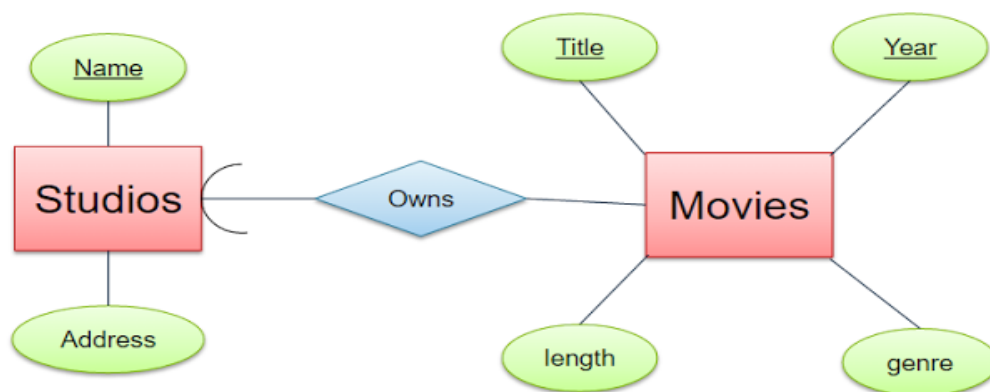


Section 7 Worksheet: E/R Diagrams

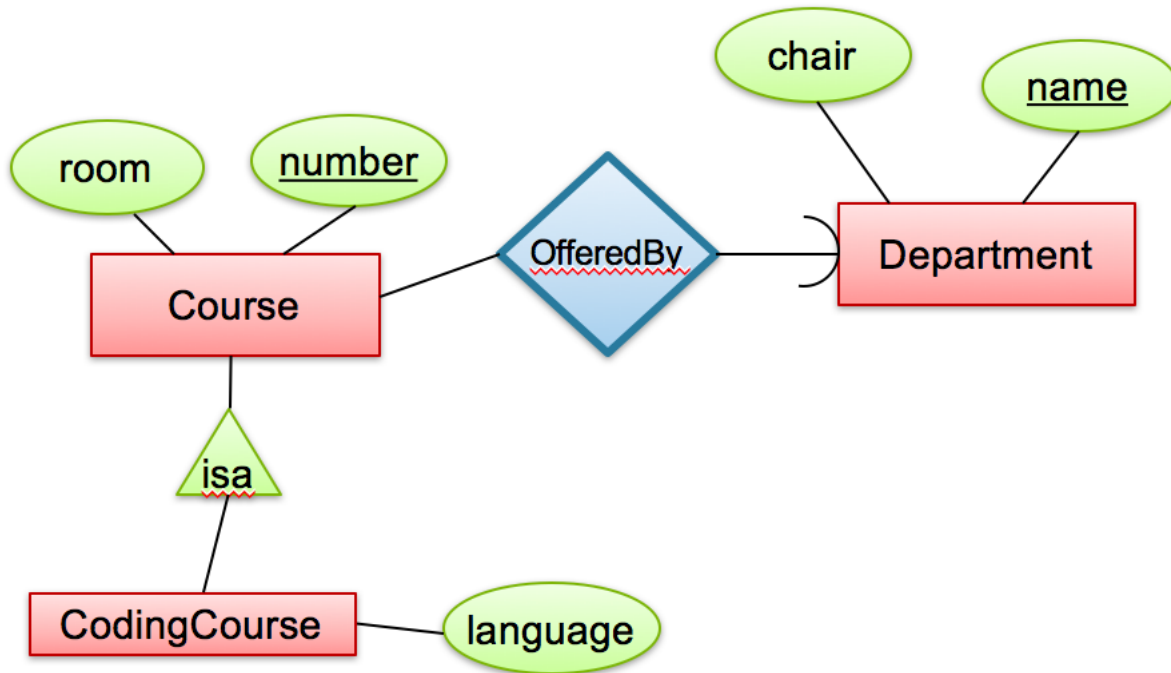
Problem 1: Convert the following SQL CREATE TABLE statements to an E/R diagram

```
CREATE TABLE Studios(  
  name VARCHAR(50),  
  address VARCHAR(100),  
  PRIMARY KEY(name))
```

```
CREATE TABLE Movies(  
  title VARCHAR(50),  
  year INT,  
  genre VARCHAR(50),  
  length INT,  
  ownedBy VARCHAR(50) NOT NULL,  
  PRIMARY KEY(title, year),  
  FOREIGN KEY (ownedBy) REFERENCES Studios(name))
```



Problem 2: Convert the following E/R diagram into a set of tables. Gives SQL queries to create those tables and all of the constraints implied by the diagram.

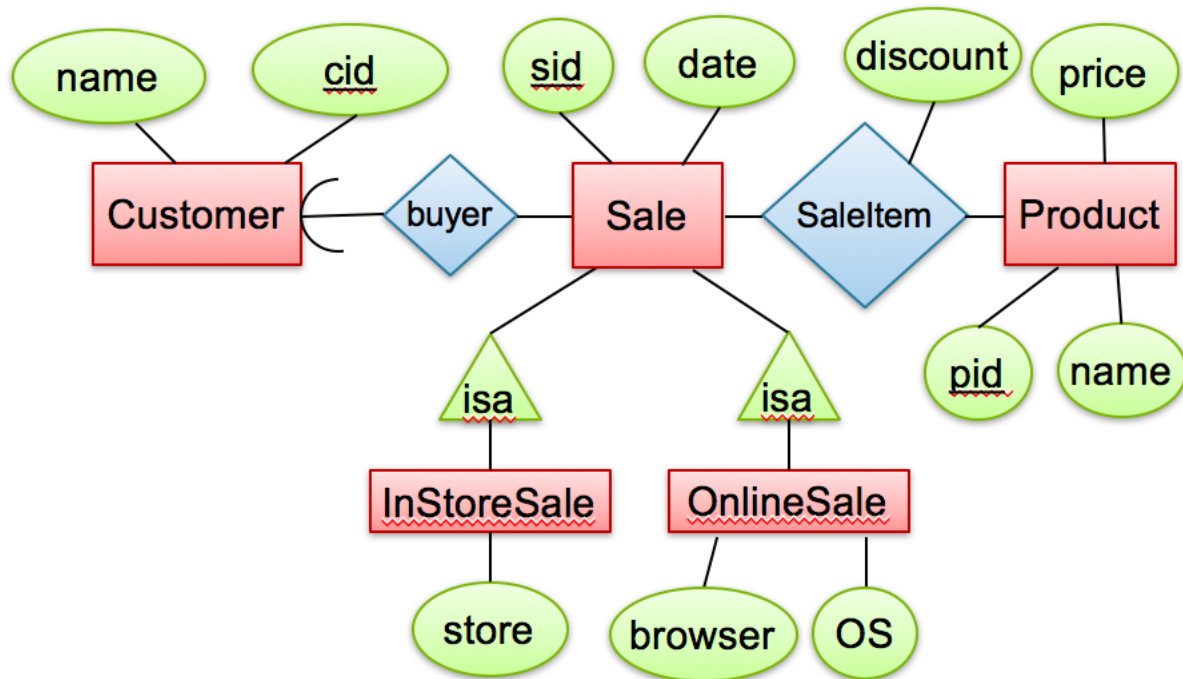


```
CREATE TABLE Department(
    name varchar(100) PRIMARY KEY,
    chair varchar(100));
```

```
CREATE TABLE Course(
    dept_name varchar(100) NOT NULL REFERENCES Department,
    number INT,
    room int,
    PRIMARY KEY (dept_name, number));
```

```
CREATE TABLE CodingCourse(
    dept_name varchar(100) REFERENCES Department,
    number INT,
    language varchar(100)
    PRIMARY KEY (dept_name, number)
    FOREIGN KEY (dept_name, number) REFERENCES Course);
```

Problem 3: Convert the following E/R diagram into a set of tables. Gives SQL queries to create those tables and all of the constraints implied by the diagram.



```
CREATE TABLE Customer(cid int PRIMARY KEY, name text);
CREATE TABLE Product(
  pid int PRIMARY KEY,
  name text,
  price float);
CREATE TABLE Sale(
  sid int PRIMARY KEY,
  date text,
  buyer int NOT NULL REFERENCES Customer);
CREATE TABLE InStoreSale(
  sid int PRIMARY KEY REFERENCES Sale,
  store text);
CREATE TABLE OnlineSale(
  sid int PRIMARY KEY REFERENCES Sale,
  browser text,
  OS text);
CREATE TABLE SaleItem(
  pid int REFERENCES Product,
  sid int REFERENCES Sales,
  discount float,
  PRIMARY KEY (pid, sid));
```