Question-2

For the Auto Dealership ERD shown in Figure 1, identify and resolve errors and note incompleteness in the specifications. Your solution should include a list of errors and a revised ERD. For each error, identify the type of error (diagram or design) and the specific error within each error type. Note that the ERD may have both diagram and design errors. Specifications for the ERD are presented in the following narrative

Solution:

1. Sale Details – Vehicle remain lot before sales occur (Design Error – One to One Relationship)
2. Vehicle Details- Missing Attribute (Diagram error -Transmission type), VehStatus is attribute is redundant
3. Customer Details – Missing Attribute (Customer Cellphone number), Extra Attribute (Customer Email (Diagram Error)
4. Expense Details- Redundant Attribute ExpDate (Diagram Error)
5. Account Details- Redundant Attribute AccName (Diagram Error)
6. Employee to Payment is redundant relationship (Should be removed)
7. Account must be strong entity because it has unique identifier AccId (Design error)
8. Payment to Account must be Non-identifying relationship because Account Id has unique identifier and it is a strong entity (Design Error)
9. Account to Expense must be Non-identifying relationship because Account Id has unique identifier and it is a strong entity (Design Error)
10. Each Payment should be associated with one account (Many optional Cardinality – Design Error)
11. Each account can multiple Expenses (one mandatory relationship Design error)

Revised ERD

