

DBMS ASSIGNMENT 3

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

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('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
+-----+-----+-----+			