

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 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.

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Entities:

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

Relationships:

- isMember: <LoyaltyLevel, Customer>, m:1, TOTAL/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