ISTE-230 Introduction to Database and Data Modeling

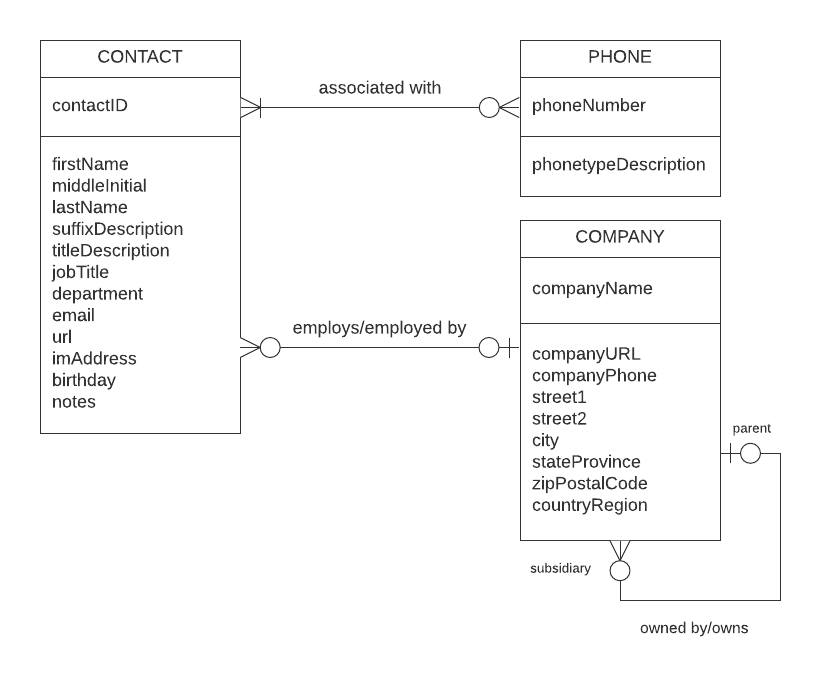
## Practice Exercise # 8 – ‘IS-A’ Relationships

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**All assignments will be graded with regard to the standards that were discussed in class, which can be found in the Standards Content area.**

**Problem #1**

Given the following business rules, please extend the E-R diagram provided below.

* Each CONTACT doesn’t have to be, but could be classified as any combination of the following: CO-WORKER, VENDOR, and PERSONAL.
* If the CONTACT is a CO-WORKER, then the office\_number will be stored.
* A VENDOR will have one or more VENDOR\_TYPEs.
* A VENDOR TYPE is uniquely identified by vendor\_typeID. In addition, a description is provided.
* A VENDOR\_TYPE doesn’t have to apply to any instances of VENDOR, but could apply to many different VENDORs.
* If the CONTACT is a PERSONAL, then the street, city, state, zip should be tracked for the home address.
* Every PERSONAL CONTACT, must be either a RELATIVE or a FRIEND, but never both.
* For a RELATIVE the relationship will be stored, such as mother, father, cousin, etc.
* For a FRIEND, where that friend was met will be stored, such as elementary school, middle school, high school, college, camp, etc. 

**YOUR ANSWER:** This adds on to the given diagram, CONTACT is the same entity in both.

**Diagram

Description automatically generated**

**Problem #2**

Using your knowledge of the scenario described above, please answer the following questions.

A. If a discriminator were to be added to CONTACT, what attribute(s) would you add?

**YOUR ANSWER:** A CONTACT may be a VENDOR, PERSONAL, or CO-WORKER but not a combination. (disjoint rule)

B. If a discriminator were to be added to PERSONAL, what attribute(s) would you add?

**YOUR ANSWER:** A PERSONAL\_CONTACT may be a FRIEND or RELATIVE, but not both.