Part B Conceptual Data Modelling

Overview

Business Rules

1. **User BR**
    - 1.1 Each User should be able to store multiple delivery address in their account.
    - 1.2 Each User should be able to store
    - 1.3 Each users will need to have a Unique Email, but for security & privacy reasons an auto generated UniqueID will be used to identify each users instead of the emails.
    - 1.4 When signing up, users will only be asked to enter an email, their name and set up a password for the account.
    - 1.5 When signing up, If the email already exist in the database, the user will be prompt to sign in with a matching password for the account
2. **Restaurants BR**
    - The list of restaurants a user could order from is based on the distance
    - The list of restaurants should be able to be filtered by cuisine type
3. **Menu BR**
    - Each restaurants are able to offer multiple different meals & the meals are speparated into different categories set by the restaurant owner.
    - users should be able to customise their meals with different options(size, extra toppings) if they wish to.
4. **Ordering BR**
    - For logistics reasons & to keep delivery cost low, each order should only contain meals from 1 restaurant.
    - Users should be able to order multiple different meals per order(cart)
    - users should be able to view & edit details such as delivery address & payment method before confirming the order.
    - users should be able to add promotional code for discounts to orders.
    - Each order can not have more than one promo code applied.

Conceptual Data Modelling (ERD)

Here is the ERD for the Deliveroo DB system based on the business rules

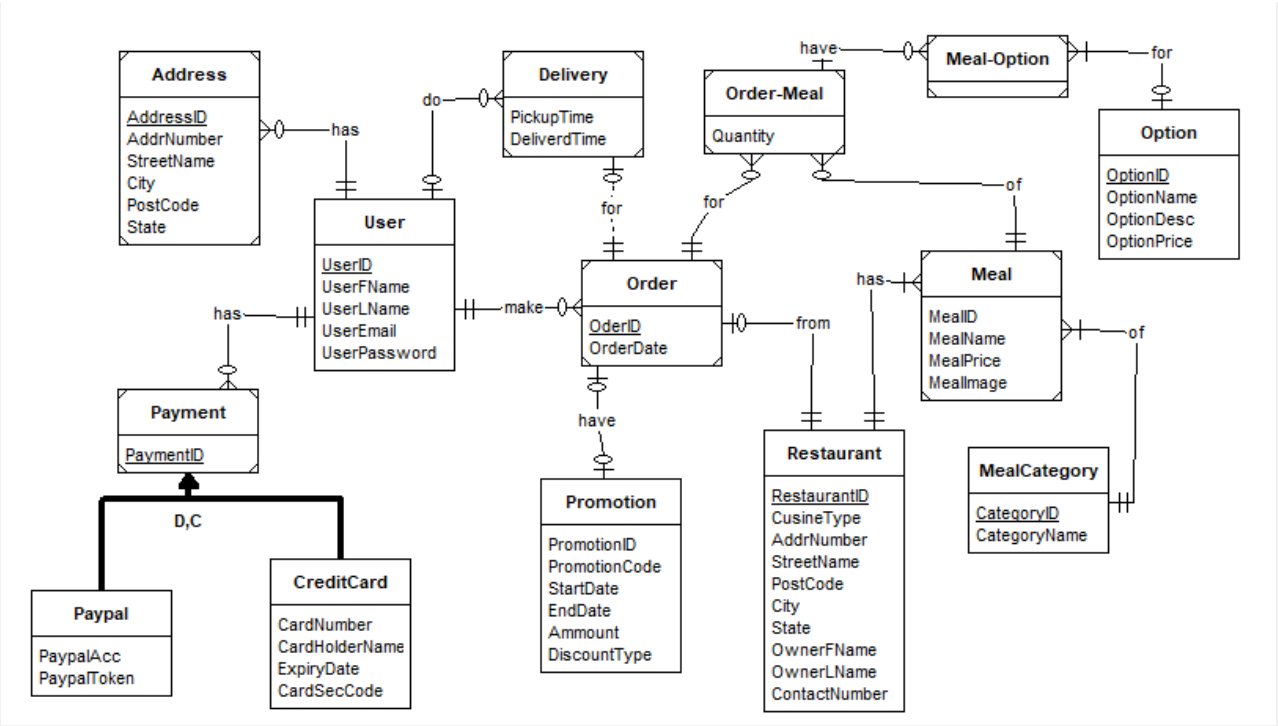

Fig.0 Main ERD

Design Note

The ERD is drawn using the software **ER-Assistant**, therefore notation for super/sub-entity relationship at Payment(**fig.1**) could seem different from the regular Crows Nest notation(**fig.2**). In **Fig.1**, the bolded arrow notates that the Paypal & CreditCard entities are subtypes for the supertype Payment entity. Additionaly, the **D** & **C** means its a **Complete**/Total specilization(supertype instance must be a subtype) with **Disjointed** constraints(Supertype instance can only be one of the subtypes).

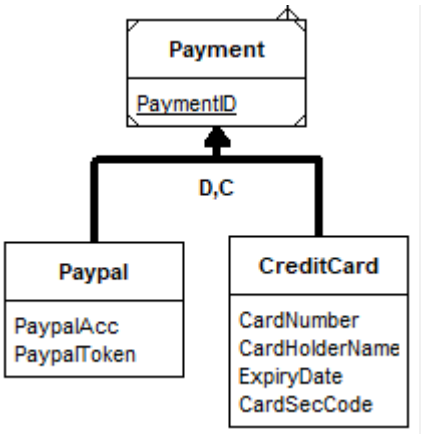

Fig1. ER-Assistant super/subtype notation

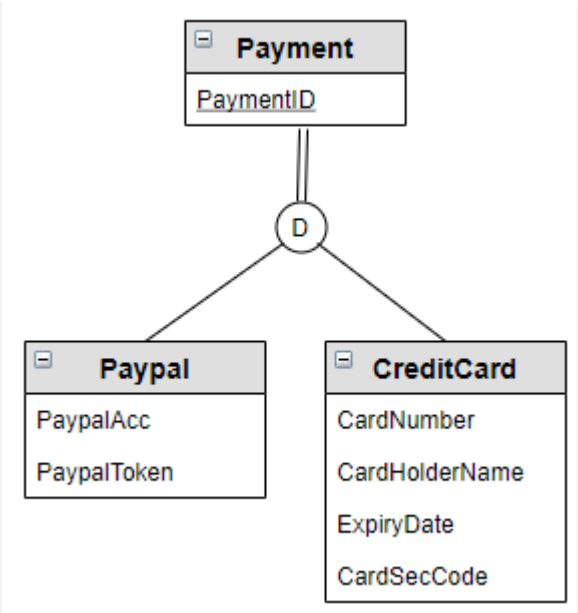

Fig.2 Crows Nest Super/Sub notation

Design Justification

1. User

2. Restaurant

3. Ordering

Specification

- Produce **final** ERD reflecting the requirements given in thecase study (using Crows)
- Justify your design decisions by **documenting** all your assumptions

Structure

1. Overview of case study (5sentences)
2. Revised BR of part A
3. Part B (conceptual data modelling)
4. Justification
    - provide correct detailed BR describing entity cardinality & relationship btween entities
    - WTF for every entitity/ relationship