

DBDS DataBase Design Specialists, Inc.

“We are always 5NF.”

AAA Rentals – AAA Project

Draft LDM and PDM

Memo: #5

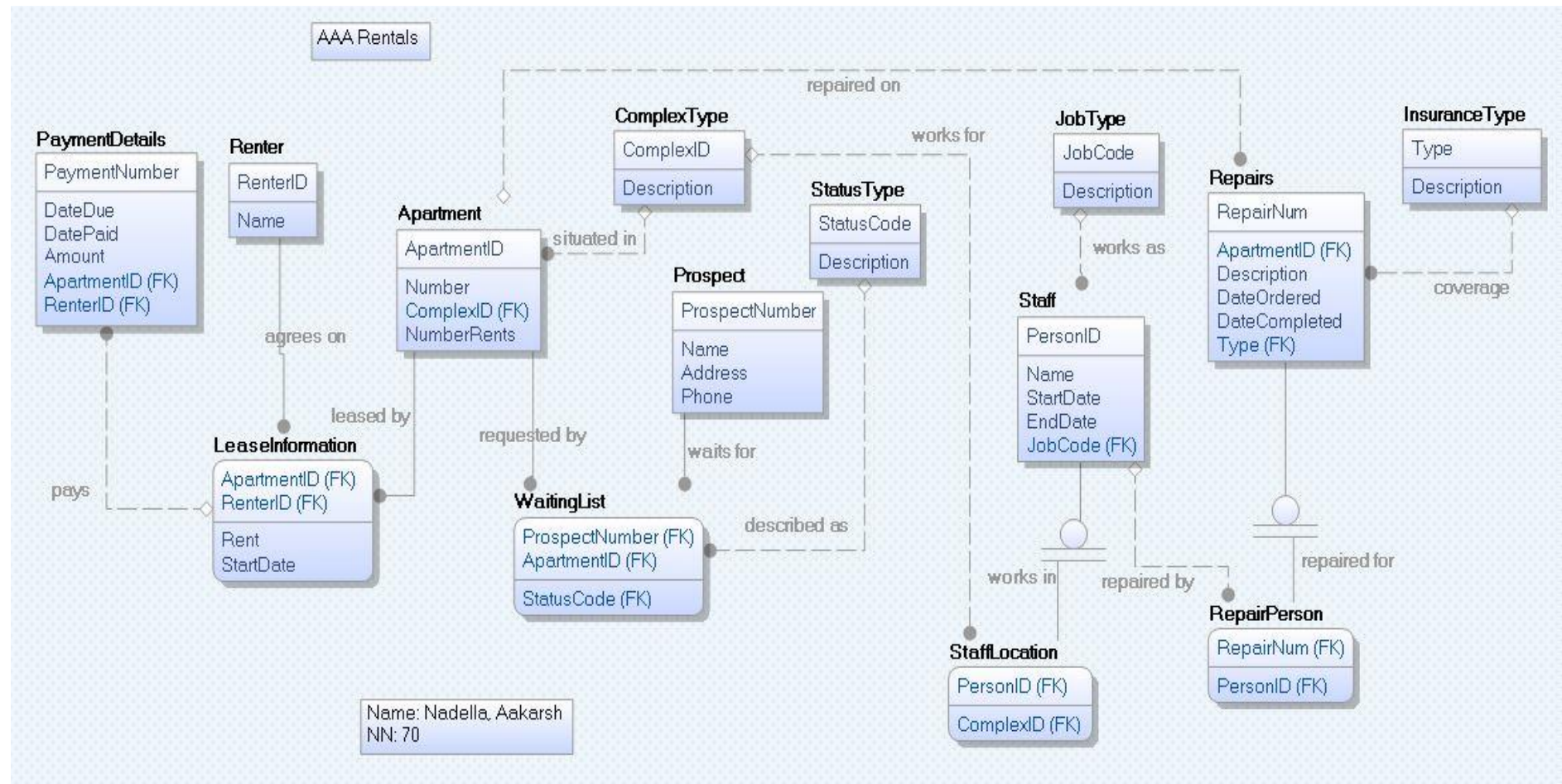
By

Aakarsh Nadella

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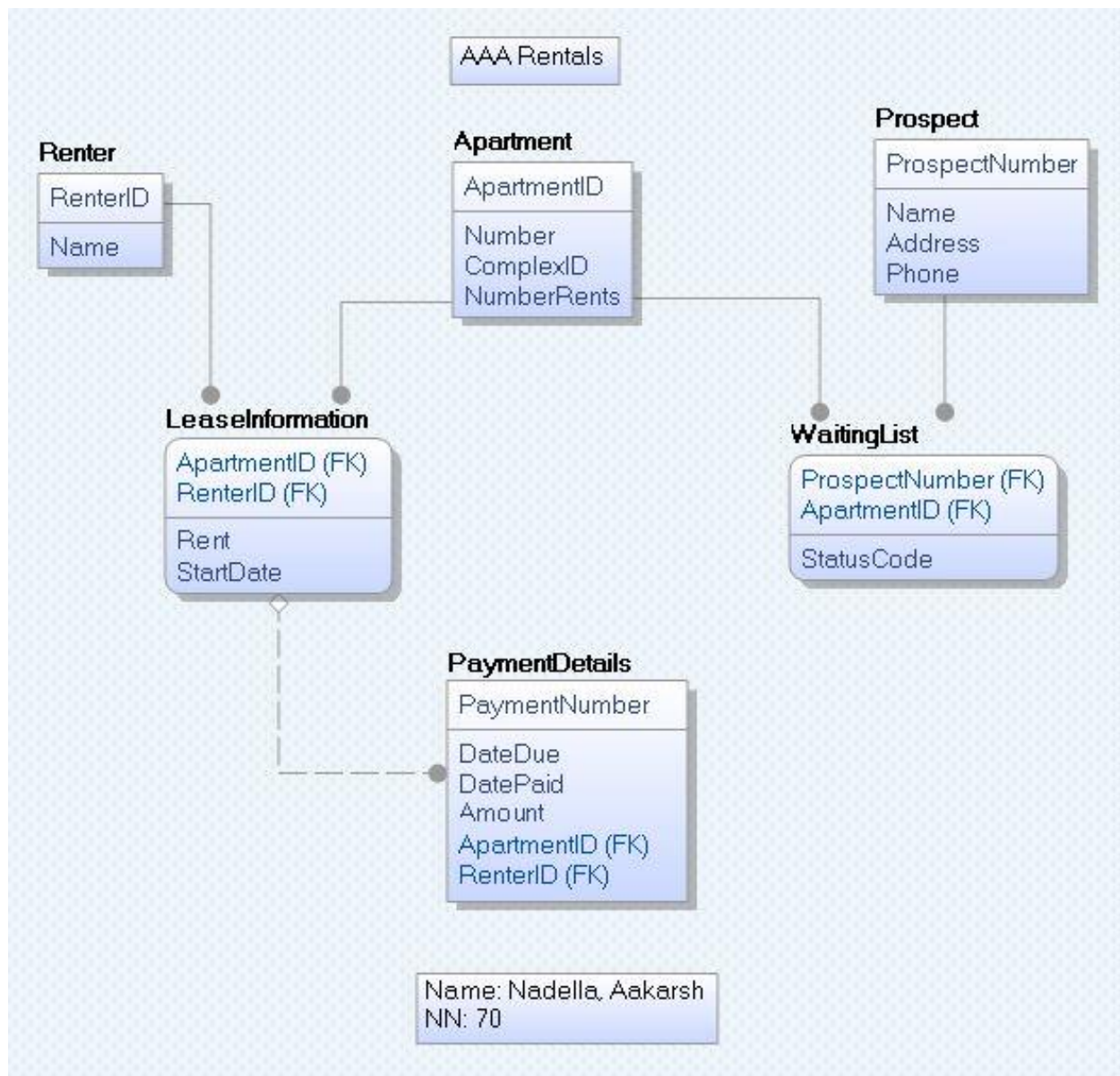
Data Architect

The Logical Data Model for AAA Rentals is as follows:



[illegible]

The previous Logical Data Model submitted is:



Steps carried out in migration from previous design to the current design are:

- Code tables were added to the previous LDM as Bob wanted them to be include in the database.
- Independent entities are moved to top to follow perfect design methodology.
- Verb Phrases associated with the relationships are included to determine the association between 2 entities.
- The design model is updated to add new information of repair data into the database.
- Functional Dependency analysis is carried out to make sure that the design satisfies BCNF.
- Staff table is created with PersonID, Name, StartDate, End Date and JobCode.
- Repairs table is created with RepairNum, Description, DateOrderd, DateCompleted, Type and a non-identifying relationship with Apartment table to get the AptId in which repair is carried out.
- As the database should also contain the maintenance staff associated with each repair if known, a sub-type relationship is created with new entity RepairPerson along with non-identifying relationship with Staff table to get PersonID.
- In the same way to track the working staff of each complex say Manager and maintenance staff, a sub-type relationship is created with new entity StaffLocation along with non-identifying relationship with ComplexType table to get ComplexID.
- *Note: These sub-types are created so that they can handle null values if any. i.e. Only the values which don't have null are been placed in the newly created table. For example, the CEO of AAA Rentals, Bob also has a PersonID. But to keep track of working staff of each complex say manager, we can't include ComplexID in Person table as the CEO Bob will have ambiguity to associate a ComplexID.*
- Proper data types are assigned to each attribute, so that all the integrity constraints are satisfied.