数据库系统原理第四次作业

1. 设有两个关系R（A，B，C）和S（C，D，E），试用SQL查询语句表达下列关系代数表达式：

（1）SELECT R.A, S.E FROM R

INNER JOIN S ON R.C = S.C

WHERE R.B = S.D;

（2）SELECT R.A, S.E FROM R

INNER JOIN S ON R.C = S.C

WHERE R.B = 50

UNION

SELECT R.A, S.E FROM R

INNER JOIN S ON R.C = S.C

WHERE R.B = 60;

1. 有两个关系S(A, B, C, D)和T(C, D, B,F), 写出与下列查等价的SQL表达式 :

(1)SELECT \* FROM S WHERE A=10

(2) SELECT DISTINCT A,B FROM S

(3) SELECT A,B,S.C,S.DE,F FROM S,T WHERE S.C-TC AND S.D-TD

(4) SELECT A,B,S.C,SDTCTDEF FROM ST WHERE S.CETC

(5) SELECT A,B,S.C,S.D,TC,TD,E,F FROM ST HERE A <E

(6) SELECT S1.C,S1.D,T.C,TD,E,F FROM T,(select DISTINCT CD FROM S) AS S1

3.用SQL语建立第2章习题6中的4个表;针对建立的4个表用SQL语言完成第2章习题6中的查询。

答：

建S表:

S(SNO.SNAME,STATUS,CITY)

CREATETABLE S

(SNO CHAR(3)

SNAME CHAR(10)

STATUS CHAR(2)，

CITY CHAR(10));

建P表:

P(PNO,PNAME,COLOR,WEIGHT);

CREATE TABLE P

(PNO CHAR(3)，

PNAME CHAR(10)

COLOR CHAR(4)，

WEIGHT INT);

建J表:

J(JNO,JNAME,CITY);

CREATE TABLE J

(JNO CHAR(3)

JNAME CHAR(10)

CITY CHAR(10));

建SPJ表

SPJ(SNO,PNOJNO,QTY);

CREATE TABLE SPJ

SNO CHAR(3)

PNO CHAR(3)

JNO CHAR(3)

QTY INT);

(1)求供应工程J1零件的供应商号码SNO

SELECT SNO

FROM SPJ

WHERE JNO=’J1’

(2)求供应工程J1零件P1的供应商号码SNO

SELECT SNO

FROM SPJ

WHERE INO=’JI'AND PNO='P1’

(3)求供应工程J1零件为红色的供应商号码SNO

SELECT SNO

FROM SPJ,P

WHERE JNO=’J1’ AND SPJ.PNO=P.PNO AND COLOR=’红’

(4) 求没有使用天津供应商生产的红色零件的工程号JNO。

SELECT JNO FROM J

WHERE NOT EXISTS

(SELECT \*

FROM SPJ, S, P

WHERE SPJ.JNO=J.JNO AND SPJ.SNO=S.SNO

AND SPJ.PNO=P.PNO AND S.CITY=’天津’

AND P.COLO=’红’);

(5) 求至少用了供应商S1所供应的全部零件的工程号JNO

SELECT DISTINCT INO

FROM SPJ, SPZJ

WHERE NOT EXISTS

(SELECT \* FROM SPJ, SPJX

WHERE SNO='S1' AND NOT EXISTS

(SELECT \* FROM SPJ, SPJY

WHERE SPJY.PNO=SPJX.PNO

AND SPJY.JNO=SPJZ.JNO));

4.针对习题3中的4个表试用SQL语言完成以下各项操作

答:

(1)找出所有供应商的姓名和所在城市

SELECT SNAME, CITY FROM S

(2)找出所有零件的名称、颜色、重量。

SELECT PNAME, COLOR, WEIGHT FROM P

(3)找出使用供应商S1所供应零件的工程号码。

SELECT INO FROM SPJ

WHERE SNO='S1'

(4)找出工程项目J2使用的各种零件的名称及其数量。

SELECT P.PNAME, SPJ.OTY FROM P,SPJ

WHERE P.PNO=SPJ.PNO

AND SPJ.JNO='J2

(5)找出上海厂商供应的所有零件号码

SELECT DISTINCT PNO

FROM SPJ

WHERE SNO IN

(SELECT SNO

FROM S

WHERE CITY='上海’):

(6)找出使用上海产的零件的工程名称。

SELECT JNAME

FROM J,SPJ,S

WHERE J.JNO=SPJ.JNO

AND SPJ.SNO=S.SNO

AND SCITY=’上海’

(7)找出没有使用天津产的零件的工程号码

SELECT INO

FROM J

WHERE NOT EXISTS

(SELECT \* FROM SPJ

WHERE SPJJNO=LINO

AND SNO IN

(SELECT SNO

FROM S

WHERE CITY='天津’));

(8)把全部红色零件的颜色改成蓝色

UPDATE P

SET COLOR=‘蓝‘

WHERE COLOR='红‘:

(9)由S5供给J4的零件P6改为由S3供应请作必要的修改

UPDATE SPJ

SET SNO-'S3

WHERE SNO='S5

AND JNO='J4

AND PNO=’P6’

(10)从供应商关系中删除S2 的记录,并从供应情况关系中删除相应的记录

DELETE

FROM SPJ

WHERE SNO='S2’

DELETE

FROM S

WHERE SNO='S2'

(11)请将(S2,J6,P4,200)插入供应情况关系

INSERT INTO SPJ(SNO, JNO, PNO, QTY)

VALUES(S2.J6,P4,200):