The Parking Garage

The SRH parking garage needs new software because the old one was lost in a ransomware attack. :(

The following application scenarios exist:

- The 375 parking spaces of the parking garage should always be occupied in a logical and efficient way. For this, the software needs an occupancy algorithm. It is best to occupy the rear parking spaces first. For this purpose, the driver is assigned the booked parking space when checking in.
- Vehicles should be able to check in and check out of the parking garage.
- the following vehicle categories are distinguished: cars, trucks and motorcycles. These are priced differently. The driver is asked for the vehicle category when checking in.
- The driver of a vehicle should be able to find his vehicle in the parking garage by its license plate number. For this purpose, the license plate number must be provided when checking in.
- To avoid overcrowding, the parking garage must know its own status at all times.
- If the parking garage is occupied, no further check-ins will be accepted.
- The price for parking should be adjusted to the state of filling.
- To prevent future ransomware attacks, the parking garage software should save a daily backup to a file.
- When the software is closed, a backup of the current status should also be made.
- The parking software does not have a graphical user interface.
- Additional task: The parking garage software HAS a graphical user interface. (GUI/Web page)
- Additional task: The parking garage makes a backup to the cloud/internet.