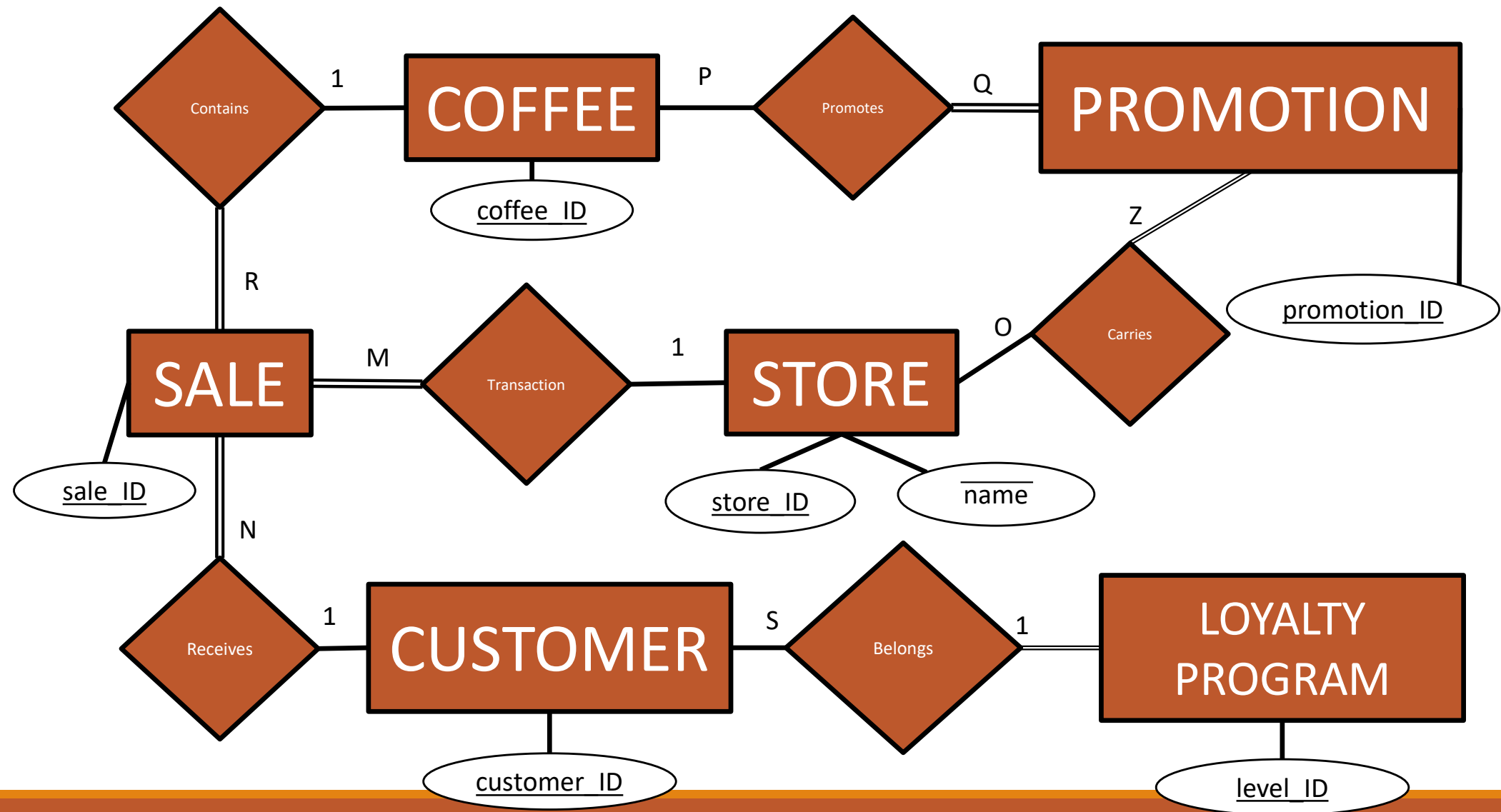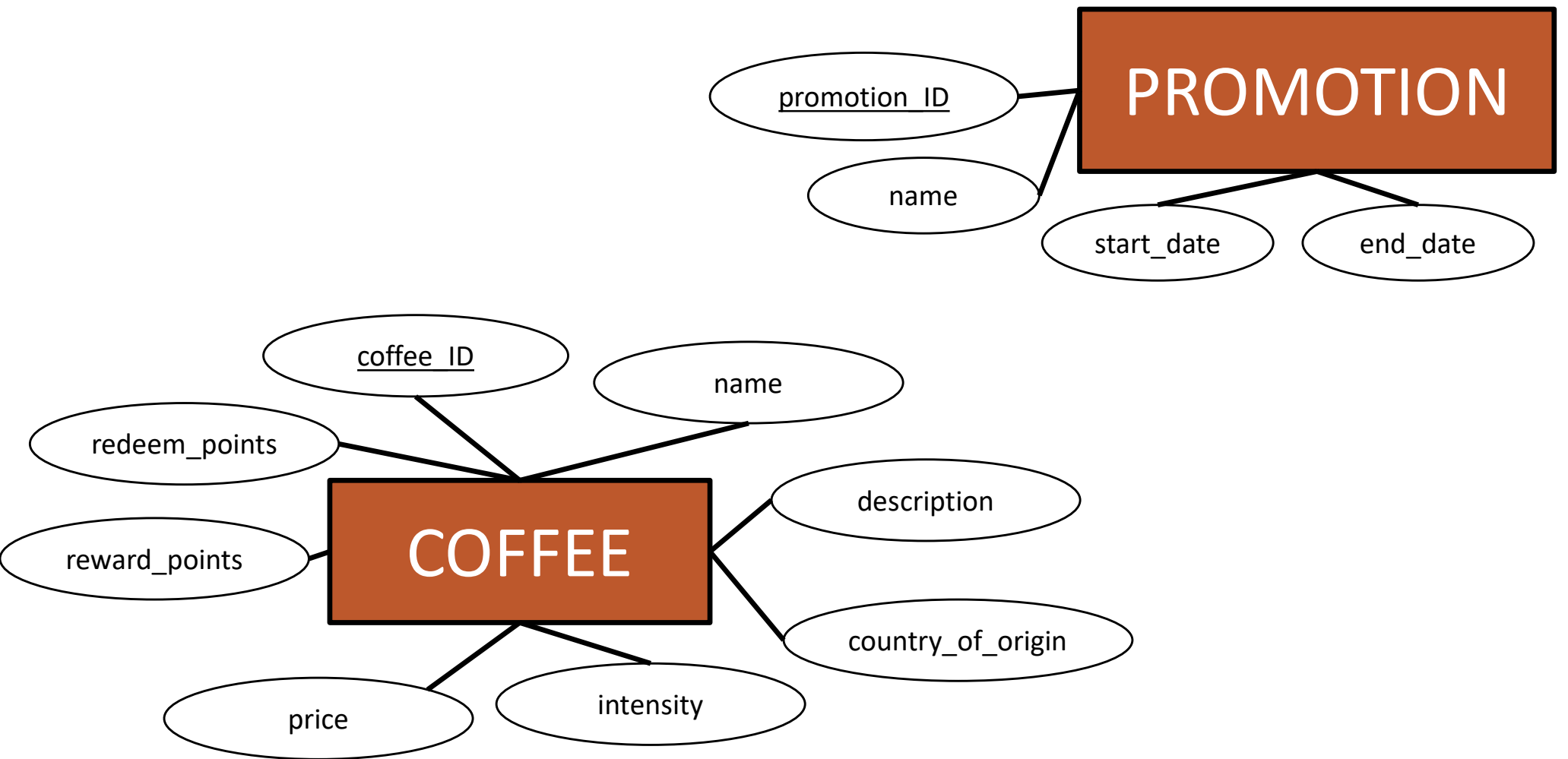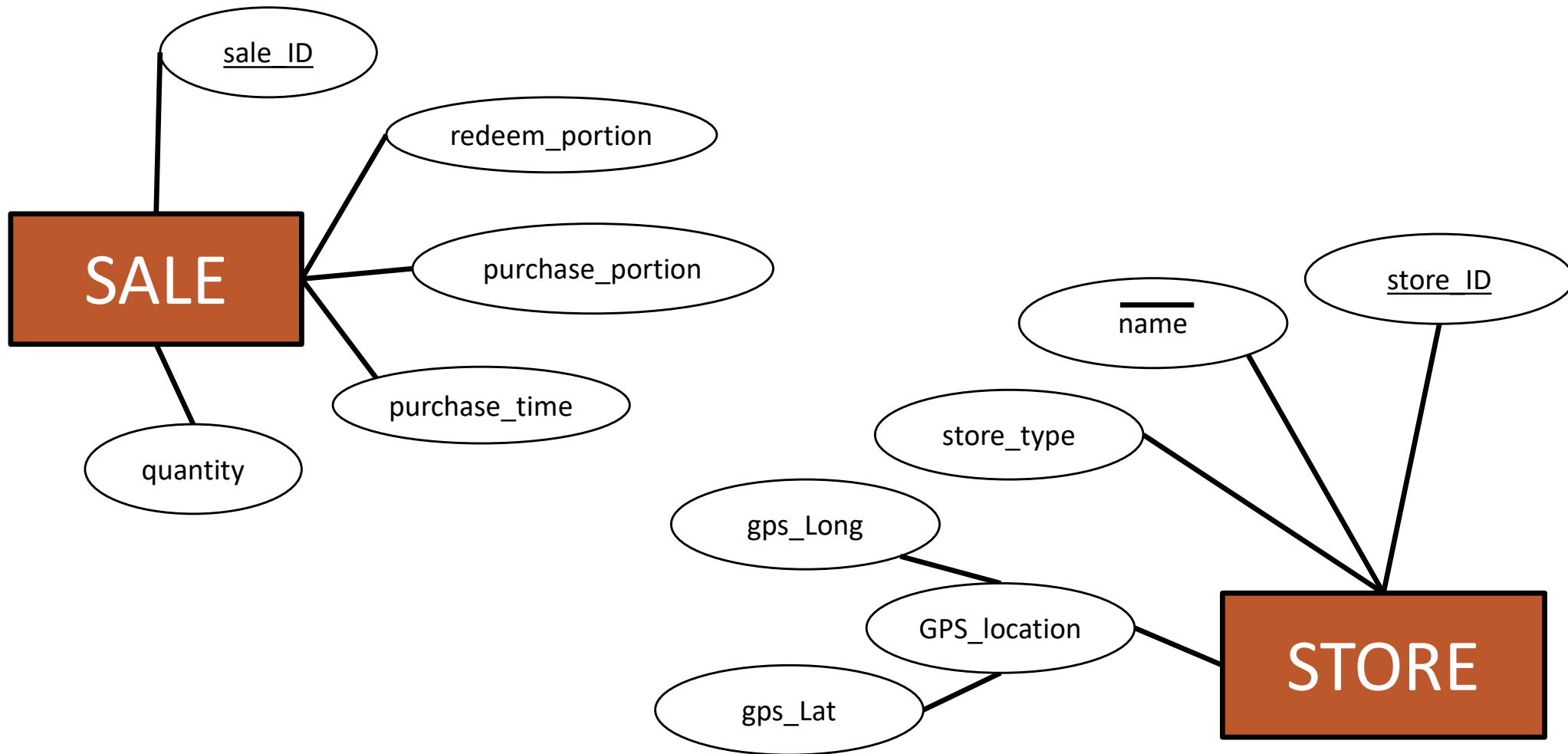# Coffee Boutique Group: Carpe Data
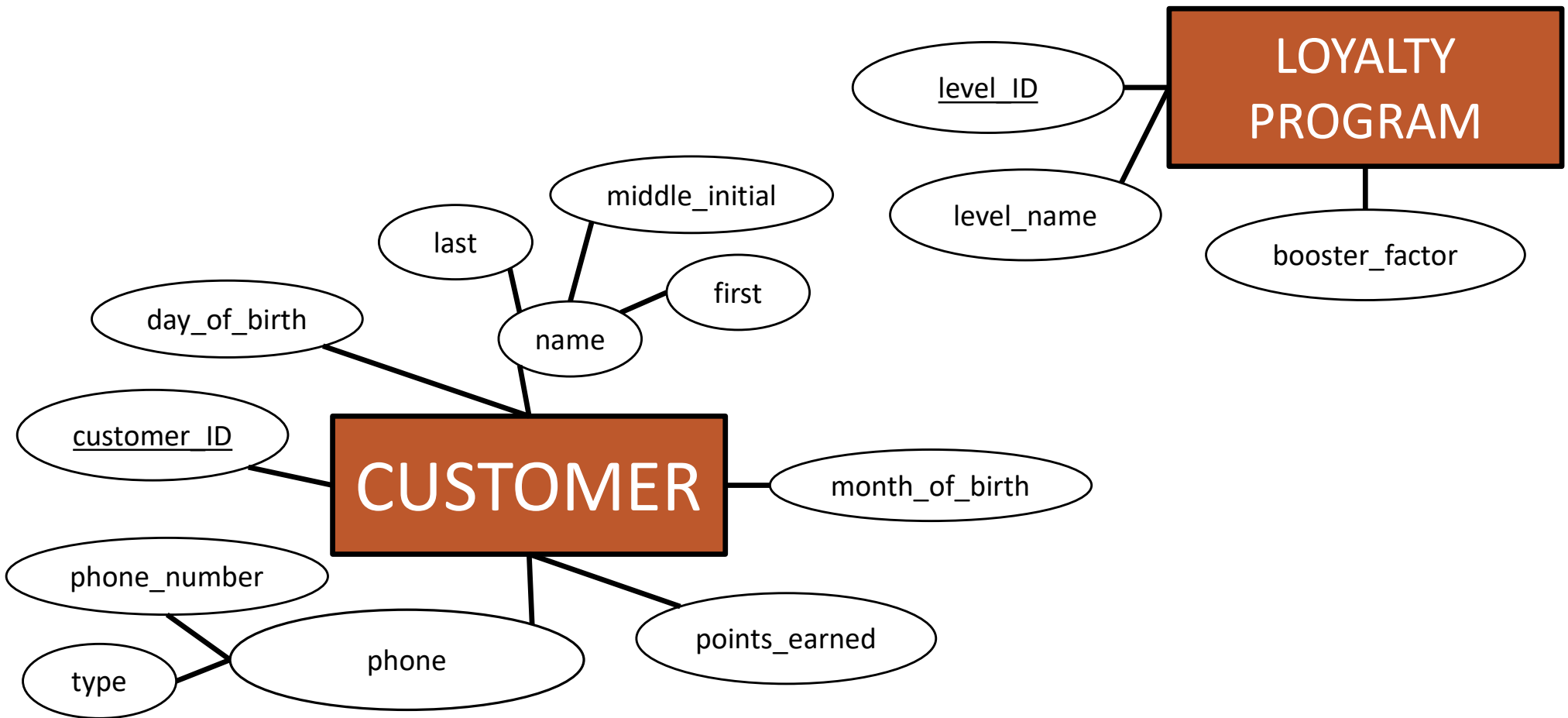
PROJECT PHASE #1 - RESUBMISSION

CLARK – DANIEL – DHARMA

Entities

1. **COFFEE**: <u>coffee_ID</u>, name, description, country_of_origin, intensity(1-12), price, reward_points, redeem_points;

2. **SALE**: <u>sale_ID</u>, customer_ID, store_ID, coffee_ID, quantity, purchase_time, purchase_portion, redeem_portion;

3. **STORE**: <u>store_ID</u>, name, store_type, GPS_location(gps_Long, gps_Lat);

4. **CUSTOMER**: <u>customer_ID</u>, name(first, last, middle_initial), day_of_birth, month, points_earned, phone(phone_number, type), loyalty_level;

5. **PROMOTION**: <u>promotion_ID</u>, name, start_date, end_date;

6. **LOYALTY_PROGRAM**: <u>level_ID</u>, level_name, booster_factor;

Relationships

1. **PROMOTES**:<COFFEE, PROMOTION>, P:Q, PARTIAL/TOTAL;

2. **CONTAINS**: <COFFEE, SALE>, 1:R, PARTIAL/TOTAL;

3. **RECEIVES:** <CUSTOMER, SALE>, 1:N, PARTIAL/TOTAL;

4. **TRANSACTION:** <SALE, STORE>, M:1, TOTAL/PARTIAL;

5. **BELONGS:** <CUSTOMER, LOYALTY PROGRAM>, S:1, PARTIAL/TOTAL;

6. **CARRIES:** <STORE, PROMOTION>, O:Z, PARTIAL/TOTAL;

Assumptions & Clarifications

A customer only maintains 1 level of membership at any given time.

Each SALE transaction of coffee(single/multiple types of coffee) will be recorded as one type per entry with any amount of quantity per entry. `quantity` will therefore be added as an attribute to SALE to account for this.

Each Promotion will have at least one store and Coffee where it is promoted thus Promotion will have Total Participation with STORE and COFFEE entity.

When a customer purchases a coffee, they will earn reward points equal to 10x the price for that coffee.
The value of the redeem points for any given coffee will be 100x the price for that coffee. Essentially, this means that a customer with a booster factor of `basic` (1.0x points multiplier) must purchase 10 coffees to earn a free coffee.

ER-Model
Group: Carpe Data
BoutiqueCoffee Database – Phase #1 - Resubmission

STORE(store_ID, name, store_type, gps_Long, gps_Lat)

COFFEE(coffee_ID, name, description, country_of_origin, intensity, price, reward_points, redeem_points)

CUSTOMER(customer_ID, first, last, middle_initial, day_of_birth, month, phone_number, phone_type, points_earned, loyalty_level)
        FK(loyalty_level) ➔ LOYALTY_PROGRAM(level_ID)

SALE(sale_ID, customer_ID, store_ID, coffee_ID, quantity, purchase_time, purchase_portion, redeem_portion)
        FK(customer_ID) ➔ CUSTOMER(customer_ID)
        FK(store_ID) ➔ STORE(store_ID)
        FK(coffee_ID) ➔ COFFEE(coffee_ID)

LOYALTY_PROGRAM(level_ID, level_name, booster_factor)

PROMOTION(promotion_ID, name, start_date, end_date)

PROMOTES(promotion_ID, coffee_ID)
        FK(promotion_ID) ➔ PROMOTION(promotion_ID)
        FK(coffee_ID) ➔ COFFEE(coffee_ID)

CARRIES(promotion_ID, store_ID)
        FK(promotion_ID) ➔ PROMOTION(promotion_ID)
        FK(store_ID) ➔ STORE(store_ID)