Group 3_Written Discussion

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Assumptions:

- ➔ Take “CustomerID” as the key attribute of Customer, as every CustomerID is a unique one and is sufficient to determine the rest of the attributes.
- ➔ Assume each Customer can register multiple Credit Cards. But, each Credit Card can only be used by one Customer. (ie. A credit card cannot be shared among multiple customers)
- ➔ Assume that each card has a unique Card Number. The expiry date of a credit card would also be recorded as an attribute.
- ➔ Assume that the “Name” attribute in Product is unique within a shop and a product type. Therefore, Products is a weak entity with key “Name”, and has supporting entities Shops and Product Type.
- ➔ Assume that each Product can be sold by only one Shop but a Shop can sell multiple Products since “each shop sells different products”, hence the one to many referential integrity relationship.
- ➔ Assume that there is an entity called Photo which is identified by a unique PhotoID. This ID attribute would be used to identify a specific Product which the photo(s) is to be tagged to.
- ➔ Assume that a Parent Product Type can have either no Child, one Child or more than one Child Product type
- ➔ Assume that a product type can have either no parent product type or 1 parent product type.
- ➔ Assume that Order Item is a weak entity supported by Order.
- ➔ Assume Order has the attribute “Payment Status” where the payment status (Full, Partial, No payment) is maintained.
- ➔ Assume that there are two subclass entities of Payment, which are Partial Payment and Full Payment.
- ➔ Assume that every “Full Payment” and “Partial Payment” must be related to exactly one invoice. (i.e. Referential integrity on the “Invoice” entity set)
- ➔ Assume multiple Partial Payments can be made to complete payment for the same Invoice.
- ➔ Assume we have a subclass of order called “Fully paid order” which has a relationship with shipment, as only fully paid orders are shipped. Assume each shipment is related to exactly one order and each order can have multiple shipments.

Thus, “Fully paid order” entity would have a many to one relationship with referential integrity with shipment, “Fully paid order” being the one side, and “Shipment” being the many side.

➔ Assume that every Shipment of Order Items has a unique Shipment ID. This means regardless of whether the same Order has multiple shipments of separate Order Items, these shipments would all have unique IDs.