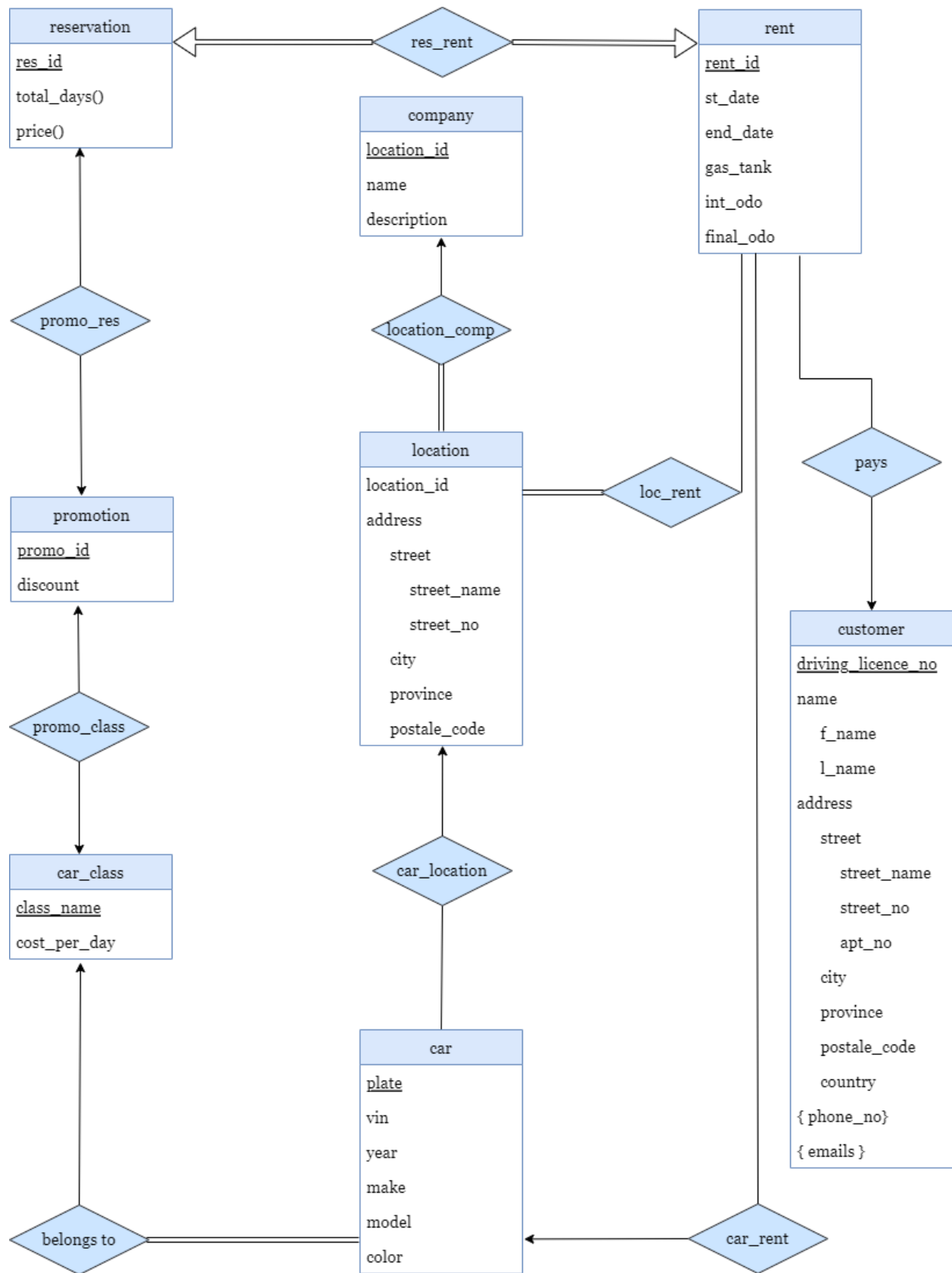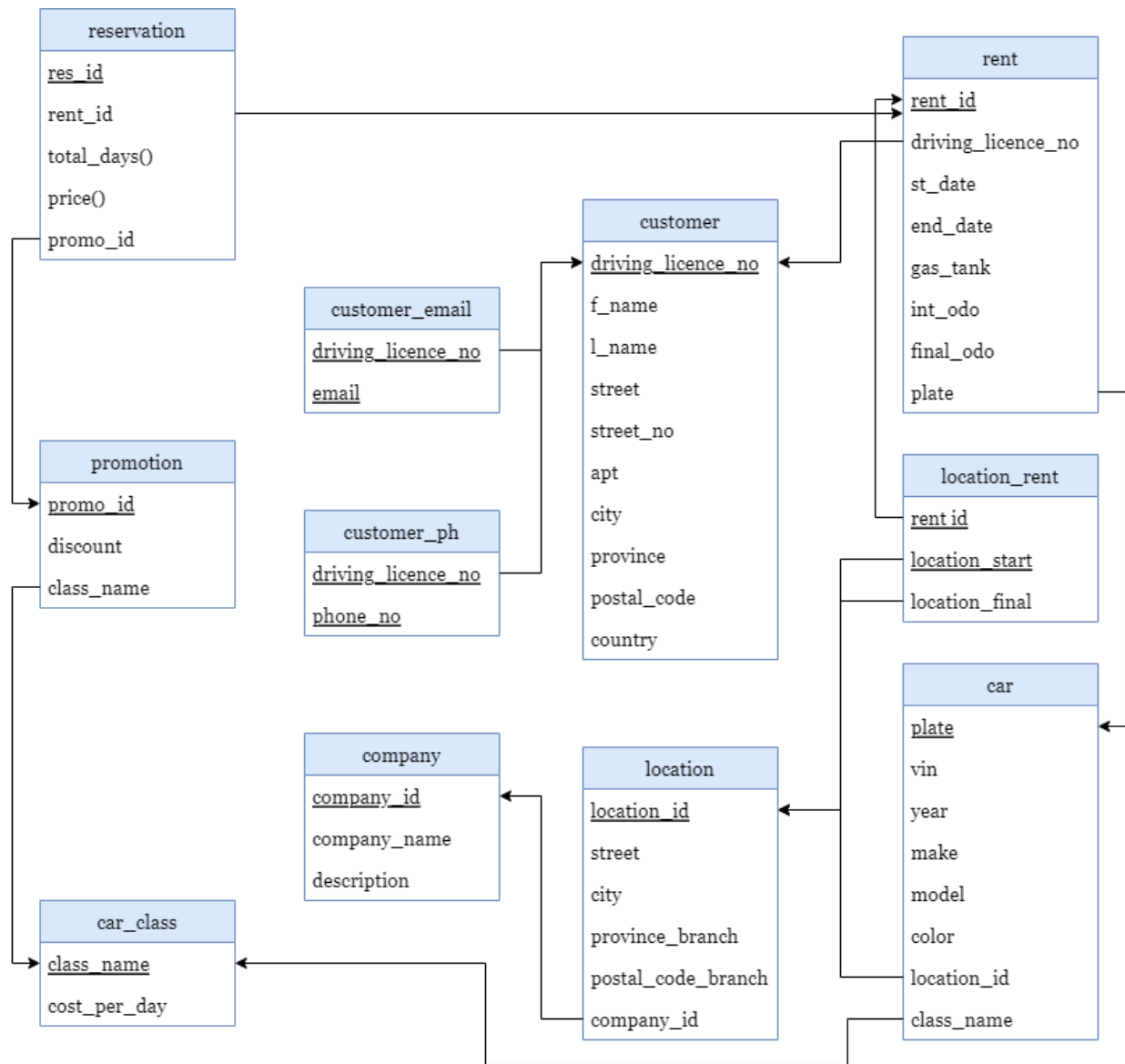A company named Car2Go runs a car rental business in several locations. It offers different car rental options to its customers by providing variety of car classes with different properties. For certain weeks in the year ,The company also applies some promotional discount on the rental prices. A customer can rent only one car at any given time and the rent calculation is based on the car class, duration in days and available promotion The rented cars can be returned to any location of the company without extra charges.

Car Rental System Business Rules

- Car2Go has several branches.
- Each branch has a unique ID

- Each car has some certain properties such as make, model, year made, and color.
- Each Car ID and Plate Number is unique

- Each car belongs to one car class
- Car options are only unique within the car

- The company keeps record of the customers Information. Each customer has a unique driving license number. A customer may have zero or more emails and phone numbers.

- The company keeps *records* of odometers as initial and final odometers

- Company rents a car with full tank, in return of the car the tank is measured; if it's empty, full, half full, ¾ full or ¼ full

- The Rented cars can be returned to any location of the company without extra charges.
- Each Drop off location has a unique id

- A customer can rent only one car at a given time. In case of not having the customer's requested class in stock a higher-class car will be provided without extra fees.

- For certain weeks in the year, the company has some promotional rental discounts that only apply to one car class

- The drop off charge is based on the class of the rented car, the duration (at least one day) in days and promotional rentals (if it's applicable).
- Each car class has a unique drop off charges

reservation

res_id

total_days()

price()

rent

rent_id

st_date

end_date

gas_tank

int_odo

final_odo

res_rent

company

location_id

name

description

location_comp

promo_res

promotion

promo_id

discount

location

location_id

address

  street

    street_name

    street_no

  city

  province

  postale_code

loc_rent

pays

promo_class

customer

driving_licence_no

name

  f_name

  l_name

address

  street

    street_name

    street_no

    apt_no

  city

  province

  postale_code

  country

{ phone_no}

{ emails }

car_class

class_name

cost_per_day

car_location

car

plate

vin

year

make

model

color

belongs to

car_rent

reservation

- res_id
- rent_id
- total_days()
- price()
- promo_id

rent

- rent_id
- driving_licence_no
- st_date
- end_date
- gas_tank
- int_odo
- final_odo
- plate

customer

- driving_licence_no
- f_name
- l_name
- street
- street_no
- apt
- city
- province
- postal_code
- country

customer_email

- driving_licence_no
- email

customer_ph

- driving_licence_no
- phone_no

promotion

- promo_id
- discount
- class_name

location_rent

- rent id
- location_start
- location_final

car

- plate
- vin
- year
- make
- model
- color
- location_id
- class_name

company

- company_id
- company_name
- description

location

- location_id
- street
- city
- province_branch
- postal_code_branch
- company_id

car_class

- class_name
- cost_per_day

- customer (<u>driving_licence_no,</u> f_name, l_name, street, street_no, apt, city, province, postal_code, country)

- customer_ph(<u>==driving_licence_no,==</u> <u>phone_no</u>)

- customer_email(<u>==driving_licence_no,==</u> <u>email</u>)

- location(<u>location_id</u>, street, city, province_branch, postal_code_branch,==company_id==)

- car (<u>plate</u>, vin, year, make, model, color, ==class_name,== ==location_id==)

- rent(<u>rent_id</u>, ==driving_licence_no,== st_date, end_date, gas_tank, int_odo, final_odo, ==plate==)

- location_rent(<u>==rent_id, location_start==</u>, location_final)

- car_class(<u>class_name</u>, cost_per_day)

- promotion(<u>promo_id</u>, discount, ==class_name==)

- reservation(<u>res_id</u>, total_days(), price(),==rent_id,== ==promo_id==)

- company(<u>company_id</u>,company_name, description)

Yellow represents foreign key.

FOREIGN KEY	REFERENCED RELATION	REFERENCING REALTION
driving_licence_no	customer	customer_ph
driving_licence_no	customer	customer_email
company_id	company	location
car_class_id	car_class	promotion
car_class_id	car_class	car
location_id	location	car
driving_licence_no	customer	rent
plate	car	rent
rent_id	rent	reservation
promo_id	promotion	reservation
location_id	location	location_rent