**DBMS ASSIGNMENT NO.3**

CREATE TABLE suppliers (sno VARCHAR(4) PRIMARY KEY, sname VARCHAR(20), status DECIMAL(5,2), scity VARCHAR(10));

CREATE TABLE parts(pno VARCHAR(4) PRIMARY KEY, pname VARCHAR(20), color

VARCHAR(10), weight DECIMAL(7,2), city VARCHAR(15));

CREATE TABLE project(jno VARCHAR(4) PRIMARY KEY, jname VARCHAR(20), jcity VARCHAR(15));

CREATE TABLE shipment(sno VARCHAR(4) PRIMARY KEY, pno VARCHAR(4), jno

VARCHAR(4), qty VARCHAR(8));

INSERT INTO suppliers VALUES

('s1', 'Ajay', 30.00, 'Paris'),

('s2', 'Nancy', 20.00, 'London'), ('s3', 'Ram', 40.00, 'New York'),

('s4', 'Isha', 70.00, 'Paris'),

('s5', 'Ayush', 30.00, 'Delhi'),

('s6', 'Hema', 10.00, 'Chennai'),

('s7', 'Seema', 45.00, 'London'),

('s8', 'Riya', 23.00, 'Ontario');

INSERT INTO parts VALUES

('P1', 'A', 'red', 7.00, 'Paris'),

('P2', 'B', 'blue', 20.00, 'London'),

('P3', 'C', 'green', 17.00, 'New York'),

('P4', 'D', 'black', 21.00, 'Paris'),

('P5', 'E', 'red', 9.00, 'Ontario'),

('P6', 'F', 'grey', 10.00, 'Delhi'),

('P7', 'G', 'silver', 18.00, 'Chennai'),

('P8', 'H', 'red', 7.00, 'Delhi');

INSERT INTO project VALUES

('J1', 'J', 'Chennai'),

('J2', 'K', 'London'),

('J3', 'L','Paris'),

('J4', 'M', 'Ontario'),

('J5', 'N', 'Delhi'),

('J6', 'O', 'Chennai'),

('J7', 'P', 'London'),

('J8', 'Q', 'New York');

INSERT INTO shipment VALUES

('s1', 'P1', 'J1', '400'),

('s2', 'P2', 'J2', '500'),

('s3', 'P3', 'J3', '350'),

('s4', 'P4', 'J4', '100'),

('s5', 'P5', 'J5', '200'),

('s6', 'P6', 'J6', '600'),

('s7', 'P7', 'J7', '700'),

('s8', 'P8', 'J8', '250');

ALTER TABLE shipment ADD FOREIGN KEY (sno) REFERENCES suppliers(sno);

ALTER TABLE shipment ADD FOREIGN KEY (pno) REFERENCES parts(pno);

ALTER TABLE shipment ADD FOREIGN KEY (jno) REFERENCES project(jno);

a.Primary Keys: Suppliers(SNo), Parts(PNo), Project(JNo)

Foreign Keys: Shipment(SNo, PNo, JNo)

b.SELECT sno FROM suppliers WHERE scity = 'Paris' AND status > 20;

**+-----+**

**| sno |**

**+-----+**

**| s1 |**

**| s4 |**

**+-----+**

c.SELECT suppliers.\* FROM suppliers JOIN shipment ON shipment.pno = 'P2'

AND shipment.sno = suppliers.sno ORDER BY suppliers.sno ;

**+-----+-------+--------+--------+**

**| sno | sname | status | scity |**

**+-----+-------+--------+--------+**

**| s2 | Nancy | 20.00 | London |**

**+-----+-------+--------+--------+**

d.SELECT suppliers.\* FROM suppliers JOIN shipment ON shipment.pno <>

'P2' AND shipment.sno = suppliers.sno ORDER BY suppliers.sno ;

**+-----+-------+--------+----------+**

**| sno | sname | status | scity |**

**+-----+-------+--------+----------+**

|  |  |  |
| --- | --- | --- |
| **| s1** | **| Ajay |** | **30.00 | Paris |** |
| **| s3** | **| Ram |** | **40.00 | New York |** |
| **| s4** | **| Isha |** | **70.00 | Paris |** |
| **| s5** | **| Ayush |** | **30.00 | Delhi |** |
| **| s6** | **| Hema |** | **10.00 | Chennai |** |
| **| s7** | **| Seema |** | **45.00 | London |** |
| **| s8** | **| Riya |** | **23.00 | Ontario |** |

**+-----+-------+--------+----------+**

e.SELECT suppliers.\*, parts.\*, project.\*, shipment.qty \* parts.weight AS total\_wt FROM suppliers, parts, project, shipment WHERE shipment.sno = suppliers.sno AND shipment.pno = parts.pno AND shipment.jno = project.jno ;

**+-----+-------+--------+----------+-----+-------+--------+--------+----------+-----+-------+----------+----------+**

**| sno | sname | status | scity | pno | pname | color | weight | city | jno | jname | jcity | total\_wt |**

**+-----+-------+--------+----------+-----+-------+--------+--------+----------+-----+-------+----------+----------+**

|  |  |  |  |
| --- | --- | --- | --- |
| **| s1 | Ajay | 30.00 | Paris | P1 | A** | **| red | 7.00 | Paris | J1 | J** | **| Chennai |** | **2800 |** |
| **| s2 | Nancy | 20.00 | London | P2 | B** | **| blue | 20.00 | London | J2 | K** | **| London |** | **10000 |** |
| **| s3 | Ram | 40.00 | New York | P3 | C** | **| green | 17.00 | New York | J3 | L** | **| Paris |** | **5950 |** |
| **| s4 | Isha | 70.00 | Paris | P4 | D** | **| black | 21.00 | Paris | J4 | M** | **| Ontario |** | **2100 |** |
| **| s5 | Ayush | 30.00 | Delhi | P5 | E** | **| red | 9.00 | Ontario | J5 | N** | **| Delhi |** | **1800 |** |
| **| s6 | Hema | 10.00 | Chennai | P6 | F** | **| grey | 10.00 | Delhi | J6 | O** | **| Chennai |** | **6000 |** |
| **| s7 | Seema | 45.00 | London | P7 | G** | **| silver | 18.00 | Chennai | J7 | P** | **| London |** | **12600 |** |
| **| s8 | Riya | 23.00 | Ontario | P8 | H** | **| red | 7.00 | Delhi | J8 | Q** | **| New York |** | **1750 |** |

**+-----+-------+--------+----------+-----+-------+--------+--------+----------+-----+-------+----------+----------+**

f.SELECT \* FROM shipment WHERE qty BETWEEN 300 AND 750;

**+-----+------+------+------+**

**| sno | pno | jno | qty |**

**+-----+------+------+------+**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **| s1** | **| P1** | **| J1** | **| 400** | **|** |
| **| s2** | **| P2** | **| J2** | **| 500** | **|** |
| **| s3** | **| P3** | **| J3** | **| 350** | **|** |
| **| s6** | **| P6** | **| J6** | **| 600** | **|** |
| **| s7** | **| P7** | **| J7** | **| 700** | **|** |

**+-----+------+------+------+**

g.SELECT DISTINCT parts.pno FROM parts JOIN shipment ON parts.pno =

(SELECT pno FROM shipment WHERE sno='s2') AND parts.weight > 16;

**+-----+**

**| pno |**

**+-----+**

**| P2 |**

**+-----+**

h. SELECT DISTINCT scity FROM suppliers JOIN parts ON parts.color =

'red' AND suppliers.status > 5 AND suppliers.scity = parts.city;

**+---------+**

**| scity |**

**+---------+**

**| Paris |**

**| Ontario | | Delhi |**

**+---------+**

i.SELECT \* FROM parts WHERE pno IN (SELECT pno FROM shipment

WHERE sno IN (SELECT sno FROM suppliers WHERE scity = 'London'));

**+-----+-------+--------+--------+---------+**

**| pno | pname | color | weight | city |**

**+-----+-------+--------+--------+---------+**

**| P2 | B | blue | 20.00 | London | | P7 | G | silver | 18.00 | Chennai |**

**+-----+-------+--------+--------+---------+**

j.SELECT pno FROM parts WHERE pno IN (SELECT pno FROM shipment

WHERE sno IN (SELECT sno FROM suppliers WHERE scity = 'London')

AND jno IN (SELECT jno FROM project WHERE jcity = 'London'));

**+-----+**

**| pno |**

**+-----+**

**| P2 |**

**| P7 |**

**+-----+**

k.SELECT sno, COUNT(jno) FROM shipment GROUP BY sno;

**+-----+------------+ | sno | COUNT(jno) |**

**+-----+------------+**

|  |  |  |  |
| --- | --- | --- | --- |
| **| s1** | **|** | **1** | **|** |
| **| s2** | **|** | **1** | **|** |
| **| s3** | **|** | **1** | **|** |
| **| s4** | **|** | **1** | **|** |
| **| s5** | **|** | **1** | **|** |
| **| s6** | **|** | **1** | **|** |
| **| s7** | **|** | **1** | **|** |
| **| s8** | **|** | **1** | **|** |

**+-----+------------+**

l.SELECT shipment.sno, shipment.pno, shipment.qty\*parts.weight AS total\_qty FROM shipment JOIN parts ON parts.pno = shipment.pno;

**+-----+------+-----------+**

**| sno | pno | total\_qty |**

**+-----+------+-----------+**

|  |  |  |  |
| --- | --- | --- | --- |
| **| s1** | **| P1** | **|** | **2800 |** |
| **| s2** | **| P2** | **|** | **10000 |** |
| **| s3** | **| P3** | **|** | **5950 |** |
| **| s4** | **| P4** | **|** | **2100 |** |
| **| s5** | **| P5** | **|** | **1800 |** |
| **| s6** | **| P6** | **|** | **6000 |** |
| **| s7** | **| P7** | **|** | **12600 |** |
| **| s8** | **| P8** | **|** | **1750 |** |

**+-----+------+-----------+**