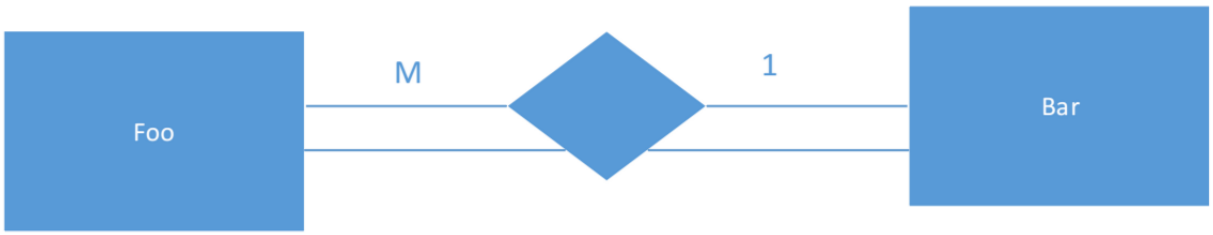
Colleen Minor (Databases)

1. Relationships – For this question you are to ignore attributes and provide ER diagrams that represent the relationship between entities correctly. The entities will be Foo, Bar and Baz. There should be one diagram for part a (5 points), and one diagram for part b (15 points)

a. A Foo is related to exactly one Bar.

A Bar is related to at least one Foo.

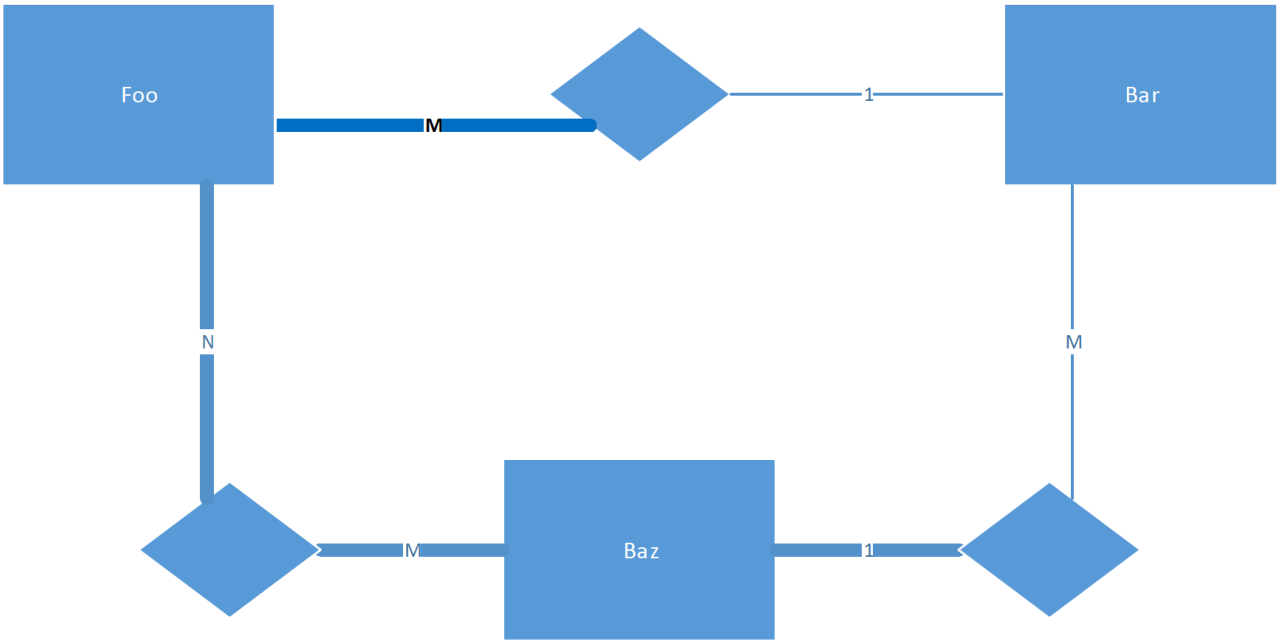


b. A Foo is related to exactly one Bar.

A Bar is related to zero ore more Foos

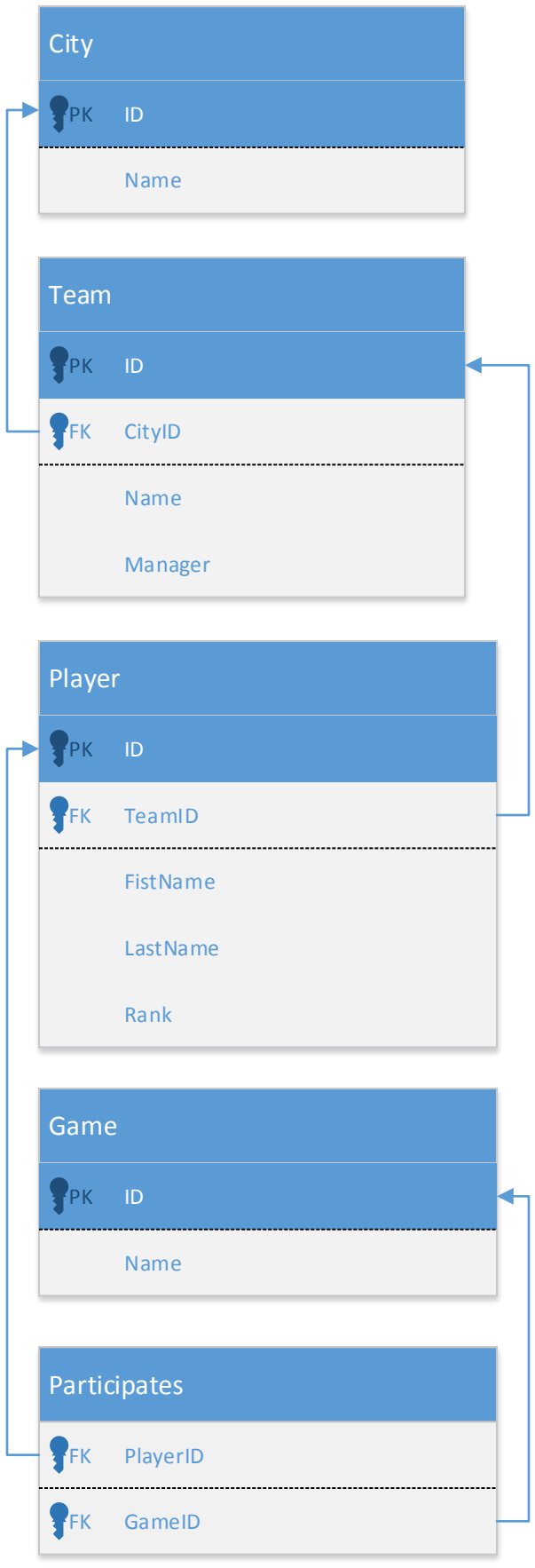
A Baz is related to one or more Bars and at least one Foo. A Bar is related to at most one Baz.

A Foo is related to at least one Baz.



2. Provide a schema for the following data. (40 points)

Convert the ER diagram located at the end of this document into a schema.


City
PK ID
Name
Team
PK ID
FK CityID
Name
Manager
Player
PK ID
FK TeamID
FistName
LastName
Rank
Game
PK ID
Name
Participates
FK PlayerID
FK GameID

3. Provide an ER diagram for the following situation. (40 points)
   You are designing a database to keep track of the IT landscape in a medium sized
   business.
   A computer has a Serial Number, Operating System and Version. A serial number uniquely identifies a computer.
   Hardware has a Serial Number, Type and Model. A piece of hardware is uniquely defined by its serial number.
   A workstation has an ID, Position, Size and Room. The ID of a workstation uniquely identifies it.
   An employee has a SSN, First Name, and Last Name. The employee is uniquely identified by his/her SSN.

A support ticket has an ID, a Status, and a Description. It is uniquely identified by its ID.

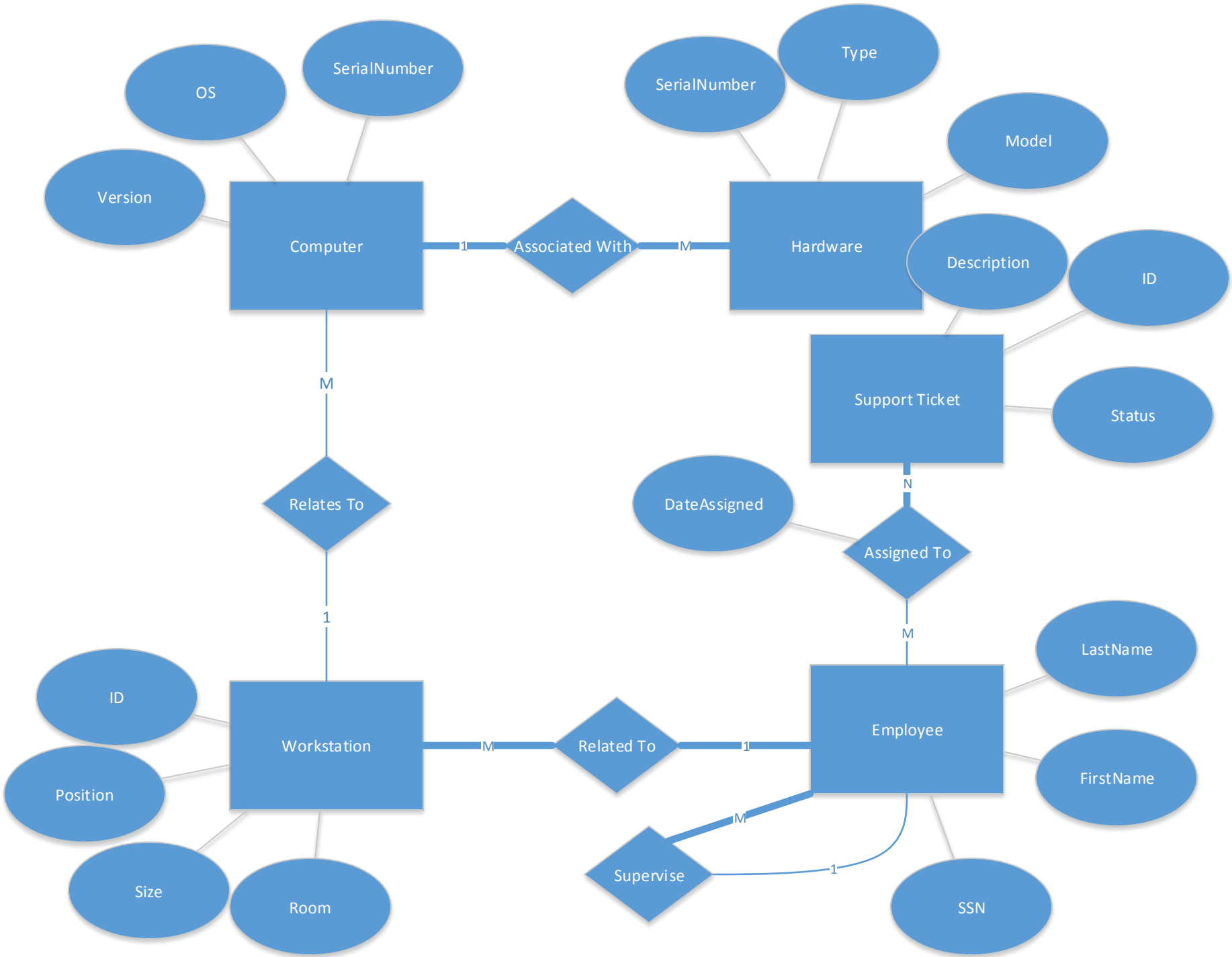
A computer is related to at most one work station. A work station is related to 0 or more computers.

Hardware is associated to exactly one computer. A computer is related to at least one piece of hardware.

An employee is related to one or more work stations and a work station is related to exactly one employee.

A support ticket is assigned to one or more employees. An employee can be related to 0 or more tickets. The date the ticket was assigned to each employee is tracked.

An employee can supervise 0 or more employees. Every employee has one supervisor.


OS
SerialNumber
Version
Computer
1
Associated With
M
SerialNumber
Type
Model
Hardware
Description
ID
Support Ticket
Status
N
DateAssigned
Assigned To
M
LastName
Employee
FirstName
M
1
Supervise
1
SSN
M
Relates To
1
ID
Workstation
Position
Size
Room
M
Related To
1