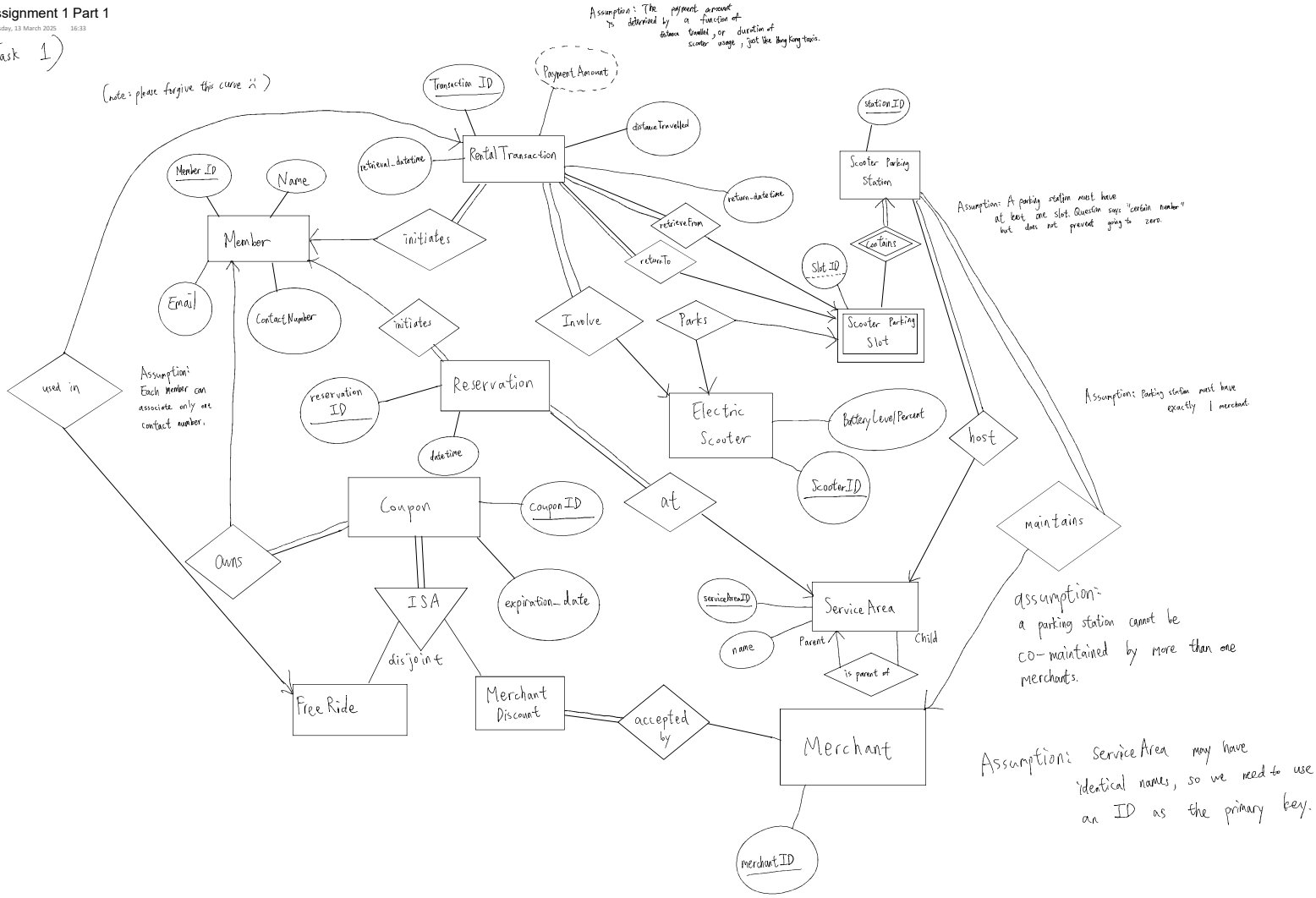
Assignment 1 Part 1

Thursday, 13 March 2025 16:33

Task 1)



Assumption: each parking station must belongs to only one service area.

Task 2)

Member (MemberID, Name, Email, ContactNumber)

RentalTransaction (TransactionID, PaymentAmount, retrieval_datetime, return_datetime, from_slotID, to_slotID, MemberID, ScooterID, distanceTravelled)

- Foreign keys:
  - from_slotID refers ScooterParkingSlot.SlotID
  - to_slotID refers ScooterParkingSlot.SlotID
  - MemberID refers Member.MemberID
  - ScooterID refers ElectricScooter.ScooterID

Reservation (reservationID, datetime, MemberID, serviceAreaID)

- Foreign keys:
  - MemberID refers to Member.MemberID
  - serviceAreaID refers ServiceArea.serviceAreaID

Coupon (couponID, expiration_date, MemberID)

- Foreign keys:
  - MemberID refers Member.MemberID

FreeRide (couponID, transactionApplied)

- Foreign keys:
  - couponID refers Coupon.couponID
  - transactionApplied refers RentalTransaction.TransactionID
    - can be null if the coupon is not redeemed

MerchantDiscount (couponID)

- Foreign keys:
  - couponID refers Coupon.couponID

MerchantDiscountAcceptance (couponId, merchantID)

- Foreign keys:
  - merchantID refers Merchant.merchantID

ServiceArea (serviceAreaID, name, parentServiceArea)

- Foreign keys:

    - parentServiceArea refers ServiceArea.serviceAreaID
        - Can be null if its name is "Los Angeles" as stated in the figure "Step 1".

Merchant (merchantID)

ScooterParkingStation (stationID, merchantID, serviceAreaID)
- Foreign keys:
    - merchantID refers Merchant.merchantID
    - serviceAreaID refers ServiceArea.serviceAreaID

ScooterParkingSlot (stationID, SlotID)
- Foreign keys:
    - stationID refers ScooterParkingStation.stationID

ElectricScooter (ScooterID, BatteryLevelPercent, SlotID)
- Foreign keys:
    - SlotID refers ScooterParkingSlot.SlotID
        - Can be null