Justification

The aspects of the MOVEHOME design that I have chosen to implement in an object-relational database are: local branches, staff, and properties. It was difficult to break the system down into a smaller section as there aren’t many ways to reduce it while still having a meaningful database i.e., one that is complex enough to perform interesting queries, but simple enough to not include every entity from the original design.

More entities could have possibly been included in my subset, but I found that the obvious ones to build off the three entities I kept, would not add much value to the demonstration of object-relational design. I could have kept person as an entity, and kept staff as a subclass of person, but the added complexity of this would not have demonstrated anything additional for the OR design. Similarly, I chose not to include the estate agent entity, which would have just kept a record of which local branches belonged to it, as it would not provide much additional functionality in this demonstration.

In the original ER design, there are no many to many relationships, which somewhat reduced the options for demonstrating the advantages of OR design. For example, two entities with a M:N relationship could each have a nested table of references to objects of the other’s type. One of OR’s strengths would be allowing for this type of relationship without duplication of data as each entity could have its own table of references instead of having to include an additional table to manage the relationship. A disadvantage of the OR model is its necessity for more verbose SQL needed to implement it, leading to more resources being needed to create it, and more complexity if the SQL needs to be modified. There is also significantly less support for validating data, with constraints being limited.

STAFF (ID, Name, DOB, Gender, Contact, City, Street)

PROPERTY (PropertyID, Description, Available, Type, Accommodation\_details, Number\_of\_bedrooms, Date\_listed, City, Street)

BRANCH (Branch\_code, Manager: REF Staff, Branch\_of\_agent, City, Street, Contact, Staff: nested table [REF Staff], Properties: nested table [Property])