CSE 344 Section 3 Worksheet

SQL Aggregates Practice

```
CREATE TABLE Movies (id int PRIMARY KEY, name varchar(30),
                     budget int, gross int, rating int, year int);
CREATE TABLE Actors (id int PRIMARY KEY, name varchar(30), age int);
CREATE TABLE ActsIn (mid int REFERENCES Movies(id),
                     aid int REFERENCES Actors(id));
```

What is the number of movies, and the average rating of all movies that the actor ”Patrick Stewart” has appeared in?

What is the minimum age of an actor who has appeared in a movie where the gross of the movie has been over $1,000,000,000?

What is the name and budget of each movie released in 2017 whose oldest actor is less than 30?

More Challenging Aggregation

```
CREATE TABLE Class (
    dept   VARCHAR(50),
    number INT,
    title  VARCHAR(50),
    PRIMARY KEY (dept, number));

CREATE TABLE Instructor (
    username   VARCHAR(50) PRIMARY KEY,
    fname      VARCHAR(50),
    lname      VARCHAR(50),
    started_on CHAR(10));

CREATE TABLE Teaches(
    username VARCHAR(50),  -- alternately, can use the REFERENCES syntax here
    dept     VARCHAR(50),
    number   INT,
    PRIMARY KEY (username, dept, number),
    FOREIGN KEY (username) REFERENCES Instructor,
    FOREIGN KEY (dept, number) REFERENCES Class);
```

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1. Return the first and last name of all instructors who are teaching at least one class.

2. For each instructor, return their username and the number of classes they teach.

3. Return the number of instructors who are teaching at least one class.

4. Return the first and last name of the newest instructor(s) (who started on the latest date). Assume Instructor.started_on uses yyyy-mm-dd format. If there are multiple instructors, list all of them.

5. Which CSE courses do neither Dr. Levy (username ‘levy’) nor Dr. Wetherall (username ‘djw’) teach? Give the department, number, and title of these courses. (Hint: set subtraction using EXCEPT might be helpful here. The EXCEPT operator compares the result sets of two queries and returns distinct rows from the first query that are not returned by the second query. The syntax is as follows:
SELECT…FROM…
EXCEPT
SELECT…FROM…