mysql> CREATE TABLE 19PW15CUSTOMER (CUSTOMERID VARCHAR(3) PRIMARY KEY, CUSTOMERNAME VARCHAR(20) UNIQUE,DATEOFBIRTH DATE,GENDER CHAR,CITY VARCHAR(20),CONSTRAINT C1 CHECK (CUSTOMERID LIKE 'C%'),CONSTRAINT C2 CHECK (CUSTOMERNAME REGEXP '[A-Z]'),CONSTRAINT C3 CHECK (TIMESTAMPDIFF(YEAR,DATEOFBIRTH,CURRENT\_TIMESTAMP)>18),CONSTRAINT C4 CHECK (GENDER IN ('M','F')),CONSTRAINT C5 CHECK (CITY REGEXP '^[A-Z][:Word]\*'));

Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE 19PW15ACCOUNT (CUSTOMERID VARCHAR(3),ACCOUNTTYPE CHAR PRIMARY KEY,OPENINGDATE DATE,INITIALAMOUNT NUMERIC(8),CONSTRAINT A1 FOREIGN KEY (CUSTOMERID) REFERENCES 19PW15CUSTOMER (CUSTOMERID),CONSTRAINT A2 CHECK (ACCOUNTTYPE IN ('C','S')),CONSTRAINT A3 CHECK (OPENINGDATE>'2000/12/31'),CONSTRAINT A4 CHECK (INITIALAMOUNT BETWEEN 1000 AND 5000));

Query OK, 0 rows affected (0.01 sec)

mysql> CREATE TABLE 19PW15TRANSACTION (CUSTOMERID VARCHAR(3),DEPOSIT NUMERIC(8),WITHDRAWAL NUMERIC(8),DATEOFTRANSACTION DATE PRIMARY KEY,CONSTRAINT T1 FOREIGN KEY (CUSTOMERID) REFERENCES 19PW15CUSTOMER (CUSTOMERID),CONSTRAINT T2 CHECK (DEPOSIT > 100),CONSTRAINT T3 CHECK (WITHDRAWAL > 100),CONSTRAINT T4 CHECK (DATEOFTRANSACTION > '2000/12/31' AND DATEOFTRANSACTION < CURRENT\_DATE));

Query OK, 0 rows affected (0.02 sec)

mysql> DROP TABLE 19PW15ACCOUNT;

Query OK, 0 rows affected (0.01 sec)

mysql> DROP TABLE 19PW15TRANSACTION;

Query OK, 0 rows affected (0.00 sec)

mysql> CREATE TABLE 19PW15ACCOUNT (CUSTOMERID VARCHAR(3),ACCOUNTTYPE CHAR,OPENINGDATE DATE,INITIALAMOUNT NUMERIC(8),CONSTRAINT A1 FOREIGN KEY (CUSTOMERID) REFERENCES 19PW15CUSTOMER (CUSTOMERID),CONSTRAINT A2 CHECK (ACCOUNTTYPE IN ('C','S')),CONSTRAINT A3 CHECK (OPENINGDATE>'2000/12/31'),CONSTRAINT A4 CHECK (INITIALAMOUNT BETWEEN 1000 AND 5000),CONSTRAINT A5 PRIMARY KEY (CUSTOMERID,ACCOUNTTYPE));

Query OK, 0 rows affected (0.02 sec)

mysql> CREATE TABLE 19PW15TRANSACTION (CUSTOMERID VARCHAR(3),DEPOSIT NUMERIC(8),WITHDRAWAL NUMERIC(8),DATEOFTRANSACTION DATE,CONSTRAINT T1 FOREIGN KEY (CUSTOMERID) REFERENCES 19PW15CUSTOMER (CUSTOMERID),CONSTRAINT T2 CHECK (DEPOSIT > 100),CONSTRAINT T3 CHECK (WITHDRAWAL > 100),CONSTRAINT T4 CHECK (DATEOFTRANSACTION > '2000/12/31' AND DATEOFTRANSACTION < CURRENT\_DATE),CONSTRAINT T5 PRIMARY KEY (CUSTOMERID,DATEOFTRANSACTION));

Query OK, 0 rows affected (0.01 sec)

mysql> INSERT INTO 19PW15CUSTOMER VALUE('C01','VINITH','1980/12/02','F','Cbe');

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO 19PW15CUSTOMER VALUE('C02','MONIKA','1977/04/12','F','Chennai');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15CUSTOMER VALUE('C03','VASANTHI','1978/10/10','M','Bombay');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15CUSTOMER VALUE('C04','NITHIN','1970/05/01','M','Cbe');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15ACCOUNT VALUE('C01','S','2001/10/10',1000);

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO 19PW15ACCOUNT VALUE('C01','S','2001/10/10',1000); Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO 19PW15ACCOUNT VALUE('C02','S','2001/11/10',2000);

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15ACCOUNT VALUE('C03','C','2001/10/19',5000);

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15ACCOUNT VALUE('C04','C','2002/01/29',2000);

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO 19PW15ACCOUNT VALUE('C04','S','2002/01/29',2000);

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C01',1000,NULL,'2008/01/01');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C02',2000,NULL,'2008/01/02');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C03',NULL,500,'2008/01/02');

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C01',NULL,2000,'2008/01/03');

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C02',1000,NULL,'2008/01/03');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C03',2000,NULL,'2008/01/03');

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C01',NULL,1000,'2008/01/04');

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C03',NULL,5000,'2008/01/04');

Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C02',NULL,1200,'2008/01/05');

Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO 19PW15TRANSACTION VALUE('C03',1200,NULL,'2008/01/05');

Query OK, 1 row affected (0.00 sec)

1]

SELECT CUSTOMERNAME FROM 19PW15CUSTOMER WHERE CUSTOMERID NOT IN (SELECT DISTINCT CUSTOMERID FROM 19PW15TRANSACTION);

+--------------+

| CUSTOMERNAME |

+--------------+

| NITHIN |

+--------------+

2]

SELECT C.CUSTOMERID,C.CUSTOMERNAME,SUM(T.DEPOSIT) AS 'DEPOSIT',SUM(T.WITHDRAWAL) AS 'WITHDRAWAL' FROM 19PW15CUSTOMER C INNER JOIN 19PW15TRANSACTION T ON C.CUSTOMERID = T.CUSTOMERID GROUP BY C.CUSTOMERID;

+------------+--------------+---------+------------+

| CUSTOMERID | CUSTOMERNAME | DEPOSIT | WITHDRAWAL |

+------------+--------------+---------+------------+

| C01 | VINITH | 1000 | 3000 |

| C02 | MONIKA | 3000 | 1200 |

| C03 | VASANTHI | 3200 | 5500 |

+------------+--------------+---------+------------+

3 rows in set (0.00 sec)

3]

SELECT SUM(A.INITIALAMOUNT)+SUM(T.DEPOSIT)-SUM(T.WITHDRAWAL) FROM 19PW15ACCOUNT A INNER JOIN 19PW15TRANSACTION T ON A.CUSTOMERID=T.CUSTOMERID WHERE A.CUSTOMERID='C01' GROUP BY A.CUSTOMERID;

+-------------------------------------------------------+

| SUM(A.INITIALAMOUNT)+SUM(T.DEPOSIT)-SUM(T.WITHDRAWAL) |

+-------------------------------------------------------+

| 1000 |

+-------------------------------------------------------+

4]

SELECT CUSTOMERNAME FROM 19PW15CUSTOMER WHERE CUSTOMERID IN (SELECT CUSTOMERID FROM 19PW15TRANSACTION GROUP BY CUSTOMERID ORDER BY COUNT(\*) DESC LIMIT 1);

5]

SELECT CUSTOMERID,CUSTOMERNAME,TIMESTAMPDIFF(YEAR,DATEOFBIRTH,CURRENT\_TIMESTAMP) AS 'AGE' FROM 19PW15CUSTOMER WHERE DATEOFBIRTH IN (SELECT MAX(DATEOFBIRTH) FROM 19PW15CUSTOMER) AND CUSTOMERID IN (SELECT DISTINCT CUSTOMERID FROM 19PW15TRANSACTION);

+------------+--------------+------+

| CUSTOMERID | CUSTOMERNAME | AGE |

+------------+--------------+------+

| C01 | VINITH | 39 |

+------------+--------------+------+

6]

ALTER TABLE 19PW15CUSTOMER ADD FINALBALANCE NUMERIC(8);

UPDATE 19PW15CUSTOMER SET FINALBALANCE = (SELECT SUM(A.INITIALAMO UNT)+SUM(T.DEPOSIT)-SUM(T.WITHDRAWAL) FROM 19PW15ACCOUNT A INNER JOIN 19 PW15TRANSACTION T ON A.CUSTOMERID=T.CUSTOMERID WHERE A.CUSTOMERID = 'C01 ' GROUP BY A.CUSTOMERID) WHERE CUSTOMERID='C01';

Query OK, 0 rows affected (0.01 sec)

Rows matched: 1 Changed: 0 Warnings: 0

mysql> UPDATE 19PW15CUSTOMER SET FINALBALANCE = (SELECT SUM(A.INITIALAMO UNT)+SUM(T.DEPOSIT)-SUM(T.WITHDRAWAL) FROM 19PW15ACCOUNT A INNER JOIN 19 PW15TRANSACTION T ON A.CUSTOMERID=T.CUSTOMERID WHERE A.CUSTOMERID = 'C02 ' GROUP BY A.CUSTOMERID) WHERE CUSTOMERID='C02';

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE 19PW15CUSTOMER SET FINALBALANCE = (SELECT SUM(A.INITIALAMO UNT)+SUM(T.DEPOSIT)-SUM(T.WITHDRAWAL) FROM 19PW15ACCOUNT A INNER JOIN 19 PW15TRANSACTION T ON A.CUSTOMERID=T.CUSTOMERID WHERE A.CUSTOMERID = 'C03 ' GROUP BY A.CUSTOMERID) WHERE CUSTOMERID='C03';

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE 19PW15CUSTOMER SET FINALBALANCE = (SELECT SUM(A.INITIALAMO UNT)+SUM(T.DEPOSIT)-SUM(T.WITHDRAWAL) FROM 19PW15ACCOUNT A INNER JOIN 19 PW15TRANSACTION T ON A.CUSTOMERID=T.CUSTOMERID WHERE A.CUSTOMERID = 'C04 ' GROUP BY A.CUSTOMERID) WHERE CUSTOMERID='C04';

Query OK, 1 row affected (0.01 sec)

FINAL TABLE

mysql> SELECT \* FROM 19PW15CUSTOMER; +------------+--------------+-------------+--------+---------+--------------+

| CUSTOMERID | CUSTOMERNAME | DATEOFBIRTH | GENDER | CITY | FINALBALANCE |

+------------+--------------+-------------+--------+---------+--------------+

| C01 | VINITH | 1980-12-02 | F | Cbe | 1000 |

| C02 | MONIKA | 1977-04-12 | F | Chennai | 7800 |

| C03 | VASANTHI | 1978-10-10 | M | Bombay | 1700 |

| C04 | NITHIN | 1970-05-01 | M | Cbe | NULL |

+------------+--------------+-------------+--------+---------+--------------+

4 rows in set (0.00 sec)