INTRO_SQL_HWK(Answers

Queries:

Specify the following queries in SQL on the COMPANY relational database and show the result of each query.

a. Retrieve the name and address of all employees who work for the 'Research' department.

b. For every project located in 'Stafford', list the project number, the controlling department number, and the department manager's last name, address, and birth date.

c. Retrieve the salary of *every* employee and all *distinct* salary values.

d. Make a list of all project numbers for projects that involve an employee whose last name is 'Smith', either as a worker or as a manager of the department that controls the project.

e. Retrieve the names of all employees in department 5 who work more than 10 hours per week on the ProductX project.

f. List the names of all employees who have a dependent with the same first name as themselves.

g. Find the names of all employees who are directly supervised by 'Franklin Wong'.

h. Retrieve a list of employees and the projects they are working on, ordered by department and, within each department, ordered alphabetically by last name, then first name.

i. Show the resulting salaries if every employee working on the 'ProductX' project is given a 15 percent raise.

Perform Queries

a. SELECT fname, lname, address
   FROM employee, department
   WHERE dname='Research' AND dnumber=dno;

FNAME	LNAME	ADDRESS
Franklin	Wong	638 Voss, Houston, TX
John	Smith	731 Fondren,Houston, TX
Ramesh	Narayan	975 Fire Oak,Humble, TX
Joyce	English	5631 Rice,Houston, TX

b. SELECT pnumber, dnum, lname, address, bdate
   FROM project, department, employee
   WHERE dnum=dnumber AND mgr_ssn=ssn AND plocation='Stafford';

PNUMBER	DNUM	LNAME	ADDRESS	BDATE
30	4	Wallace	291 Berry,Bellaire, TX	20-JUN-41
10	4	Wallace	291 Berry,Bellaire, TX	20-JUN-41

c. SELECT ALL salary
   FROM employee;

```
SALARY
----------
 55000
 40000
 43000
 30000
 38000
 25000
 25000
 25000
```

SELECT **DISTINCT**(salary)
FROM employee;

```
SALARY
----------
 38000
 55000
 43000
 30000
 40000
 25000
```

2

d. (SELECT DISTINCT(pnumber)
FROM project, department, employee
WHERE dnum=dnumber AND mgr_ssn=ssn AND lname='Smith')
 UNION
(SELECT DISTINCT(pnumber)
FROM project, works_on, employee
WHERE pnumber=pno AND essn=ssn AND lname= 'Smith');

    PNUMBER
      1
      2

e. SELECT distinct fname, lname
FROM employee e, works_on w
WHERE e.dno = 5 AND w.pno =1 AND w.hours > 10.0;

FNAME	LNAME
Franklin	Wong
Ramesh	Narayan
Joyce	English
John	Smith

f. SELECT fname, lname
FROM employee e, dependent d
WHERE e.fname = d.dependent_name;

no rows selected

SQL> SELECT fname from employee;
FNAME

James
Franklin
Jennifer
John
Ramesh
Joyce
Alicia
Ahmad

SQL> SELECT dependent_name from dependent;
DEPENDENT_NAME
Alice
Theodore
Joy
Abner
Michael
Alice
Elizabeth

3

g. SELECT fname, lname
FROM employee
WHERE super_ssn = 333445555;

[As supervisor 'Franklin Wong' has ssn = 333445555]

FNAME	LNAME
John	Smith
Ramesh	Narayan
Joyce	English

h. SELECT d.dname, e.lname, e.fname, p.pname
FROM department d, employee e, works_on w, project p
WHERE d.dnumber=e.dno AND e.ssn=w.essn AND w.pno=p.pnumber
ORDER BY d.dname, e.lname, e.fname;

DNAME	LNAME	FNAME	PNAME
Administration	Jabbar	Ahmad	Computerization
Administration	Jabbar	Ahmad	Newbanefits
Administration	Wallace	Jennifer	Newbanefits
Administration	Wallace	Jennifer	Reorganization
Administration	Zelaya	Alicia	Computerization
Administration	Zelaya	Alicia	Newbanefits
Headquarters	Borg	James	Reorganization
Research	English	Joyce	ProductY
Research	English	Joyce	ProductX
Research	Narayan	Ramesh	ProductZ
Research	Smith	John	ProductX
Research	Smith	John	ProductY
Research	Wong	Franklin	ProductZ \
Research	Wong	Franklin	Computerization
Research	Wong	Franklin	Reorganization
Research	Wong	FranklinProductY	

i. SELECT e.fname, e.lname, 1.15*e.salary AS increased_sal
FROM employee e, project p
WHERE p.pnumber = 1 AND e.dno = p.dnum;

FNAME	LNAME	INCREASED_SAL
Franklin	Wong	46000
John	Smith	34500
Ramesh	Narayan	43700
Joyce	English	28750