Nathan Gopee

Professor Suchy

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Exercise 6.1.2:

Write the following queries, based on our running movie database example in SQL.

Movies (title, year, length, genre, studioName, producerC#)

Starsln (movieTit1e, movieYear, starName)

MovieStar (name, address, gender, birthdate)

MovieExec (name, address, cert#, netWorth)

Studio (name, address, presC#)

a) Find the address of MGM studios.

SELECT address

FROM Studio

WHERE name = 'MGM';

b) Find Sandra Bullock’s birthdate.

SELECT birthdate

FROM MovieStar

WHERE name = 'Sandra Bullock';

c) Find all the stars that appeared either in a movie made in 1980 or a movie with “Love” in the title.

SELECT starName

FROM StarsIn

WHERE movieYear = 1980

OR movieTitle LIKE '%Love%';

d) Find all executives worth at least $10,000,000.

SELECT name

FROM MovieExec

WHERE netWorth >= 10000000;

e) Find all the stars who either are male or live in Malibu (have string Malibu as a part of their address).

SELECT name

FROM MovieStar

WHERE gender = 'M'

OR address LIKE '%Malibu%';

Exercise 6.1.3:   
Write the following queries in SQL.

Product(maker, model, type)

PC(model, speed, ram, hd, price)

Laptop(model, speed, ram, hd, screen, price)

Printer(model, color, type, price)

a) Find the model number, speed, and hard-disk size for all PC’s whose price is under $1000.

SELECT model, speed, hd

FROM PC

WHERE price < 1000;

b) Do the same as (a), but rename the speed column gigahertz and the hd column gigabytes.

SELECT model, speed AS gigahertz, hd AS gigabytes

FROM PC

WHERE price < 1000;

c) Find the manufacturers of printers.

SELECT DISTINCT maker

FROM Product

WHERE type = 'Printer';

d) Find the model number, memory size, and screen size for laptops costing more than $1500.

SELECT model, ram, screen

FROM Laptop

WHERE price > 1500;

e) Find all the tuples in the Printer relation for color printers. Remember that color is a boolean-valued attribute.

SELECT \*

FROM Printer

WHERE color = TRUE;

f) Find the model number and hard-disk size for those PC ’s that have a speed of 3.2 and a price less than $2000.

SELECT model, hd

FROM PC

WHERE speed = 3.2

AND price < 2000;

Exercise 6.1.4: Write the following queries

Classes(class, type, country, numGuns, bore, displacement)

Ships(name, class, launched)

Battles(name, date)

Outcomes(ship, battle, result)

a) Find the class name and country for all classes with at least 10 guns.

SELECT class, country

FROM Classes

WHERE numGuns >= 10;

b) Find the names of all ships launched prior to 1918, but call the resulting column shipName.

SELECT name AS shipName

FROM Ships

WHERE launched < 1918;

c) Find the names of ships sunk in battle and the name of the battle in which they were sunk.

SELECT ship, battle

FROM Outcomes

WHERE result = 'sunk';

d) Find all ships that have the same name as their class.

SELECT name

FROM Ships

WHERE name = class;

e) Find the names of all ships that begin with the letter “R.”

SELECT name

FROM Ships

WHERE name LIKE 'R%';

f) Find the names of all ships whose name consists of three or more words (e.g., King George V).

SELECT name

FROM Ships

WHERE LENGTH(name) - LENGTH(REPLACE(name, ' ', '')) >= 2;