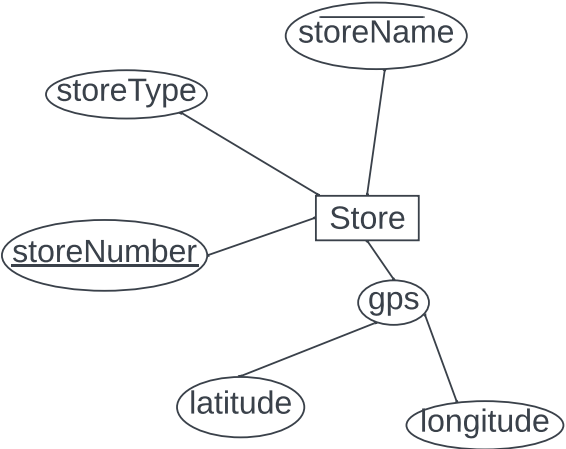
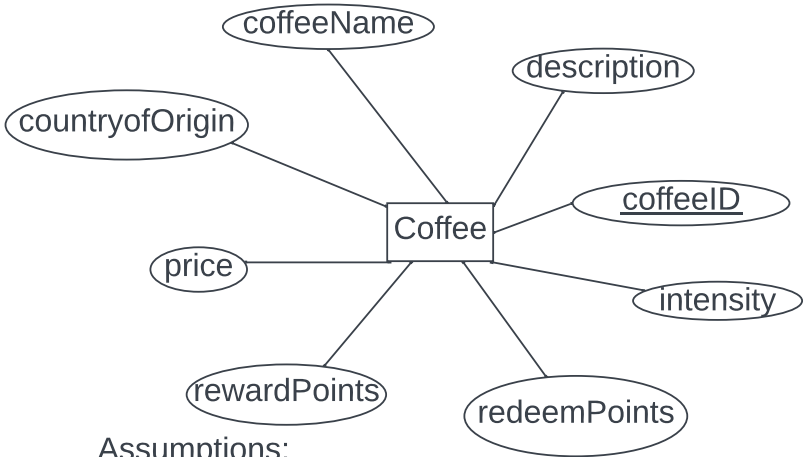
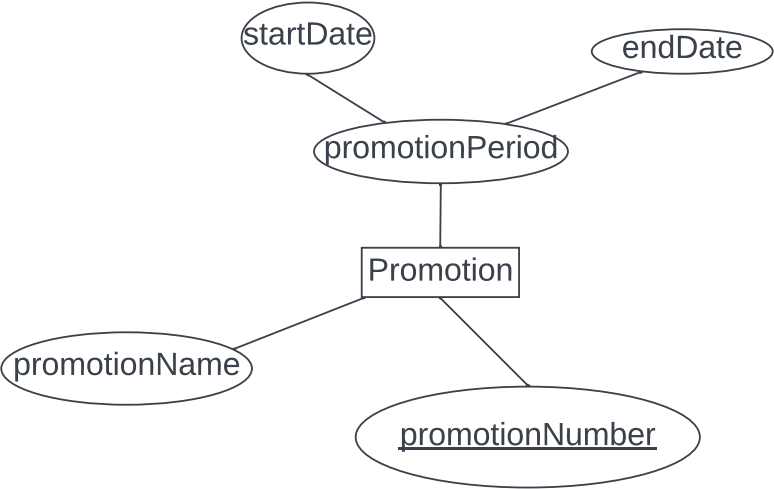
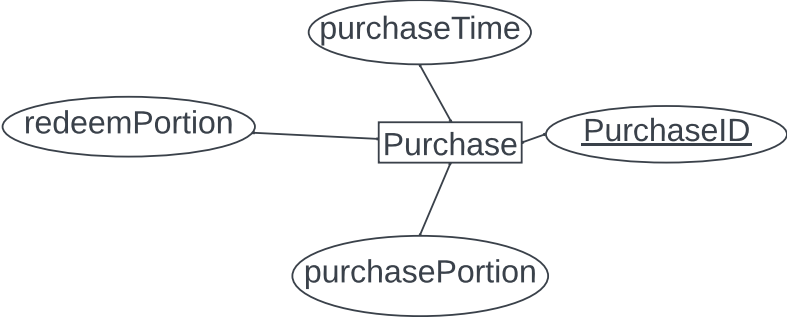
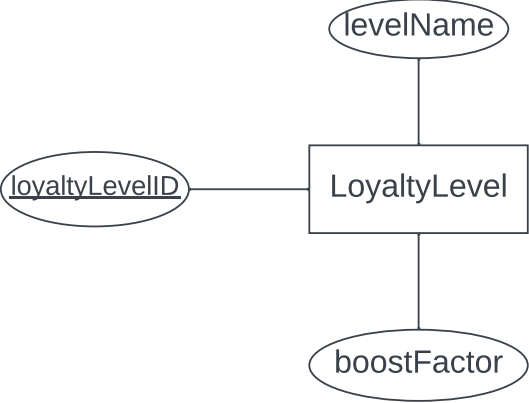
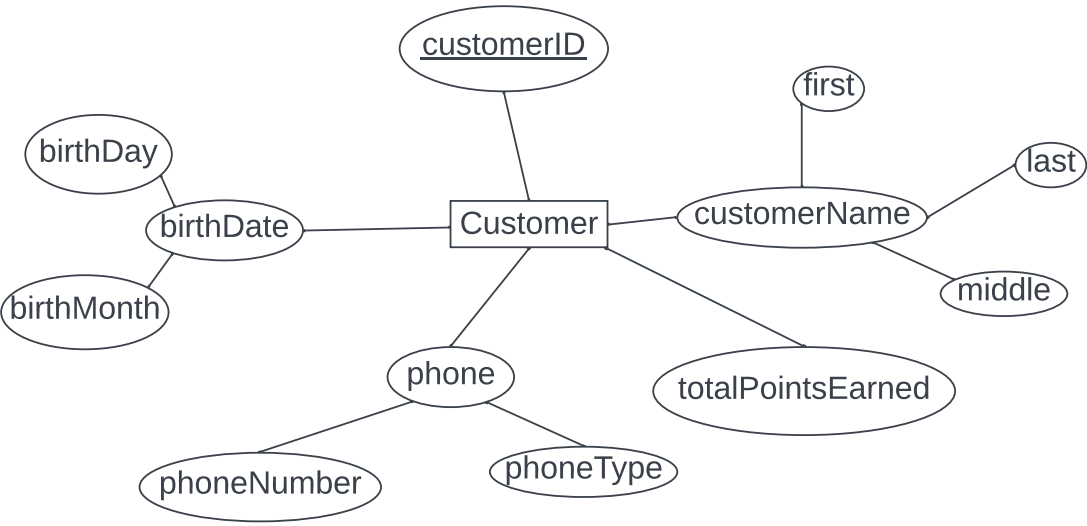


To improve readability, only key attributes are specified here, the other attributes are included in the diagram on the next page



Assumptions:

- Coffee prices must be greater than zero.
- Although customers can have any of the specified phone types, only one phone number and type will be recorded in the database.
- A customer can make many purchases.
- There can be only one customer per purchase.
- A given purchase can occur only at one store.
- There can only be one type of coffee per purchase.
- Any coffee can be in any number of purchases.
- A store can offer many different coffees.
- A given coffee type can be in many stores.
- A given promotion can occur at many stores.
- A given store can have many promotions.
- A promotion can feature many different cofees.
- A coffee can be in many different promotions.
- Many customers can have the same Loyalty Level
- A Loyalty Level can exist (logically) independently from a Customer
- A customer cannot pay for a coffee using a combination of real money and Coffee Boutique reward points, they can either pay for the full price of the coffee or redeem the coffee, provided they have enough redeem points.
- A customers total points earned reflects the total points which they have not used to redeem a free coffee.
- Each time a customer redeems a free coffee using their points, their total points will decrease by the amount required to redeem the coffee for free.

TEXTUAL ER

Entities:

- Customer: customerID, customerName(first, last, middle), birthDate(birthDay, birthMonth), phone(phoneNumber, phoneType), totalPointsEarned
- Coffee: coffeeID, coffeeName, description, countryOfOrigin, intensity, price, rewardPoints, redeemPoints
- Store: storeNumber, storeName, storeType, gps(latitude, longitude)
- Promotion: promotionNumber, promotionName, promotionPeriod(startDate, endDate)
- LoyaltyLevel: loyaltyLevelID, levelName, boostFactor
- Purchase: purchaseID, purchaseTime, redeemPortion, purchasePortion

Relationships:

- isMember: <LoyaltyLevel, Customer>, 1:m, PARTIAL/PARTIAL
- buysFrom: <Purchase, Store>, m:1, TOTAL/PARTIAL
- buysCoffee: <Purchase, Customer, Coffee>, m:1:1, TOTAL/PARTIAL/PARTIAL
- offersCoffee: <Store, Coffee>, n:m, PARTIAL/PARTIAL
- hasPromotion: <Store, Promotion>, m:n, PARTIAL/TOTAL
- promotionFor: <Promotion, Coffee>, n:m, TOTAL/PARTIAL