Name

Hw1

- Try to answer all the questions using what you have learned in class
- Some questions are marked as bonus. You do not have to answer these questions to get full points for the assignment. However, you can get bonus points for these questions!

Question 3.1.1 (60 Points)

Build a conceptional model for a **Material Resource Planning,** for a manufacturer**.** The solution should be presented as an **ER-diagram**. Base your design on the following requirements.

- The database should record information about Dealers, Location, Model, Series, Employee, Parts, Warehouse, supplier.
- A **Dealer** identified by their *account number*, has also *name*, *Address*, *phoneNo* and *email* address on file. A **location** that include the discriminator *locationNumber*, and *manager.*
  - **Dealer** may provide *Feedback* for each transaction they have placed (optional) for car **model**. For every transaction, a **Dealer** has to make a *Payment*. Each time a dealer buy car model (s) it forms a transaction.
- A **Model** is identified by the combination of *name* and *year, manufacturer, type.* A **Serie** is associated with a **model** have a discriminator *name*, *transmissionTyp*e, *traction*, seatMaterial
- Each model is made by constitute of different quantities of **Parts,** that include *partNumber, name, material and certification, leadTime*
- Different parts are sold by different **supplier** at different prices, the supplier information are *name, country, tier.*
- The **warehouse** includes storage their *city, size, environment,* t he list of parts inventory
- An **Employee** is uniquely identified by the *employeeId*. For an **Employee** we record a sale transaction performed for **dealer** and salary, bonus. Bonus each employee derived from number of closed deal.

Part 3.2 Translation of ER into Relational Model (Total: 40 point)

Question 3.2.1 (40 Points)

Take the following ER-model and translate it into a relational schema using the rules presented in class. Present the relational schema. Present the results of the following intermediate steps in this order:

1. Translate strong entities + unnest composite attributes
2. Translate weak entities
3. Translated multi-valued attributes
4. Translate relationships