CREATE TABLE EMP  
(  
 Empno INT,  
 Empname VARCHAR(30),  
 Empsalary INT,  
 Deptname VARCHAR(30) NULL,  
 Bossno INT NULL,  
 PRIMARY KEY (Empno),  
 FOREIGN KEY (Bossno) REFERENCES EMP (Empno),  
 FOREIGN KEY (Deptname) REFERENCES DEPARTMENT (Deptname)  
);  
  
CREATE TABLE DEPARTMENT  
(  
 Deptname VARCHAR(30) PRIMARY KEY,  
 Deptfloor INT,  
 Deptphone INT,  
 MgrId INT NOT NULL,  
 FOREIGN KEY (MgrId) REFERENCES EMP (Empno)  
);  
  
CREATE TABLE ITEM  
(  
 itemname VARCHAR(30) PRIMARY KEY,  
 itemtype CHARACTER,  
 itemcolor varchar(10)  
);  
  
CREATE TABLE SALES  
(  
 Salesno INT PRIMARY KEY,  
 Saleqty INT,  
 itemname varchar(30) NOT NULL,  
 Deptname VARCHAR(30) NOT NULL,  
 FOREIGN KEY (itemname) REFERENCES ITEM (itemname),  
 FOREIGN KEY (Deptname) REFERENCES DEPARTMENT (Deptname)  
);  
  
INSERT INTO EMP  
VALUES (1, 'Alice ', 75000, 'Management', NULL),  
 (2, 'Ned', 45000, 'Marketing', 1),  
 (3, 'Andrew', 25000, 'Marketing', 2),  
 (4, 'Clare', 22000, 'Marketing', 2),  
 (5, 'Todd', 38000, 'Accounting', 1),  
 (6, 'Nancy', 22000, 'Accounting', 5),  
 (7, 'Brier', 43000, 'Purchasing', 1),  
 (8, 'Sarah', 56000, 'Purchasing', 7),  
 (9, 'Sophile', 35000, 'Personnel', 1),  
 (10, 'Sanjay', 15000, 'Navigation', 3),  
 (11, 'Rita', 15000, 'Books', 4),  
 (12, 'Gigi', 16000, 'Clothes', 4),  
 (13, 'Maggie', 11000, 'Clothes', 4),  
 (14, 'Paul', 15000, 'Equipment', 3),  
 (15, 'James', 15000, 'Equipment', 3),  
 (16, 'Pat', 15000, 'Furniture', 3),  
 (17, 'Mark', 15000, 'Recreation', 3);  
  
INSERT INTO DEPARTMENT  
VALUES ('Management', 5, 34, 1),  
 ('Books', 1, 81, 4),  
 ('Clothes', 2, 24, 4),  
 ('Equipment', 3, 57, 3),  
 ('Furniture', 4, 14, 3),  
 ('Navigation', 1, 41, 3),  
 ('Recreation', 2, 29, 4),  
 ('Accounting', 5, 35, 5),  
 ('Purchasing', 5, 36, 7),  
 ('Personnel', 5, 37, 9),  
 ('Marketing', 5, 38, 2);  
  
  
INSERT INTO ITEM  
VALUES ('Pocket Knife-Nile', 'E', 'Brown'),  
 ('Pocket Knife-Avon', 'E', 'Brown'),  
 ('Compass', 'N', NULL),  
 ('Geo positioning system', 'N', NULL),  
 ('Elephant Polo stick', 'R', 'Bamboo'),  
 ('Camel Saddle', 'R', 'Brown'),  
 ('Sextant', 'N', NULL),  
 ('Map Measure', 'N', NULL),  
 ('Boots-snake proof', 'C', 'Green'),  
 ('Pith Helmet', 'C', 'Khaki'),  
 ('Hat-polar Explorer', 'C', 'White'),  
 ('Exploring in 10 Easy Lessons', 'B', NULL),  
 ('Hammock', 'F', 'Khaki'),  
 ('How to win Foreign Friends', 'B', NULL),  
 ('Map case', 'E', 'Brown'),  
 ('Safari Chair', 'F', 'Khaki'),  
 ('Safari cooking kit', 'F', 'Khaki'),  
 ('Stetson', 'C', 'Black'),  
 ('Tent - 2 person', 'F', 'Khaki'),  
 ('Tent -8 person', 'F', 'Khaki');  
  
INSERT INTO SALES  
VALUES (101, 2, 'Boots-snake proof', 'Clothes'),  
 (102, 1, 'Pith Helmet', 'Clothes'),  
 (103, 1, 'Sextant', 'Navigation'),  
 (104, 3, 'Hat-polar Explorer', 'Clothes'),  
 (105, 5, 'Pith Helmet', 'Equipment'),  
 (106, 2, 'Pocket Knife-Nile', 'Clothes'),  
 (107, 3, 'Pocket Knife-Nile', 'Recreation'),  
 (108, 1, 'Compass', 'Navigation'),  
 (109, 2, 'Geo positioning system', 'Navigation'),  
 (110, 5, 'Map Measure', 'Navigation'),  
 (111, 1, 'Geo positioning system', 'Books'),  
 (112, 1, 'Sextant', 'Books'),  
 (113, 3, 'Pocket Knife-Nile', 'Books'),  
 (114, 1, 'Pocket Knife-Nile', 'Navigation'),  
 (115, 1, 'Pocket Knife-Nile', 'Equipment'),  
 (116, 1, 'Sextant', 'Clothes'),  
 (117, 1, 'Sextant', 'Equipment'),  
 (118, 1, 'Sextant', 'Recreation'),  
 (119, 1, 'Sextant', 'Furniture'),  
 (120, 1, 'Pocket Knife-Nile', 'Furniture'),  
 (121, 1, 'Exploring in 10 easy lessons', 'Books'),  
 (122, 1, 'How to win foreign friends', 'Books'),  
 (123, 1, 'Compass', 'Books'),  
 (124, 1, 'Pith Helmet', 'Books'),  
 (125, 1, 'Elephant Polo stick', 'Recreation'),  
 (126, 1, 'Camel Saddle', 'Recreation');

## Ques\_No :1  
SELECT DISTINCT Deptname  
FROM DEPARTMENT;  
  
## Ques\_No :2  
SELECT \*  
FROM EMP  
 INNER JOIN DEPARTMENT D ON EMP.Empno = D.MgrId;  
  
## Ques\_No :3  
SELECT itemname, SUM(Saleqty) AS 'Total Quantity'  
FROM SALES  
GROUP BY itemname;  
  
## Ques\_No :4  
SELECT itemname  
FROM ITEM  
WHERE itemtype IN ('E', 'F');  
  
## Ques\_No :5  
SELECT itemname  
FROM ITEM  
WHERE itemcolor IS NULL;  
  
## Ques\_No :6  
SELECT itemcolor, COUNT(\*)  
FROM ITEM  
WHERE itemcolor IS NOT NULL  
GROUP BY itemcolor  
ORDER BY COUNT(\*) DESC  
LIMIT 1;  
  
## Ques\_No :7  
SELECT itemname  
FROM ITEM  
WHERE itemtype BETWEEN 'E' AND 'K'  
 AND itemcolor IN ('Kakhi', 'Brown');  
  
## Ques\_No :8  
SELECT itemname  
FROM ITEM  
WHERE itemtype IN ('E', 'N')  
 AND itemcolor = 'Brown';  
  
## Ques\_No :9  
SELECT \*  
FROM ITEM  
WHERE itemtype = 'R';  
  
## Ques\_No :10  
SELECT \*  
FROM ITEM  
WHERE itemcolor = 'Red';  
  
## Ques\_No :11  
SELECT itemname  
FROM ITEM  
WHERE itemtype = 'C'  
 AND itemcolor = 'Red';  
  
## Ques\_No :12  
SELECT itemname  
FROM ITEM  
GROUP BY itemname  
HAVING COUNT(DISTINCT itemcolor) > 1;  
  
## Ques\_No :13  
SELECT \*  
FROM ITEM  
WHERE SUBSTRING(itemname, 1, 1) IN ('S', 'R');  
  
## Ques\_No :14  
SELECT \*  
FROM ITEM  
WHERE itemname LIKE '%Knife%';  
  
## Ques\_No :15  
SELECT \*  
FROM ITEM  
WHERE SUBSTRING(itemname, 3, 1) = 't';  
  
## Ques\_No :16  
SELECT \*  
FROM ITEM  
WHERE itemname IN (SELECT DISTINCT itemname FROM SALES WHERE Deptname = 'Clothes')  
 AND itemtype = 'C';  
  
## Ques\_No :17  
SELECT \*  
FROM ITEM  
WHERE itemtype = 'C';  
  
## Ques\_No :18  
SELECT \*  
FROM ITEM  
WHERE itemname NOT IN (SELECT DISTINCT itemname FROM SALES WHERE Deptname = 'Clothes')  
 AND itemtype = 'C';  
  
  
## Ques\_No :20  
SELECT \*  
FROM ITEM  
WHERE itemcolor = 'Brown';  
  
## Ques\_No :21  
SELECT itemname  
FROM SALES  
WHERE Saleqty > 1;  
  
  
## Ques\_No :23  
SELECT itemname  
FROM SALES  
WHERE Deptname = 'Furniture';  
  
## Ques\_No :24  
SELECT \*  
FROM ITEM  
WHERE itemname IN (SELECT itemname FROM SALES WHERE Salesno BETWEEN 107 AND 112 OR Salesno BETWEEN 121 AND 126);  
  
## Ques\_No :25  
SELECT Deptname, SUM(Saleqty)  
FROM SALES  
GROUP BY Deptname;  
  
## Ques\_No :26  
SELECT itemname  
FROM SALES S  
 INNER JOIN ITEM I USING (itemname)  
WHERE itemcolor = 'Green';  
  
## Ques\_No :27  
SELECT DISTINCT I.\*  
FROM ITEM I  
 INNER JOIN SALES S USING (itemname)  
WHERE Deptname != 'Books';  
  
## Ques\_No :28  
SELECT DISTINCT Deptname  
FROM SALES  
WHERE Deptname NOT IN (SELECT Deptname FROM SALES WHERE itemname = 'Geo positioning system');  
  
## Ques\_No :29  
SELECT Deptname  
FROM SALES  
WHERE Deptname IN (SELECT DISTINCT Deptname FROM SALES WHERE itemname = 'Compass')  
GROUP BY Deptname  
HAVING COUNT(DISTINCT itemname) > 2;  
  
## Ques\_No :30  
SELECT Deptname  
FROM SALES  
GROUP BY Deptname  
HAVING COUNT(itemname) >= 4;  
  
## Ques\_No :31  
SELECT E.\*  
FROM EMP E  
 INNER JOIN EMP B ON E.Bossno = B.Empno AND E.Deptname != B.Deptname;  
  
## Ques\_No :32  
SELECT E.\*  
FROM EMP E  
 INNER JOIN EMP B ON E.Bossno = B.Empno AND E.Empsalary < B.Empsalary / 2;  
  
## Ques\_No :33  
SELECT I.\*  
FROM ITEM I  
 INNER JOIN SALES S USING (itemname)  
 INNER JOIN DEPARTMENT D USING (Deptname)  
WHERE itemcolor = 'Green'  
 AND Deptfloor = 2;  
  
## Ques\_No :34  
SELECT itemname  
FROM SALES  
GROUP BY itemname  
HAVING COUNT(Deptname) >= 2;  
  
## Ques\_No :35  
SELECT \*  
FROM SALES  
WHERE Deptname NOT IN ('Clothes', 'Books');  
  
## Ques\_No :36  
SELECT \*  
FROM EMP  
WHERE Deptname = 'Marketing'  
ORDER BY Empsalary DESC  
LIMIT 1;  
  
## Ques\_No :37  
SELECT Empname  
FROM EMP  
WHERE Empsalary < (SELECT AVG(Empsalary) FROM EMP) \* 0.9;  
  
## Ques\_No :38  
SELECT Empname  
FROM EMP  
WHERE Empsalary > (SELECT MIN(Empsalary) FROM EMP WHERE Empno IN (SELECT DISTINCT Bossno FROM EMP));  
  
## Ques\_No :39  
SELECT DISTINCT Deptname  
FROM SALES  
WHERE Deptname NOT IN (SELECT DISTINCT Deptname FROM SALES WHERE itemname IN ('Compass', 'Geo positioning system'));  
  
## Ques\_No :40  
SELECT Empname  
FROM EMP  
WHERE Empsalary < 10000;  
  
## Ques\_No :41  
SELECT COUNT(\*)  
FROM ITEM I  
 INNER JOIN SALES S USING (itemname)  
 INNER JOIN DEPARTMENT D USING (Deptname)  
WHERE Deptfloor = 3  
 AND itemtype = 'E';  
  
## Ques\_No :42  
SELECT itemname, COUNT(\*)  
FROM SALES S  
 INNER JOIN ITEM I USING (itemname)  
GROUP BY itemname;  
  
## Ques\_No :43  
SELECT itemname  
FROM ITEM  
WHERE itemcolor = 'Green'  
 AND itemname IN (SELECT itemname  
 FROM SALES  
 GROUP BY itemname  
 HAVING COUNT(DISTINCT Deptname) = (SELECT DISTINCT COUNT(Deptname) FROM SALES));  
  
## Ques\_No :44  
SELECT Deptname  
FROM SALES  
GROUP BY Deptname  
HAVING COUNT(\*) <= 1;  
  
## Ques\_No :45  
SELECT itemname  
FROM SALES  
GROUP BY itemname  
HAVING COUNT(DISTINCT Deptname) = (SELECT COUNT(DISTINCT Deptname) FROM SALES);  
  
## Ques\_No :46  
SELECT DISTINCT Deptname  
FROM SALES  
WHERE Deptname NOT IN (SELECT Deptname FROM SALES WHERE itemname = 'Compass');  
  
## Ques\_No :47  
SELECT D.Deptname, D.Deptfloor, AVG(E.Empsalary)  
FROM DEPARTMENT D  
 INNER JOIN EMP E ON D.MgrId = E.Empno  
GROUP BY D.Deptname;  
  
## Ques\_No :48  
SELECT B.Empname  
FROM EMP E  
 INNER JOIN EMP B ON E.Bossno = B.Empno  
WHERE E.Empname = 'Nancy';  
  
## Ques\_No :49  
SELECT Empno, Empname, EMP.Deptname, Bossno, Empsalary - Average  
FROM EMP  
 INNER JOIN (SELECT Deptname, AVG(Empsalary) AS Average FROM EMP GROUP BY Deptname) A  
 ON A.Deptname = EMP.Deptname;  
  
## Ques\_No :50  
SELECT Deptname  
FROM EMP  
GROUP BY Deptname  
HAVING COUNT(\*) > 1  
 AND Deptname IN (SELECT Deptname FROM DEPARTMENT WHERE Deptfloor = 2);  
  
## Ques\_No :51  
SELECT Deptname  
FROM DEPARTMENT  
WHERE Deptfloor IN (2, 5);  
  
## Ques\_No :52  
SELECT Empname  
FROM EMP  
WHERE Empsalary > (SELECT AVG(Empsalary) FROM EMP WHERE Deptname = 'Books');  
  
## Ques\_No :53  
SELECT Empname  
FROM EMP  
WHERE Empno IN (SELECT Bossno FROM EMP GROUP BY Bossno HAVING COUNT(\*) = 1);  
  
## Ques\_No :54  
SELECT E.Empname  
FROM EMP E  
 INNER JOIN EMP B ON E.Bossno = B.Empno  
WHERE B.Empname = 'Todd';  
  
## Ques\_No :55  
SELECT DISTINCT Deptname  
FROM SALES  
WHERE Deptname NOT IN (SELECT Deptname  
 FROM SALES S  
 INNER JOIN ITEM I USING (itemname)  
 WHERE itemcolor = 'Green'  
 GROUP BY (S.Deptname)  
 HAVING COUNT(\*) = (SELECT COUNT(\*) FROM ITEM WHERE itemcolor = 'Green'));  
  
## Ques\_No :56  
SELECT B.Empname  
FROM EMP E  
 INNER JOIN EMP B ON E.Bossno = B.Empno  
WHERE E.Empname = 'Sophile';  
  
## Ques\_No :57  
SELECT E.Empname  
FROM EMP E  
 INNER JOIN EMP B ON E.Bossno = B.Empno AND E.Empsalary < B.Empsalary / 2;  
  
## Ques\_No :58  
SELECT B.Empname AS Manager, E.Empname AS Employee  
FROM EMP E  
 INNER JOIN EMP B ON E.Bossno = B.Empno;  
  
## Ques\_No :59  
SELECT Empname  
FROM EMP  
ORDER BY Empsalary  
LIMIT 1;  
  
## Ques\_No :60  
SELECT Empname  
FROM EMP  
WHERE Empsalary < (SELECT MIN(Empsalary) FROM EMP WHERE Deptname = 'Marketing');  
  
## Ques\_No :61  
SELECT DISTINCT S.itemname  
FROM SALES S  
 INNER JOIN ITEM I ON S.itemname = I.itemname AND I.itemcolor = 'Brown';  
  
## Ques\_No :62  
SELECT DISTINCT S.itemname  
FROM SALES S  
 INNER JOIN ITEM I ON S.itemname = I.itemname AND I.itemcolor = 'Brown'  
WHERE S.Deptname = 'Books';  
  
## Ques\_No :63  
SELECT Deptname  
FROM EMP  
GROUP BY Deptname  
ORDER BY AVG(Empsalary) DESC  
LIMIT 1;  
  
## Ques\_No :64  
SELECT Deptname  
FROM SALES S  
 INNER JOIN ITEM I ON S.itemname = I.itemname AND I.itemcolor = 'Brown'  
GROUP BY (Deptname)  
HAVING COUNT(\*) = (SELECT COUNT(\*) FROM ITEM WHERE itemcolor = 'Brown');  
  
## Ques\_No :65  
SELECT Deptname, AVG(Empsalary)  
FROM EMP  
WHERE Deptname IN (SELECT DISTINCT Deptname FROM SALES WHERE itemname = 'Sextant')  
GROUP BY Deptname;  
  
## Ques\_No :66  
SELECT itemname  
FROM SALES  
GROUP BY itemname  
HAVING COUNT(DISTINCT Deptname) >= 2;  
  
## Ques\_No :67  
SELECT B.Deptname  
FROM EMP E  
 INNER JOIN EMP B  
WHERE E.Bossno = B.Empno  
GROUP BY B.Empno  
HAVING AVG(E.Empsalary) > 25000;  
  
## Ques\_No :68  
SELECT Deptname  
FROM SALES  
WHERE itemname = 'Stetson'  
 AND Deptname IN (SELECT Deptname FROM EMP GROUP BY Deptname HAVING SUM(Empsalary) > 25000);  
  
## Ques\_No :69  
SELECT itemname, D.Deptname, Deptfloor, Empname  
FROM SALES S  
 INNER JOIN DEPARTMENT D USING (Deptname)  
 INNER JOIN EMP E ON D.MgrId = E.Empno;  
  
## Ques\_No :70  
SELECT DISTINCT itemname  
FROM SALES S  
 INNER JOIN DEPARTMENT D USING (Deptname)  
WHERE Deptfloor != 2;