```sql
-- CREATE TABLE Customer (
--   custNo   VARCHAR(8)   NOT NULL,
--   custName VARCHAR(30) NOT NULL,
--   address  VARCHAR(50) NOT NULL,
--   internal CHAR(1)     NOT NULL,
--   city     VARCHAR(30) NOT NULL,
--   zip      VARCHAR(10) NOT NULL,
--   state    VARCHAR(2)  NOT NULL,
--   contact  VARCHAR(50) NOT NULL,
--   phone    VARCHAR(30) NOT NULL,
--   CONSTRAINT CustomerPk PRIMARY KEY (custNo)
-- );
-- Insert into CUSTOMER
(CUSTNO,CUSTNAME,ADDRESS,INTERNAL,CONTACT,PHONE,CITY,STATE,ZIP) values
('C100','Football','Box 352200','Y','Mary Manager','6857100','Boulder','CO','80309');
-- Insert into CUSTOMER
(CUSTNO,CUSTNAME,ADDRESS,INTERNAL,CONTACT,PHONE,CITY,STATE,ZIP) values
('C101','Men''s Basketball','Box 352400','Y','Sally Supervisor','5431700','Boulder','CO','80309');
-- Insert into CUSTOMER
(CUSTNO,CUSTNAME,ADDRESS,INTERNAL,CONTACT,PHONE,CITY,STATE,ZIP) values
('C103','Baseball','Box 352020','Y','Bill Baseball','5431234','Boulder','CO','80309');
-- Insert into CUSTOMER
(CUSTNO,CUSTNAME,ADDRESS,INTERNAL,CONTACT,PHONE,CITY,STATE,ZIP) values
('C104','Women''s Softball','Box 351200','Y','Sue Softball','5434321','Boulder','CO','80309');
-- Insert into CUSTOMER
(CUSTNO,CUSTNAME,ADDRESS,INTERNAL,CONTACT,PHONE,CITY,STATE,ZIP) values
('C105','High School Football','123 AnyStreet','N','Coach Bob','4441234','Louisville','CO','80027');

-- CREATE TABLE Employee (
--   empNo     CHAR(11)     NOT NULL,
--   empName    VARCHAR(30)  NOT NULL,
--   department VARCHAR(30)  NOT NULL,
--   email     VARCHAR(255) NOT NULL,
--   phone     VARCHAR(30)  NOT NULL,
--   CONSTRAINT EmployeePK PRIMARY KEY (empNo)
-- );
-- Insert into EMPLOYEE (EMPNO,EMPNAME,DEPARTMENT,EMAIL,PHONE) values
('E100','Chuck Coordinator','Administration','chuck@colorado.edu','3-1111');
-- Insert into EMPLOYEE (EMPNO,EMPNAME,DEPARTMENT,EMAIL,PHONE) values
('E101','Mary Manager','Football','mary@colorado.edu','5-1111');
-- Insert into EMPLOYEE (EMPNO,EMPNAME,DEPARTMENT,EMAIL,PHONE) values
('E102','Sally Supervisor','Planning','sally@colorado.edu','3-2222');
-- Insert into EMPLOYEE (EMPNO,EMPNAME,DEPARTMENT,EMAIL,PHONE) values
('E103','Alan Administrator','Administration','alan@colorado.edu','3-3333');
```

```sql
-- CREATE TABLE Facility (
--  facNo   CHAR(11)   NOT NULL,
--  facName VARCHAR(30) NOT NULL,
--  CONSTRAINT FacilityPK PRIMARY KEY (facNo)
-- );
-- Insert into FACILITY (FACNO,FACNAME) values ('F100','Football stadium');
-- Insert into FACILITY (FACNO,FACNAME) values ('F101','Basketball arena');
-- Insert into FACILITY (FACNO,FACNAME) values ('F102','Baseball field');
-- Insert into FACILITY (FACNO,FACNAME) values ('F103','Recreation room');

-- CREATE TABLE Location (locNo VARCHAR(8)  NOT NULL,
-- facNo   CHAR(11)    NOT NULL,
-- locName VARCHAR(30) NOT NULL,
-- CONSTRAINT Location_PK PRIMARY KEY (locNo));

-- Insert into LOCATION (LOCNO,FACNO,LOCNAME) values ('L100','F100','Locker room');
-- Insert into LOCATION (LOCNO,FACNO,LOCNAME) values ('L101','F100','Plaza');
-- Insert into LOCATION (LOCNO,FACNO,LOCNAME) values ('L102','F100','Vehicle gate');
-- Insert into LOCATION (LOCNO,FACNO,LOCNAME) values ('L103','F101','Locker room');
-- Insert into LOCATION (LOCNO,FACNO,LOCNAME) values ('L104','F100','Ticket Booth');
-- Insert into LOCATION (LOCNO,FACNO,LOCNAME) values ('L105','F101','Gate');
-- Insert into LOCATION (LOCNO,FACNO,LOCNAME) values ('L106','F100','Pedestrian gate');


-- CREATE TABLE ResourceTbl (
--  resNo   CHAR(8)     NOT NULL,
--  resName VARCHAR(30)   NOT NULL,
--  rate    DECIMAL(8, 2) NOT NULL,
--  CONSTRAINT PK_ResourceTbl PRIMARY KEY (resNo)
-- );

-- INSERT INTO ResourceTbl (resNo, resName, rate) VALUES ('R100', 'attendant', '10.00');
-- INSERT INTO ResourceTbl (resNo, resName, rate) VALUES ('R101', 'police', '15.00');
-- INSERT INTO ResourceTbl (resNo, resName, rate) VALUES ('R102', 'usher', '10.00');
-- INSERT INTO ResourceTbl (resNo, resName, rate) VALUES ('R103', 'nurse', '20.00');
-- INSERT INTO ResourceTbl (resNo, resName, rate) VALUES ('R104', 'janitor', '15.00');
-- INSERT INTO ResourceTbl (resNo, resName, rate) VALUES ('R105', 'food service', '10.00');

-- CREATE TABLE EventRequest (
--  evntNo    CHAR(8)     NOT NULL,
--  custNo    VARCHAR(8)     NOT NULL,
--  facNo     CHAR(11)     NOT NULL,
--  dateHeld  DATE        NOT NULL,
```

```sql
--   dateReq     DATE        NOT NULL,
--   dateAuth    DATE,
--   status      CHAR(20)    NOT NULL,
--   estCost     DECIMAL(8, 2) NOT NULL,
--   estAudience INTEGER     NOT NULL,
--   budNo       CHAR(30),
--   CONSTRAINT EventRequestPK PRIMARY KEY (evntNo),
--   CONSTRAINT FK_Facility FOREIGN KEY (facNo) REFERENCES Facility (facNo),
--   CONSTRAINT FK_Customer FOREIGN KEY (custNo) REFERENCES Customer (custNo),
--   CHECK (status IN('Pending','Denied','Approved') AND estaudience>0)
-- );

-- INSERT INTO EventRequest (evntNo, custNo, facNo, dateHeld, dateReq, dateAuth, status, estCost, estAudience, budNo)
-- VALUES ('E100', 'C100', 'F100', DATE '2013-10-25', DATE'2013-06-06', DATE'2013-06-08', 'Approved', 5000.00, 80000, 'B1000');
-- INSERT INTO EventRequest (evntNo, custNo, facNo, dateHeld, dateReq, dateAuth, status, estCost, estAudience, budNo)
-- VALUES ('E101', 'C100', 'F100',DATE '2013-10-26',DATE '2013-07-28', NULL, 'Pending', 5000.00, 80000, 'B1000');

-- INSERT INTO EventRequest (evntNo, custNo, facNo, dateHeld, dateReq, dateAuth, status, estCost, estAudience, budNo)
-- VALUES ('E102', 'C100', 'F100', DATE'2013-09-14',DATE '2013-07-28', DATE'2013-07-31', 'Approved', 5000.00, 80000, 'B1000');

-- INSERT INTO EventRequest (evntNo, custNo, facNo, dateHeld, dateReq, dateAuth, status, estCost, estAudience, budNo)
-- VALUES ('E103', 'C100', 'F100', DATE '2013-09-21', DATE'2013-07-28',DATE '2013-08-01', 'Approved', 5000.00, 80000, 'B1000');

-- INSERT INTO EventRequest (evntNo, custNo, facNo, dateHeld, dateReq, dateAuth, status, estCost, estAudience, budNo)
-- VALUES ('E104', 'C101', 'F101', DATE'2013-12-03',DATE '2013-07-28',DATE '2013-07-31', 'Approved', 2000.00, 12000, 'B1000');

-- INSERT INTO EventRequest (evntNo, custNo, facNo, dateHeld, dateReq, dateAuth, status, estCost, estAudience, budNo)
-- VALUES ('E105', 'C101', 'F101',DATE '2013-12-05',DATE '2013-07-28', DATE'2013-08-01', 'Approved', 2000.00, 10000, 'B1000');

-- INSERT INTO EventRequest (evntNo, custNo, facNo, dateHeld, dateReq, dateAuth, status, estCost, estAudience, budNo)
```

```sql
-- VALUES ('E106', 'C101', 'F101', DATE'2013-12-12', DATE'2013-07-28',DATE '2013-07-31',
'Approved', 2000.00,10000, 'B1000');

-- INSERT INTO EventRequest (evntNo, custNo, facNo, dateHeld, dateReq, dateAuth, status,
estCost, estAudience, budNo)
-- VALUES ('E107', 'C105', 'F100',DATE '2013-11-23', DATE'2013-07-28', DATE'2013-07-31',
'Denied', 10000.00, 5000, NULL);

-- CREATE TABLE EventPlan (
--   planNo   CHAR(8)  NOT NULL,
--   evntNo   CHAR(8)  NOT NULL,
--   empNo    CHAR(11),
--   workDate DATE     NOT NULL,
--   notes    VARCHAR(300),
--   activity CHAR(10) NOT NULL,
--   CONSTRAINT PK_EventPlan PRIMARY KEY (planNo),
--   CONSTRAINT FK_EventRequest FOREIGN KEY (evntNo) REFERENCES EventRequest
(evntNo),
--   CONSTRAINT FK_Employee FOREIGN KEY (empNo) REFERENCES Employee (empNo)
-- );

-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES
('P100', 'E100', 'E102', DATE'2013-10-25', 'Standard operation', 'Operation');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES
('P101', 'E104', 'E100',DATE '2013-12-03', 'Watch for gate crashers', 'Operation');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES
('P102', 'E105', 'E102', DATE'2013-12-05', 'Standard operation', 'Operation');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES
('P103', 'E106', NULL, DATE'2013-12-12', 'Watch for seat switching', 'Operation');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES
('P104', 'E101', 'E101', DATE'2013-10-26', 'Standard cleanup', 'Cleanup');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES
('P105', 'E100', 'E101',DATE '2013-10-25', 'Light cleanup', 'Cleanup');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES
('P199', 'E102', 'E101',DATE '2013-12-10', 'Standard operation', 'Operation');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES
('P299', 'E101', 'E101',DATE '2013-10-26', '', 'Operation');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES
('P349', 'E106', 'E101',DATE '2013-12-12', '', 'Cleanup');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES ('P85',
'E100', 'E102',DATE '2013-10-25', 'Standard operation', 'Setup');
-- INSERT INTO EventPlan (planNo, evntNo, empNo, workDate, notes, activity) VALUES ('P95',
'E101', 'E102',DATE '2013-10-26', 'Extra security', 'Setup');
```

```sql
-- CREATE TABLE EventPlanLine (
--   planNo   CHAR(8)   NOT NULL,
--   lineNo   CHAR(8)   NOT NULL,
--   locNo    VARCHAR(8)  NOT NULL,
--   resNo    CHAR(8)   NOT NULL,
--   timeStart TIMESTAMP NOT NULL,
--   timeEnd   TIMESTAMP NOT NULL,
--   numberFLD INTEGER   NOT NULL,
--   CONSTRAINT PK_EventPlanLine PRIMARY KEY (planNo, lineNo),
--   CONSTRAINT FK_EventPlan FOREIGN KEY (planNo) REFERENCES EventPlan (planNo),
--   CONSTRAINT FK_Location FOREIGN KEY (locNo) REFERENCES Location (locNo),
--   CONSTRAINT FK_ResourceTbl FOREIGN KEY (resNo) REFERENCES ResourceTbl
(resNo)
-- );

-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P100', '1','L100','R100',timestamp'2013-10-25 8:00:00',timestamp'2013-10-25
17:00:00','2');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P100', '2','L101','R101',timestamp'2013-10-25 12:00:00',timestamp'2013-10-25
17:00:00','2');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P100', '3','L102','R102',timestamp'2013-10-25 7:00:00',timestamp'2013-10-25
16:30:00','1');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P100', '4','L100','R102',timestamp'2013-10-25 18:00:00',timestamp'2013-12-12
22:00:00','1');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P101', '1','L103','R100',timestamp'2013-12-03 18:00:00',timestamp'2013-12-03
20:00:00','2');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P101', '2','L105','R100',timestamp'2013-12-03 18:30:00',timestamp'2013-12-03
19:00:00','2');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P101', '3','L103','R103',timestamp'2013-12-03 19:00:00',timestamp'2013-12-03
20:00:00','4');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P102', '1','L103','R100',timestamp'2013-12-05 18:00:00',timestamp'2013-12-05
19:00:00','2');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P102', '2','L105','R100',timestamp'2013-12-05 18:00:00',timestamp'2013-12-05
21:00:00','2');
```

```sql
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P102', '3','L103','R103',timestamp'2013-12-05 19:00:00',timestamp'2013-12-05
22:00:00','4');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P103', '1','L103','R100',timestamp'2013-12-12 18:00:00',timestamp'2013-12-12
21:00:00','2');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P103', '2','L105','R100',timestamp'2013-12-12 18:00:00',timestamp'2013-12-12
21:00:00','4');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P103', '3','L103','R103',timestamp'2013-12-12 19:00:00',timestamp'2013-12-12
22:00:00','2');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P104', '1','L101','R104',timestamp'2013-10-26 18:00:00',timestamp'2013-10-26
22:00:00','4');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P104', '2','L100','R104',timestamp'2013-10-26 18:00:00',timestamp'2013-10-26
22:00:00','4');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P105', '1','L101','R104',timestamp'2013-10-25 18:00:00',timestamp'2013-10-25
22:00:00','4');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P105', '2','L100','R104',timestamp'2013-10-25 18:00:00',timestamp'2013-10-25
22:00:00','4');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P199', '1','L100','R100',timestamp'2013-12-10 8:00:00',timestamp'2013-12-10
12:00:00','1');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P349', '1','L103','R100',timestamp'2013-12-12 12:00:00',timestamp'2013-12-12
15:30:00','1');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P85', '1','L100','R100',timestamp'2013-10-25 9:00:00',timestamp'2013-10-25
17:00:00','5');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P85', '2','L102','R101',timestamp'2013-10-25 8:00:00',timestamp'2013-10-25
17:00:00','2');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P85', '3','L104','R100',timestamp'2013-10-25 10:00:00',timestamp'2013-10-25
17:00:00','3');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P95', '1','L100','R100',timestamp'2013-10-26 8:00:00',timestamp'2013-10-26
17:00:00','4');
```

```sql
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P95', '2','L102','R101',timestamp'2013-10-26 9:00:00',timestamp'2013-10-26
17:00:00','4');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P95', '3','L106','R100',timestamp'2013-10-26 10:00:00',timestamp'2013-10-26
15:00:00','4');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P95', '4','L100','R103',timestamp'2013-10-26 13:00:00',timestamp'2013-10-26
17:00:00','2');
-- INSERT INTO EventPlanLine(planNo, lineNo, locNo, resNo, timeStart, timeEnd, numberFLD)
VALUES ('P95', '5','L101','R104',timestamp'2013-10-26 13:00:00',timestamp'2013-10-26
17:00:00','2');

-- SELECT DISTINCT
--   c.city,
--   c.state,
--   c.zip
-- FROM Customer c;

-- SELECT
--   e.empName,
--   e.department,
--   e.phone,
--   e.email
-- FROM Employee e
-- WHERE e.phone LIKE '3-%';

-- SELECT *
-- FROM ResourceTbl r
-- WHERE r.rate >= 10 AND r.rate <= 20
-- ORDER BY r.rate;

-- SELECT
--   er.evntNo,
--   er.dateAuth,
--   er.status
-- FROM EventRequest er
-- WHERE (er.status = 'Approved' OR er.status = 'Denied') AND er.dateAuth BETWEEN DATE
'2013-07-01' AND DATE '2013-07-31';

-- SELECT * FROM Location, Facility;
-- SELECT
--   l.locNo,
--   l.locName
```

```sql
-- FROM Location l, Facility f
-- WHERE l.facNo = f.facNo AND f.facName = 'Basketball arena';

-- SELECT
--   ep.planNo,
--   count(el.planNo),
--   sum(el.numberFLD)
-- FROM EventPlan ep, EventPlanLine el
-- WHERE ep.planNo = el.planNo
-- GROUP BY ep.planNo;

-- SELECT EventRequest.EvntNo, DateHeld, COUNT(EventPlan.PlanNo) AS
NUM_EVENT_PLANS
-- FROM EventRequest, EventPlan
-- WHERE (EventRequest.EvntNo = EventPlan.EvntNo)
--     AND (DateHeld BETWEEN '1-Dec-2013' AND '31-Dec-2013')
-- GROUP BY EventRequest.EvntNo, DateHeld
-- HAVING COUNT(EventPlan.PlanNo) > 1;

-- SELECT PlanNo, EventPlan.EvntNo, WorkDate, Activity
-- FROM EventPlan, EventRequest, Facility
-- WHERE (EventPlan.EvntNo = EventRequest.EvntNo)
--     AND (EventRequest.FacNo = Facility.FacNo)
--     AND (WorkDate BETWEEN '1-Dec-2013' AND '31-Dec-2013')
--     AND (FacName = 'Basketball arena');

-- SELECT EventPlan.EvntNo, DateHeld, Status, EstCost
-- FROM EventRequest, EventPlan, Employee, Facility
-- WHERE (EventPlan.EvntNo = EventRequest.EvntNo)
--     AND (EventPlan.EmpNo = Employee.EmpNo)
--     AND (EventRequest.FacNo = Facility.FacNo)
--     AND (DateHeld BETWEEN '1-Oct-2013' AND '31-Dec-2013')
--     AND (FacName = 'Basketball arena')
--     AND (EmpName = 'Mary Manager');


-- SELECT EventPlanLine.PlanNo, LineNo, ResName, NumberFld, LocName, TimeStart,
TimeEnd
-- FROM EventPlanLine, ResourceTbl, Location, Facility, EventPlan
-- WHERE (EventPlanLine.ResNo = ResourceTbl.ResNo)
--     AND (EventPlanLine.LocNo = Location.LocNo)
--     AND (EventPlanLine.PlanNo = EventPlan.PlanNo)
--     AND (Location.FacNo = Facility.FacNo)
--     AND (FacName = 'Basketball arena')
```

```sql
--    AND (Activity = 'Operation')
--    AND (WorkDate BETWEEN '1-Oct-2013' AND '31-Dec-2013');

-- SELECT * FROM Facility;

-- INSERT INTO Facility (FacNo, FacName) VALUES ('F104', 'Swimming Pool');
-- SELECT * FROM Facility;

-- SELECT * FROM Location;

-- INSERT INTO Location (LocNo, FacNo, LocName) VALUES ('L107', 'F104', 'Door');
-- SELECT * FROM Location;

-- SELECT * FROM Location;

-- INSERT INTO Location (LocNo, FacNo, LocName) VALUES ('L108', 'F104', 'Locker Room');
-- SELECT * FROM Location;

-- SELECT * FROM Location;

-- UPDATE Location
-- SET LocName = 'Gate'
-- WHERE LocNo = 'L107'
--    AND FacNo = 'F104';
-- SELECT * FROM Location;

-- DELETE FROM Location
-- WHERE locNo = 'L108';
-- SELECT * FROM LOCATION;
```