S9

Problem Statement:

Relations: CUSTOMERS(CNo, Cname, Ccity, CMobile), ITEMS(INo, Iname, Itype, Iprice, Icount), PURCHASE(PNo, Pdate, Pquantity, Cno, INo). Queries: stationary items price between 400-1000, change mobile of Gopal, item with max price, purchases sorted recent to old, count customers per city, purchases of Maya, create view.

Code:

```
-- S9: Tables and queries (MySQL)
CREATE TABLE CUSTOMERS (
  CNo VARCHAR(10) PRIMARY KEY,
  Cname VARCHAR(150),
  Ccity VARCHAR(100),
  CMobile VARCHAR(20)
);

CREATE TABLE ITEMS (
  INo VARCHAR(10) PRIMARY KEY,
  Iname VARCHAR(150),
  Itype VARCHAR(100),
  Iprice DECIMAL(12,2),
  Icount INT
);

CREATE TABLE PURCHASE (
  PNo VARCHAR(20) PRIMARY KEY,
  Pdate DATE,
  Pquantity INT,
  Cno VARCHAR(10),
  INo VARCHAR(10),
  FOREIGN KEY (Cno) REFERENCES CUSTOMERS(CNo),
  FOREIGN KEY (INo) REFERENCES ITEMS(INo)
);

-- 1. Stationary items price between 400 and 1000
SELECT * FROM ITEMS WHERE Itype='stationary' AND Iprice BETWEEN 400 AND 1000;

-- 2. Change mobile number of customer 'Gopal'
UPDATE CUSTOMERS SET CMobile='NEWNUMBER' WHERE Cname='Gopal';

-- 3. Item with maximum price
SELECT * FROM ITEMS WHERE Iprice = (SELECT MAX(Iprice) FROM ITEMS);

-- 4. Purchases sorted most recent to oldest
SELECT * FROM PURCHASE ORDER BY Pdate DESC;

-- 5. Count number of customers in every city
SELECT Ccity, COUNT(*) AS num_customers FROM CUSTOMERS GROUP BY Ccity;

-- 6. Purchased quantity of Customer Maya
SELECT p.* FROM PURCHASE p JOIN CUSTOMERS c ON p.Cno = c.CNo WHERE c.Cname='Maya';

-- 7. View for stationary items sorted by price desc
CREATE VIEW StationaryView AS SELECT Iname, Iprice, Icount FROM ITEMS WHERE Itype='stationary';
```