Car Rental

Step 1: Requirement Analysis

reservations
rentals
locations
invoice
cars
pricelist
customers
insurance

Step 2: Entity Relationship Model

customer — name, adress, e-mail, id / passport, driving license

makes reservation — reservation number, ip adress

rents — rental number, invoice number, reservation number

returns — milieage, fuel, cleaning required, damages

car — type, model, extras, status

has → **price**

has → **location** — adress, staff

can have → **extra insurance** — type, insurance company

Step 3: UML Diagramm

customer
- + id: varchar(25)
- + first_name: varchar(55)
- + last_name: varchar(55)
- + licensenr: varchar(55)
- + licensetype: tinyint
- + passport: varchar(55)
- + prim_adress_id: int
- + prim_phone_id: int
- + prim_mail_id: int
- + password: varchar(255)

drivinglicense
- + type: tinyint
- + class: varchar(25)

adress
- + adress_id: int
- + related_id: varchar(25)
- + type: varchar(25)
- + street: varchar(255)
- + zip: varchar(25)
- + city: varchar(255)
- + coutry_id: varchar(3)

country
- + coutry_id: varchar(3)
- + name: varchar(255)

email
- + email_id: int
- + related_id: varchar(25)
- + type: varchar(25)
- + description: varchar(255)
- + email_adress: varchar(255)

phone_number
- + phone_id: int
- + related_id: varchar(25)
- + type: varchar(25)
- + description: varchar(255)
- + phone_number: int

reservation
- + id: int
- + customer_id: varchar(25)
- + date: date
- + time: time
- + ip_adress: varchar(25)

rental
- + id: int
- + reservationlist_id: int
- + customer_id: varchar(25)
- + car_id: int
- + return_id: int
- + insurance_id: int
- + date: date
- + time: time
- + location_id: int
- + status_id: tinyint
- + staff_id: int

status
- + id: tinyint
- + name: varchar(55)
- + description: varchar(255)

car
- + car_id: int
- + vin: varchar(55)
- + type_id: int
- + model: varchar(255)
- + engine: varchar(25)
- + seats: tinyint
- + location_id: int
- + status_id: tinyint

reservationlist
- + id: int
- + reservation_id: int
- + car_id: int
- + location_id: int
- + date_req.: date
- + time_req.: time

returnal
- + id: int
- + mileage: int
- + fuel: int
- + damage: varchar(255)
- + additional_charge: int
- + date: date
- + time: time
- + checked_by: int
- + location_id: int

location
- + id: int
- + name: varchar(55)
- + description: varchar(255)
- + adress_id: int

car_type
- + car_type_id: int
- + name: varchar(55)
- + description: varchar(255)

insurance_company
- + id: varchar(25)
- + name: varchar(255)
- + contact_person: varchar(55)
- + description: varchar(255)

insurance_product
- + id: int
- + company_id: varchar(25)
- + name: varchar(255)
- + price: int
- + description: varchar(255)
- + provision.: int

staff
- + id: int
- + first_name: varchar(55)
- + last_name: varchar(55)
- + location_id: int
- + job_title_id: int

job_title
- + id: int
- + name: varchar(55)
- + description: varchar(55)