

LAB 4 SOLUTIONS

EXERCISE 1.

1. SELECT FIRSTNAME || ' ' || LASTNAME FROM EMPLOYEES E,DEPARTMENTS D WHERE E.DEPTCODE= D.CODE AND D.NAME='CONSULTING';

SELECT E.FIRSTNAME || ' ' || E.LASTNAME FROM EMPLOYEES E CROSS JOIN DEPARTMENTS D WHERE E.DEPTCODE= D.CODE AND D.NAME='CONSULTING';

2. SELECT FIRSTNAME || ' ' || LASTNAME FROM EMPLOYEES E,DEPARTMENTS D , WORKSON W WHERE E.DEPTCODE= D.CODE AND D.NAME='CONSULTING'AND E.EMPLOYEEID = W.EMPLOYEEID AND W.PROJECTID='ADT4MFIA' AND ASSIGNEDTIME *100 >20;

SELECT FIRSTNAME || ' ' || LASTNAME FROM DEPARTMENTS D JOIN EMPLOYEES E ON E.DEPTCODE= D.CODE JOIN WORKSON W ON E.EMPLOYEEID = W.EMPLOYEEID WHERE D.NAME='CONSULTING' AND W.PROJECTID='ADT4MFIA' AND ASSIGNEDTIME *100 >20;

3. SELECT SUM(ASSIGNEDTIME)*100 FROM EMPLOYEES E , WORKSON W WHERE E.EMPLOYEEID= W.EMPLOYEEID AND FIRSTNAME = 'ABE' AND LASTNAME='ADVICE';

SELECT SUM(ASSIGNEDTIME)*100 FROM EMPLOYEES E JOIN WORKSON W USING (EMPLOYEEID)WHERE FIRSTNAME = 'ABE' AND LASTNAME='ADVICE';

4. SELECT P.DESCRPTION FROM PROJECTS P, WORKSON W WHERE P.PROJECTID=W.PROJECTID GROUP BY P.DESCRPTION HAVING SUM(W.ASSIGNEDTIME)*100>70;

SELECT P.DESCRPTION FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) GROUP BY P.DESCRPTION HAVING SUM(W.ASSIGNEDTIME)*100>70;

5. SELECT E.EMPLOYEEID, COUNT(PROJECTID) AS "NUMBER OF PROJECTS",SUM(ASSIGNEDTIME)*100 AS "TOTAL PERCENTAGE OF TIME" FROM EMPLOYEES E LEFT JOIN WORKSON W ON E.EMPLOYEEID=W.EMPLOYEEID GROUP BY E.EMPLOYEEID;

6. SELECT DISTINCT(DESCRIPTION) FROM PROJECTS P,WORKSON W WHERE P.PROJECTID NOT IN (SELECT PROJECTID FROM WORKSON);

7. SELECT PROJECTID, MAX(ASSIGNEDTIME) FROM EMPLOYEES E , WORKSON W WHERE E.EMPLOYEEID=W.EMPLOYEEID GROUP BY W.PROJECTID;

SELECT PROJECTID, MAX(ASSIGNEDTIME) FROM EMPLOYEES E JOIN WORKSON W ON E.EMPLOYEEID=W.EMPLOYEEID GROUP BY W.PROJECTID;

8. SELECT E1.EMPLOYEEID, E2.LASTNAME FROM EMPLOYEES E1 ,EMPLOYEES E2 WHERE E2.SALARY>E1.SALARY;

SELECT E1.EMPLOYEEID, E2.LASTNAME FROM EMPLOYEES E1 CROSS JOIN EMPLOYEES E2 WHERE E2.SALARY>E1.SALARY;

9. SELECT PROJECTID,REVENUE FROM PROJECTS ORDER BY REVENUE DESC;

MIDDLE QUESTIONS

1. SELECT COMPANYNAME
FROM VENDORS
MINUS
SELECT COMPANYNAME
FROM VENDORS V,INGREDIENTS I WHERE V.VENDORID=I.VENDORID;

2. SELECT ITEMID
FROM MADEWITH M, INGREDIENTS I
WHERE M.INGREDIENTID = I.INGREDIENTID AND FOODGROUP='MILK'
MINUS
(SELECT ITEMID
FROM MADEWITH M, INGREDIENTS I
WHERE M.INGREDIENTID = I.INGREDIENTID AND FOODGROUP='MILK'
MINUS
SELECT ITEMID
FROM MADEWITH M, INGREDIENTS I
WHERE M.INGREDIENTID = I.INGREDIENTID AND FOODGROUP='FRUIT');

EXERCISE 2.

1. SELECT STARTDATE FROM PROJECTS
UNION
SELECT ENDDATE
FROM PROJECTSORDER BY STARTDATE DESC;

2. SELECT FIRSTNAME, LASTNAME
FROM EMPLOYEES,WORKSON WHERE EMPLOYEES.EMPLOYEEID=WORKSON.EMPLOYEEID
AND WORKSON.PROJECTID='ROBOSPSE'
INTERSECT
SELECT FIRSTNAME,LASTNAME
FROM EMPLOYEES WHERE DEPTCODE='HDWRE';

3. SELECT FIRSTNAME, LASTNAME
FROM EMPLOYEES,WORKSON WHERE EMPLOYEES.EMPLOYEEID=WORKSON.EMPLOYEEID
AND WORKSON.PROJECTID='ROBOSPSE'
MINUS
SELECT FIRSTNAME,LASTNAME
FROM EMPLOYEES WHERE DEPTCODE='HDWRE';

4. SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='DOWNLOAD CLIENT'
MINUS
SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='ROBOTIC SPOUSE';

5. SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='DOWNLOAD CLIENT'
INTERSECT
SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='ROBOTIC SPOUSE';

6. SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='DOWNLOAD CLIENT'
UNION
SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='ROBOTIC SPOUSE';

7. (SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='DOWNLOAD CLIENT'
UNION
SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='ROBOTIC SPOUSE')
MINUS
(SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='DOWNLOAD CLIENT'
INTERSECT
SELECT FIRSTNAME, LASTNAME
FROM PROJECTS P JOIN WORKSON W USING (PROJECTID) JOIN EMPLOYEES E USING
(EMPLOYEEID) WHERE P.DESCRPTION='ROBOTIC SPOUSE');

8. SELECT NAME FROM DEPARTMENTS
MINUS
SELECT NAME FROM DEPARTMENTS D JOIN PROJECTS P ON D.CODE=P.DEPTCODE;