**Wentworth Institute of Technology**

**Comp355 Database Management Systems**

**In Class ERD Exercise**

**Solutions**

**A Simple Database Design**

Imagine you work for the public housing agency of a city, and you have been charged with keeping track of who is living in the agency's developments over time. To help you in this task, you have decided to use a relational database for your record keeping. Your task is to design a database that allows you to capture the facts described below:

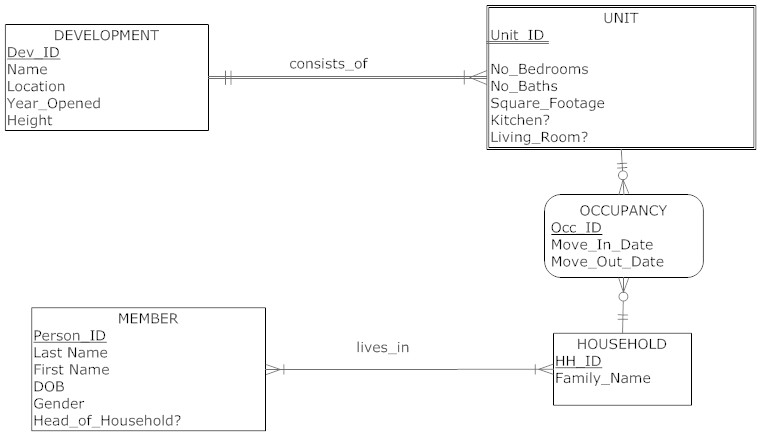
* The city has three public housing developments. You want to record their names, locations, the year they opened, and their height in stories.
* For each unit in the development, you want to keep track of the number of bedrooms, the number of bathrooms, whether the unit has a kitchen or living room, and the square footage.
* The database should keep track of the households living in the units. For each member of a household, you want to record their name, date of birth, sex, and indicate whether or not they are they are the head of the household (more than one person can share that distinction).
* You also want to keep track of when a household moved into and out of a particular unit. You want to be able to follow households as they move from one unit to another or from one development to another. Think about how you will find the unit that the household is **currently** occupying .

You may be interested to know that this assignment was inspired by records kept by the Boston Housing Authority about their developments. Hence, this type of problem has definite real-world importance.

**The Process**

Follow the following process while designing your database:

* Consider the problem, identifying the entities involved, their attributes, and relationships among them.
* Draw an entity-relationship diagram that captures your thinking. Turn in your E-R diagram with your problem set. You may either create your diagram on paper or use software.
* Submit the ERD for this problem.

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