CREATE TABLE Race (

race\_ID int PRIMARY KEY NOT NULL,

purse float NOT NULL,

schedule\_ID int FOREIGN KEY REFERENCES RacingSchedule(schedule\_ID)

);

CREATE TABLE RacingSchedule(

schedule\_ID int PRIMARY KEY NOT NULL,

race\_ID int FOREIGN KEY REFERENCES Race(race\_ID),

race\_day char(3) NOT NULL,

race\_month char(3) NOT NULL,

race\_year char(4) NOT NULL,

race\_time time NOT NULL

);

CREATE TABLE RaceEntry(

entry\_ID int PRIMARY KEY NOT NULL,

race\_ID int FOREIGN KEY REFERENCES Race(race\_ID) NOT NULL, *--Im not sure I want this FK*

jockey\_ID int FOREIGN KEY REFERENCES Personnel(personnel\_ID) NOT NULL,

horse\_registration\_ID int FOREIGN KEY REFERENCES Horse(horse\_registration\_ID) NOT NULL,

start\_position char(2) NOT NULL

final\_position char(2) NOT NULL

);

CREATE TABLE Horse(

horse\_registration\_ID int PRIMARY KEY NOT NULL,

horse\_name varchar(30) NOT NULL,

horse\_type varchar(30) NOT NULL,

horse\_gender char(1) NOT NULL,

trainer\_ID int FOREIGN KEY REFERENCES Personnel(personnel\_ID)

);

CREATE TABLE Owners(

owner\_ID int PRIMARY KEY FOREIGN KEY REFERENCES Personnel(personnel\_ID) NOT NULL,

horse\_registration\_ID int FOREIGN KEY REFERENCES Horse(horse\_registration\_ID) NOT NULL

ownership\_percentage float NOT NULL

);

CREATE TABLE Trains(

trainer\_ID int PRIMARY KEY FOREIGN KEY REFERENCES Personnel(personnel\_ID),

horse\_registration\_ID int FOREIGN KEY REFERENCES Horse(horse\_registration\_ID)

);

CREATE TABLE Personnel(

personnel\_ID int PRIMARY KEY NOT NULL,

first\_Name varchar(20) NOT NULL,

last\_Name varchar(30) NOT NULL,

street\_address varchar(40) NOT NULL,

city varchar(30) NOT NULL,

state char(2) NOT NULL,

zipcode char(5) NOT NULL,

phone\_areacode char(3) NOT NULL,

phone\_number char(7) NOT NULL,

personnel\_title varchar(20)

);

CREATE TABLE Offspring(

horse\_registration\_ID PRIMARY KEY FOREIGN KEY REFERENCES Horse(horse\_registration\_ID) NOT NULL,

parent\_dam\_registration\_ID FOREIGN KEY REFERENCES Horse(horse\_registration\_ID) NOT NULL,

parent\_sire\_registration\_ID FOREIGN KEY REFERENCES Horse(horse\_registration\_ID) NOT NULL,

);

-------------------\_FROM THE PROFESSOR------------------------------------------------

Create table barn

(

bID char(2) Not Null Primary Key,

bname varchar(10) Not null

)

Create table Person

(

pID varchar(5) Not null primary key,

pName varchar(20) not null,

pPhone varchar(15) not null,

pAddress varchar(40) Null

)

Create table horse

(

regNumber varchar(5) Not null Primary Key,

hName varchar(20) not null,

gender char(1) not null,

type varchar(20) Not null,

purchaseDate date not null,

purchasePrice float not null,

trainedBy varchar(5) foreign key references person(pid),

stabledAt char(2) foreign key references barn(bid)

)

Create table offSpring

(

regNum varchar(5) Not null,

parent varchar(5) not null

)

Alter table offSpring Add Constraint offSpring\_regNum\_parent\_pk Primary Key (regNum, parent)

Alter table offSpring Add Constraint offSpring\_regNum\_FK foreign Key (regNum) references horse (regNumber)

Alter table offSpring Add Constraint offSpring\_parent\_FK foreign Key (parent) references horse (regNumber)

Create table ownedBy

(

regNum varchar(5) Not null,

pID varchar(5) Not null,

percentage float Null

)

Alter table ownedBy Add Constraint ownedBy\_regNum\_pID\_pk primary Key (regNum, pID)

Alter table ownedBy add Constraint ownedBy\_regNum\_fk foreign key (regNum) references horse(regNumber)

Alter table ownedBy add Constraint ownedBy\_pid\_fk foreign key (pID) references person(PID)

Create table raceSchedule

(

sID varchar(3) not null Primary Key,

year varchar(4) null,

month varchar(2) null,

day varchar(2) null

)

Create table race

(

sID varchar(3) Not Null,

rNumber int NOT NULL,

purse int NULL

)

Alter table race add constraint race\_SID\_rNumber\_PK primary key (SID, rNumber)

Alter table race add Constraint race\_sID\_fk foreign key (sID) references raceSchedule (sID)

Create table entry

(

sID varchar(3) Not null,

rNumber int not null,

gate int not null,

finalPos int null,

horse varchar(5) null,

jockey varchar(5) null

)

Alter table entry add constraint entry\_sid\_rNumber\_gate\_Pk primary key (SID, rNumber, gate)

ALTER TABLE Entry ADD CONSTRAINT entry\_sid\_rnumber\_fk FOREIGN KEY(sID, rNumber)

REFERENCES Race (sID, rNumber)

ALTER TABLE Entry ADD CONSTRAINT entry\_jockey\_fk FOREIGN KEY(jockey)

REFERENCES Person (pID)

ALTER TABLE Entry ADD CONSTRAINT entry\_horse\_fk FOREIGN KEY(horse)

REFERENCES horse (regNumber)

insert into Barn values (1, 'B1');

insert into Barn values (2, 'B2');

insert into Barn values (3, 'B3');

insert into Person values ('p01', 'Bob Jones', '8069927001', '401 Oak Street, Lubbock, TX 11122');

insert into Person values ('p02', 'Sally Smith', '8069927002', '200 Pine Street, Abilene, TX 22211');

insert into Person values ('p03', 'Rick Robins', '8069927003', '301 Elm Street, Amarillo, TX 33321');

insert into Person values ('p04', 'Jack Anders', '8069927004', '100 5th Street, Guthrie, TX 55533');

insert into Person values ('p05', 'Sue Stegen', '8069927005', '506 Cedar Street, Bastrop, TX 77789');

insert into Person values ('p06', 'Joe Koblinski', '8069927006', '600 6th Street, Austin, TX 99988');

insert into Person values ('p07', 'Mary Cane', '8069927007', '722 1st Street, Houston, TX 12345');

insert into Horse values ('r01', 'Lucky', 'm', 'thoroughbred', '02/02/2015', 30000, 'p01', 1);

insert into Horse values ('r02', 'Fast', 'f', 'thoroughbred', '02/01/2015', 20000, 'p02', 2);

insert into Horse values ('r03', 'UnLucky', 'm', 'quarter horse', '02/07/2015', 25000, 'p02', 3);

insert into Horse values ('r04', 'Slow', 'f', 'quarter horse', '02/08/2015', 40000, 'p01', 1);

insert into Horse values ('r05', 'Legend', 'm', 'thoroughbred', '02/04/2015', 15000, 'p07', 3);

insert into Horse values ('r12', 'Lufast', 'f', 'thoroughbred', '02/09/2015', 50000, 'p07', 2);

insert into Horse values ('r34', 'Unslow', 'm', 'quarter horse', '02/10/2015', 30000, 'p01', 2);

insert into Offspring values ('r12', 'r01');

insert into Offspring values ('r12', 'r02');

insert into Offspring values ('r34', 'r03');

insert into Offspring values ('r34', 'r04');

insert into OwnedBy values ('r01', 'p01', 1.0);

insert into OwnedBy values ('r02', 'p02', 0.50);

insert into OwnedBy values ('r02', 'p03', 0.50);

insert into OwnedBy values ('r03', 'p03', 1.0);

insert into OwnedBy values ('r04', 'p04', 0.75);

insert into OwnedBy values ('r04', 'p05', 0.25);

insert into OwnedBy values ('r05', 'p05', 1.0);

insert into OwnedBy values ('r12', 'p06', 1.0);

insert into OwnedBy values ('r34', 'p07', 1.0);

insert into RaceSchedule values ('s01', '2015', '07', '01');

insert into RaceSchedule values ('s02', '2015', '08', '01');

insert into Race values ('s01', 1,25000);

insert into Race values ('s01', 2,20000);

insert into Race values ('s02', 1,30000);

insert into Race values ('s02', 2,15000);

insert into Entry values ('s01', 1, 1, 4, 'r01', 'p01');

insert into Entry values ('s01', 1, 2, 3, 'r02', 'p02');

insert into Entry values ('s01', 1, 3, 2, 'r03', 'p03');

insert into Entry values ('s01', 1, 4, 1, 'r04', 'p04');

insert into Entry values ('s01', 2, 1, 3, 'r05', 'p05');

insert into Entry values ('s01', 2, 2, 2, 'r12', 'p06');

insert into Entry values ('s01', 2, 3, 1, 'r34', 'p07');

insert into Entry values ('s02', 1, 1, 1, 'r01', 'p07');

insert into Entry values ('s02', 1, 2, 4, 'r12', 'p06');

insert into Entry values ('s02', 1, 3, 3, 'r34', 'p05');

insert into Entry values ('s02', 1, 4, 2, 'r04', 'p04');

insert into Entry values ('s02', 2, 1, 1, 'r05', 'p03');

insert into Entry values ('s02', 2, 2, 2, 'r02', 'p02');

insert into Entry values ('s02', 2, 3, 3, 'r03', 'p01');

------QUERIES BEGIN HERE

--write a query to list parent names of horse 'lufast'

SELECT hName FROM horse WHERE regNumber IN

(SELECT parent FROM offSpring f JOIN horse h ON f.regNum = h.regNumber WHERE h.hName = 'Lufast')

--list who trained horse 'legend'

SELECT DISTINCT pName, pID FROM Person, horse WHERE pID = (SELECT trainedBy FROM horse WHERE hName = 'Legend');

-- for horse named 'slow' list his owner(s) name and the percent ownership

SELECT \* FROM Person p JOIN ownedBy o ON o.pID = p.pID JOIN horse h on h.regNumber = o.regNum WHERE h.hName = 'Slow';

--what was lucky's final position in a given race

--DECLARE @schednum varchar(3);

--SET @schednum = 's01';

SELECT finalPos FROM entry e JOIN horse h ON h.regNumber = e.horse WHERE h.hName = 'Lucky' AND e.sID = @schednum;

--Saleh's soln

SELECT finalPos, hName, rNumber FROM entry e JOIN horse h ON e.horse = h.regNumber WHERE hName = 'Lucky';

--what are the name and address of jockey who rode the winning horse for a particular race

DECLARE @schednum varchar(3);

SET @schednum = 's01';

SELECT DISTINCT pName, pAddress, finalPos FROM Person p JOIN entry e ON e.jockey = p.pID JOIN race r ON r.rNumber = e.rNumber WHERE finalPos = 1 AND e.sID = @schednum

SELECT \* FROM entry -- shows that there are 2 first place for s01?

--Dr. Saleh' soln

SELECT e.SID, e.rNumber, p.pName, p.pAddress FROM Person p, entry e WHERE e.finalPos = 1 AND e.jockey = p.pID

------FOR NEW DB

--DB = testJoins

CREATE TABLE Customer(

CustomerID int PRIMARY KEY,

cityID int,

CustomerName varchar(20)

);

CREATE TABLE City (

cityID int PRIMARY KEY,

CityName varchar(20),

);

ALTER TABLE Customer ADD CONSTRAINT

cust\_city\_fk FOREIGN KEY (cityID) REFERENCES city(cityID)

INSERT INTO City VALUES

(1, 'Kansas City'),

(2, 'New york'),

(3, 'Houston');

INSERT INTO Customer VALUES

(1,1, 'Bob Smith'),

(2,1, 'Sally Smith'),

(3,2, 'Tom Smith'),

(4, null, 'Mary Smith')

---QUERIES BEGIN HERE

--INNER JOIN

SELECT \* FROM Customer u INNER JOIN City c ON c.cityID = u.cityID

--RIGHT JOIN

SELECT \* FROM Customer u RIGHT JOIN City c ON c.cityID = u.cityID --cities with no customers

--LEFT JOIN

SELECT \* FROM Customer u LEFT JOIN City c ON u.cityID = c.cityID --the customers with no city assinged

--FULL JOIN

SELECT \* FROM Customer u FULL JOIN City c ON u.cityID = c.cityID