**create** **database** scientistdb;

**use** scientistdb;

**create** **table** Scientists (

SSN **int**,

Name **Char**(30) **not** **null**,

**Primary** **Key** (SSN)

);

**Create** **table** Projects (

Code **Char**(4),

Name **Char**(50) **not** **null**,

Hours **int**,

**Primary** **Key** (Code)

);

**create** **table** AssignedTo (

Scientist **int** **not** **null**,

Project **char**(4) **not** **null**,

**Primary** **Key** (Scientist, Project),

**Foreign** **Key** (Scientist) **references** Scientists (SSN),

**Foreign** **Key** (Project) **references** Projects (Code)

);

**INSERT** **INTO** Scientists(SSN,Name)

**VALUES**(123234877,'Michael Rogers'),

(152934485,'Anand Manikutty'),

(222364883, 'Carol Smith'),

(326587417,'Joe Stevens'),

(332154719,'Mary-Anne Foster'),

(332569843,'George ODonnell'),

(546523478,'John Doe'),

(631231482,'David Smith'),

(654873219,'Zacary Efron'),

(745685214,'Eric Goldsmith'),

(845657245,'Elizabeth Doe'),

(845657246,'Kumar Swamy');

**INSERT** **INTO** Projects ( Code,Name,Hours)

**VALUES** ('AeH1','Winds: Studying Bernoullis Principle', 156),

('AeH2','Aerodynamics and Bridge Design',189),

('AeH3','Aerodynamics and Gas Mileage', 256),

('AeH4','Aerodynamics and Ice Hockey', 789),

('AeH5','Aerodynamics of a Football', 98),

('AeH6','Aerodynamics of Air Hockey',89),

('Ast1','A Matter of Time',112),

('Ast2','A Puzzling Parallax', 299),

('Ast3','Build Your Own Telescope', 6546),

('Bte1','Juicy: Extracting Apple Juice with Pectinase', 321),

('Bte2','A Magnetic Primer Designer', 9684),

('Bte3','Bacterial Transformation Efficiency', 321),

('Che1','A Silver-Cleaning Battery', 545),

('Che2','A Soluble Separation Solution', 778);

**INSERT** **INTO** AssignedTo ( Scientist, Project)

**VALUES** (123234877,'AeH1'),

(152934485,'AeH3'),

(222364883,'Ast3'),

(326587417,'Ast3'),

(332154719,'Bte1'),

(546523478,'Che1'),

(631231482,'Ast3'),

(654873219,'Che1'),

(745685214,'AeH3'),

(845657245,'Ast1'),

(845657246,'Ast2'),

(332569843,'AeH4');

#1

**select** Scientists.name, hours, projects.name **from** scientists **join** AssignedTo

**on** Scientists.SSN = AssignedTo.Scientist

**join** projects

**on** projects.code = AssignedTo.project

**order** **by** projects.name = Scientists.name;

#2

**select** projects.name, projects.code **from** projects **join** AssignedTo

**on** projects.code = AssignedTo.project

**group** **by** projects.code

**having** projects.code **IS** **null**;