COMP- 8115-M50 Database systems

Quiz – 6

1.[100 pts] Using the companydb database you generated in the last quiz (Quiz 5), write SQL scripts in the MySQL environment for the following use cases (no screenshots needed):

a) [10 pts] Using the IN clause, retrieve only the social security numbers of all employees who work on project numbers 61, 62, 63.

Answer:

SELECT emp.ssn as SocialSecurityNumber FROM EMPLOYEE as emp inner

join works_on as wo on emp.ssn = wo.essn WHERE wo.pno IN(61,62,63)

b) [10 pts] Using the IN clause, retrieve the first name, last name and the social security numbers of all employees who work on project numbers 61, 62, 63.

Answer:

SELECT emp.fname, emp.lname, emp.ssn as SocialSecurityNumber FROM

EMPLOYEE as emp inner join works_on as wo on emp.ssn = wo.essn WHERE

wo.pno IN(61,62,63)

c) [10 pts] Without using the IN clause, retrieve the first name, last name and the social security numbers of all employees who work on project numbers 61, 62, 63.

Answer:

SELECT emp.fname, emp.lname, emp.ssn as EmployeeSSN FROM EMPLOYEE as

emp inner join works_on as wo on emp.ssn = wo.essn WHERE wo.pno = 61 or wo.pno

= 62 or wo.pno = 63;

d) [10 pts] Using a join clause, retrieve all project names and their department names.

Answer:

SELECT dept.dname, pr.pnumber FROM DEPARTMENT as dept join PROJECT

as pr on dept.dnumber = pr.dnum;

e) [10 pts] Without using a join clause, retrieve all project names and their department names.

Answer:

SELECT pname, dname from project, department where dnum = dnumber;

f) [10 pts] Using a join clause, retrieve employees who have dependents.

Answer:

SELECT emp.*, depend.dependent_name, depend.relationship FROM EMPLOYEE as emp inner join DEPENDENT as depend on emp.ssn = depend.essn;

g) [10 pts] Retrieve all employees (first name, last name) and their dependent names. You should also get those who do not have any dependents. Hint: Use left join or right join.

Answer:

SELECT emp.fname,emp.lname,emp.ssn, depend.dependent_name, depend.relationship FROM EMPLOYEE as emp left join DEPENDENT as depend on emp.ssn = depend.essn;

h) [10 pts] Get the total number of projects in the company.

Answer:

SELECT COUNT(pnumber) FROM PROJECT;

i) [10 pts] For each employee, get the total number of hours worked in the company.

Answer:

SELECT emp.fname, emp.lname, emp.ssn, wo.hours FROM EMPLOYEE as emp join works_on as wo on emp.ssn = wo.essn;

j) [10 pts] For each employee, get the total number of hours worked more than 40 hours in the company.

Answer:

SELECT emp.fname, emp.lname, emp.ssn, wo.hours FROM EMPLOYEE as emp join works_on as wo on emp.ssn = wo.essn and wo.hours > 40;

Bonus Question [10 pts] The CEO wants a report in which he can see employees with a column "Status" which should include either low-paid, normal-paid or over-paid values. Low-paid is for employees who work under 40 hours. Normal-paid is for employees who worked only 40 regular hours. Over-paid is for employees who worked more than 40 hours. Retrieve employee ssn, first name, last name and status (lower paid, normal-paid or over-paid) of all employees.

Answer:

SELECT emp.fname, emp.lname, emp.ssn, wo.hours, CASE WHEN wo.hours < 40 THEN 'Low-paid' WHEN wo.hours = 40 THEN 'Normal-paid' ELSE 'Over-paid' END AS status FROM EMPLOYEE as emp join works_on as wo on emp.ssn = wo.essn;