and not finding a place to park in the garage, they can check that before going and save time, money, and effort. Also, that would leave garagemen/valets working with less pressure. Moreover, our parking garage would have an extra feature where customers can also wash their cars and park them overnight.

### Definitions

#### System Parts

- User interface
- Admin (garage manager) interface
- Parking cashier(s) interface(s)
- Controller (processing)
- Database

#### Actors

- Customer
- Garage Manager
- Parking Cashier

### Goals and Objective

We plan to develop a system that eases customers' parking experience, by giving them the option to search for availability or reserve a parking spot before going and getting stuck in the case of a

fully occupied parking. In addition, having the option to pay online which would save all the fuss about not finding change/carrying cash.

When the customer is satisfied that would directly positively affect the parking attendant/cashier, as he/she would handle less problems and because the system would be feasible and simple, they are less pressured. A parking cashier would check the validity of a reservation and if an extra fee is required from the customer. They would also record the required information about the car being parked and its driver, and accordingly record availability of parking spots.

As this system would include more than one branch, the garage manager's role is important, where he would have access to all the branches' expenses and revenues, complaints if any, and would have the option to constantly check surveillance cameras.

## **Plan**

From the customer's point of view, he would have the option to navigate through the available branches and pick whichever closest to his destination, where the availability of parking spots would appear to him. Then he could choose from several options: Overnight Parking, Car Care Service, Reserve a Spot. Details of every option would be available including price, expected fees in case of cancellation or delay.

From the parking cashier's point of view, he would have to login then have the option to: search for a certain reservation, record entrance of a certain car, reserve a spot if not already reserved, and record number of available spots.

From the parking manager's point of view (admin), he has all the authority to access any branch's details and surveil it. He can also check profits (or deficits) until a certain date, check for complaints and contact customers if required.