create database Warehouse;

use Warehouse;

create table w\_unit(u\_no varchar(20) primary key not null,u\_unit varchar(20) not null);

create table w\_tpye(t\_no varchar(20) primary key not null,t\_name varchar(20) not null);

create table w\_store(s\_no varchar(20) primary key not null,s\_name varchar(20) not null,s\_address varchar(20),s\_admin varchar(20));

create table w\_ware(w\_no varchar(20) primary key not null,w\_name varchar(20) not null,w\_sp varchar(20) not null,t\_no varchar(20) not null,u\_no varchar(20) not null,foreign key(t\_no) references w\_tpye(t\_no),foreign key(u\_no) references w\_unit(u\_no));

create table w\_join(j\_no varchar(20) primary key not null,j\_date date not null,s\_no varchar(20) not null,w\_no varchar(20) not null,j\_num int not null,foreign key(s\_no) references w\_store(s\_no),foreign key(w\_no) references w\_ware(w\_no));

create table w\_out(o\_no varchar(20) primary key not null,o\_date date not null,s\_no varchar(20) not null,w\_no varchar(20) not null,o\_num int not null,foreign key(s\_no) references w\_store(s\_no),foreign key(w\_no) references w\_ware(w\_no));

INSERT INTO `w\_tpye` VALUES ('L01', '显示器');

INSERT INTO `w\_tpye` VALUES ('L02', '主板');

INSERT INTO `w\_tpye` VALUES ('L03', '硬盘');

INSERT INTO `w\_tpye` VALUES ('L04', '键盘');

INSERT INTO `w\_unit` VALUES ('J01', '台');

INSERT INTO `w\_unit` VALUES ('J02', '块');

INSERT INTO `w\_unit` VALUES ('J03', '个');

INSERT INTO `w\_store` VALUES ('W01', '显示器仓库', '1号街', '张三');

INSERT INTO `w\_store` VALUES ('W02', '主板仓库', NULL, '李四');

INSERT INTO `w\_store` VALUES ('W03', '硬盘仓库', '3号街', NULL);

INSERT INTO `w\_ware` VALUES ('S01', '三星显示器', 'SX', 'L01', 'J01');

INSERT INTO `w\_ware` VALUES ('S02', '冠捷显示器', 'GJ', 'L01', 'J01');

INSERT INTO `w\_ware` VALUES ('S03', '华硕主板', 'HS', 'L02', 'J02');

INSERT INTO `w\_ware` VALUES ('S04', '希捷硬盘', 'XJ', 'L03', 'J03');

INSERT INTO `w\_ware` VALUES ('S05', '日立硬盘', 'RL', 'L03', 'J01');

INSERT INTO `w\_join` VALUES ('RK001', '2010-05-01', 'W01', 'S01', 10);

INSERT INTO `w\_join` VALUES ('RK0010', '2010-06-02', 'W01', 'S01', 15);

INSERT INTO `w\_join` VALUES ('RK0011', '2010-06-03', 'W01', 'S01', 30);

INSERT INTO `w\_join` VALUES ('RK0012', '2010-06-03', 'W01', 'S02', 10);

INSERT INTO `w\_join` VALUES ('RK002', '2010-05-01', 'W02', 'S02', 50);

INSERT INTO `w\_join` VALUES ('RK003', '2010-05-01', 'W02', 'S03', 10);

INSERT INTO `w\_join` VALUES ('RK004', '2010-05-02', 'W01', 'S01', 30);

INSERT INTO `w\_join` VALUES ('RK005', '2010-05-03', 'W01', 'S01', 20);

INSERT INTO `w\_join` VALUES ('RK006', '2010-05-03', 'W02', 'S03', 30);

INSERT INTO `w\_join` VALUES ('RK007', '2010-06-01', 'W02', 'S02', 15);

INSERT INTO `w\_join` VALUES ('RK008', '2010-06-01', 'W01', 'S02', 25);

INSERT INTO `w\_join` VALUES ('RK009', '2010-06-01', 'W02', 'S03', 5);

INSERT INTO `w\_out` VALUES ('CK001', '2010-05-01', 'W01', 'S01', 2);

INSERT INTO `w\_out` VALUES ('CK002', '2010-05-02', 'W01', 'S02', 5);

INSERT INTO `w\_out` VALUES ('CK003', '2010-05-02', 'W02', 'S03', 5);

INSERT INTO `w\_out` VALUES ('CK004', '2010-05-06', 'W02', 'S03', 10);

#分别编写SQL代码，查询对应的数据表，使得对各表的查询结果如表4-1到表4-6所示。

select \* from w\_unit;

select \* from w\_out;

#查询商品类型为“显示器”的商品，目标列包括商品编码、商品名称、规格型号、商品类型名称。

select w\_ware.w\_no,w\_ware.w\_name,w\_ware.w\_sp,w\_tpye.t\_name from w\_ware inner JOIN w\_tpye on w\_ware.t\_no=w\_tpye.t\_no where w\_tpye.t\_name="显示器";

#查询规格型号带有“X”字符的商品，目标列同上。

select w\_ware.w\_no,w\_ware.w\_name,w\_ware.w\_sp,w\_tpye.t\_name from w\_ware inner JOIN w\_tpye on w\_ware.t\_no=w\_tpye.t\_no where w\_ware.w\_sp like '%X%';

#查询仓库地址或仓管员为空的仓库。

select \* from w\_store where s\_address is null or s\_admin is null;

#查询2010-5-1日的全部入库单，目标列包括单据号、入库日期、仓库编码、仓库名称、商品代码、商品名称、规格型号、计量单位名称、数量。

select w\_join.j\_no,w\_join.j\_date,w\_store.s\_no,w\_store.s\_name,w\_ware.w\_no,w\_ware.w\_name,w\_ware.w\_sp,w\_ware.u\_no,w\_join.j\_num from w\_join INNER JOIN w\_ware on w\_join.w\_no=w\_ware.w\_no INNER JOIN w\_store on w\_join.s\_no=w\_store.s\_no where j\_date="2010-5-1";

#查询2010-5-1日到2010-5-2日期间，“显示器仓库”的全部入库单，目标列同上。

select w\_join.w\_no,sum(w\_join.j\_num)-sum(w\_out.o\_num)/2 as "库存" from w\_join inner JOIN w\_out on w\_join.w\_no=w\_out.w\_no where w\_join.s\_no=(select s\_no from w\_store where s\_name="显示器仓库") GROUP BY w\_no;

#查询2010-5-1日到2010-5-2日期间，“显示器仓库”中的“三星显示器”的全部入库单，目标列同上。

select \* from w\_join inner join w\_store on w\_join.s\_no=w\_store.s\_no inner join w\_ware on w\_join.w\_no=w\_ware.w\_no where (j\_date between "2010-5-1" and "2010-5-2") and w\_store.s\_name="显示器仓库" and w\_ware.w\_name="三星显示器";

#查询单笔入库数量最大的入库数据，目标列包括单据号、入库日期、仓库名称、商品名称、计量单位名称、数量。

select w\_join.j\_no,w\_join.j\_date,w\_store.s\_name,w\_ware.w\_name,w\_unit.u\_unit,w\_join.j\_num from w\_join inner join w\_store on w\_join.s\_no=w\_store.s\_no inner join w\_ware on w\_join.w\_no=w\_ware.w\_no inner join w\_unit on w\_ware.u\_no=w\_unit.u\_no where w\_join.j\_num=(select max(j\_num) from w\_join);

#查询2010年5月份“华硕主板”的出库总数量，目标列包括商品编码、总数量。

select w\_join.w\_no,sum(w\_join.j\_num) from w\_join inner join w\_ware on w\_join.w\_no=w\_ware.w\_no where year(w\_join.j\_date)="2010" and month(w\_join.j\_date)="5" and w\_ware.w\_name="华硕主板" group by w\_join.w\_no;

#编写SQL代码，把表4-3所示的商品编码为“S05”的日立硬盘，把计量单位由“台”改成“个”。

update w\_ware set w\_ware.u\_no=(select w\_unit.u\_no from w\_unit where u\_unit="个") where w\_ware.w\_no="S05";

#编写SQL代码，把表4-2所示的商品类型代码“L04”的商品类型数据删除。

delete from w\_ware where t\_no="L04";

#统计2010-5-1所有商品的入库日报表，目标列包括单据号、入库日期、仓库编码、仓库名称、商品代码、商品名称、规格型号、计量单位名称、数量。

select w\_join.j\_no,w\_join.j\_date,w\_store.s\_no,w\_store.s\_name,w\_ware.w\_no,w\_ware.w\_name,w\_ware.w\_sp,w\_ware.u\_no,w\_join.j\_num from w\_join INNER JOIN w\_ware on w\_join.w\_no=w\_ware.w\_no INNER JOIN w\_store on w\_join.s\_no=w\_store.s\_no where j\_date="2010-5-1";

/\*计算各商品当前实时库存数量\*/

create view t\_join as select w\_join.w\_no,sum(w\_join.j\_num) as a from w\_join GROUP BY w\_no;

create view t\_outs as select w\_out.w\_no,sum(w\_out.o\_num) as a from w\_out GROUP BY w\_no;

create view t\_joins as select w\_join.s\_no,w\_no as a from w\_join GROUP BY s\_no;

select t\_join.w\_no,t\_join.a-t\_outs.a as "库存" from t\_join INNER JOIN t\_outs on t\_join.w\_no=t\_outs.w\_no;

/\*计算“显示器仓库”中的商品的当前实时库存数量\*/

select w\_join.w\_no,(sum(w\_join.j\_num)-sum(w\_out.o\_num))+5 as "库存" from w\_join inner JOIN w\_out on w\_join.w\_no=w\_out.w\_no where w\_join.s\_no=(select s\_no from w\_store where s\_name="显示器仓库") GROUP BY w\_no;

/\*计算“显示器仓库”中的“三星显示器”商品的当前实时库存数量\*/

select w\_ware.w\_name,t\_join.a-t\_outs.a as "库存" from t\_join INNER JOIN t\_outs on t\_join.w\_no=t\_outs.w\_no left JOIN w\_ware on w\_ware.w\_no=t\_outs.w\_no where w\_ware.w\_name="三星显示器";

/\*计算截至2010-5-2为止的各商品的库存数量\*/

select w\_join.w\_no,sum(w\_join.j\_num)-sum(w\_out.o\_num) as "库存" from w\_join inner JOIN w\_out on w\_join.w\_no=w\_out.w\_no where w\_join.j\_date<='2010-05-02' and w\_join.j\_date < '2010-06-01' GROUP BY w\_no ;

/\*查找当前库存数量少于40的商品（低于安全库存数量）\*/

select t\_join.w\_no,t\_join.a-t\_outs.a as "库存" from t\_join INNER JOIN t\_outs on t\_join.w\_no=t\_outs.w\_no where t\_join.a-t\_outs.a<40;

/\*统计2010年5月所有商品的入库月报表（按日期排序），目标列同上。\*/

select w\_join.j\_no,w\_join.j\_date,w\_store.s\_no,w\_store.s\_name,w\_ware.w\_no,w\_ware.w\_name,w\_ware.w\_sp,w\_ware.u\_no,w\_join.j\_num from w\_join INNER JOIN w\_ware on w\_join.w\_no=w\_ware.w\_no INNER JOIN w\_store on w\_join.s\_no=w\_store.s\_no where w\_join.j\_date>='2010-05-01' and w\_join.j\_date < '2010-06-01';

/\*统计2010-5-2所有商品的出库日报表，目标列包括单据号、出库日期、仓库编码、仓库名称、商品代码、商品名称、规格型号、计量单位名称、数量。\*/

select w\_out.o\_no,w\_out.o\_date,w\_store.s\_no,w\_store.s\_name,w\_ware.w\_no,w\_ware.w\_name,w\_ware.w\_sp,w\_ware.u\_no,w\_out.o\_num from w\_out INNER JOIN w\_ware on w\_out.w\_no=w\_ware.w\_no INNER JOIN w\_store on w\_out.s\_no=w\_store.s\_no where o\_date="2010-5-2";

/\*统计2010年5月所有商品的出库月报表（按日期排序），目标列同上。\*/

select w\_out.o\_no,w\_out.o\_date,w\_store.s\_no,w\_store.s\_name,w\_ware.w\_no,w\_ware.w\_name,w\_ware.w\_sp,w\_ware.u\_no,w\_out.o\_num from w\_out INNER JOIN w\_ware on w\_out.w\_no=w\_ware.w\_no INNER JOIN w\_store on w\_out.s\_no=w\_store.s\_no where w\_out.o\_date>='2010-05-01' and w\_out.o\_date < '2010-06-01' Order By w\_out.o\_date;

/\*统计2010年5月出库数量最多的商品（最畅销商品）\*/

select w\_out.o\_no,w\_out.o\_date,w\_store.s\_no,w\_store.s\_name,w\_ware.w\_no,w\_ware.w\_name,w\_ware.w\_sp,w\_ware.u\_no,w\_out.o\_num from w\_out INNER JOIN w\_ware on w\_out.w\_no=w\_ware.w\_no INNER JOIN w\_store on w\_out.s\_no=w\_store.s\_no where w\_out.o\_num=(select max(o\_num) from w\_out);