*-- creates some test-tables and data*  
*-- DROP TABLE EMPLOYEE;*  
*-- DROP TABLE DEPARTMENT;*  
*-- DROP TABLE SALARYGRADE;*  
*-- DROP TABLE BONUS;*  
*-- DROP TABLE PROJECT;  
-- DROP TABLE PROJECT\_PARTICIPATION;*  
*-- DROP TABLE ROLE;*  
**CREATE TABLE** EMPLOYEE(  
 empno INTEGER **NOT NULL**,  
 name VARCHAR(10),  
 job VARCHAR(9),  
 boss INTEGER,  
 hiredate VARCHAR(12),  
 salary DECIMAL(7, 2),  
 comm DECIMAL(7, 2),  
 deptno INTEGER  
);  
   
**CREATE TABLE** DEPARTMENT(  
 deptno INTEGER **NOT NULL**,  
 name VARCHAR(14),  
 location VARCHAR(13)  
);  
  
**CREATE TABLE** SALARYGRADE(  
 grade INTEGER **NOT NULL**,  
 losal INTEGER **NOT NULL**,  
 hisal INTEGER **NOT NULL**  
);  
  
**CREATE TABLE** BONUS (  
 ename VARCHAR(10) **NOT NULL**,  
 job VARCHAR(9) **NOT NULL**,  
 sal DECIMAL(7, 2),  
 comm DECIMAL(7, 2)  
);  
  
**CREATE TABLE** PROJECT(  
 projectno INTEGER **NOT NULL**,  
 description VARCHAR(100),  
 start\_date VARCHAR(12),  
 end\_date VARCHAR(12)  
);  
  
**CREATE TABLE** PROJECT\_PARTICIPATION(  
 projectno INTEGER **NOT NULL**,  
 empno INTEGER **NOT NULL**,  
 start\_date VARCHAR(12) **NOT NULL**,  
 end\_date VARCHAR(12),  
 role\_id INTEGER  
);  
 **CREATE TABLE** ROLE(

role\_id INTEGER **NOT NULL**,

description VARCHAR(100)

);  
  
*-- Primary Keys*  
**ALTER TABLE** EMPLOYEE  
 **ADD CONSTRAINT** emp\_pk  
 **PRIMARY KEY** (empno);  
  
**ALTER TABLE** DEPARTMENT  
 **ADD CONSTRAINT** dept\_pk  
 **PRIMARY KEY** (deptno);  
  
**ALTER TABLE** SALARYGRADE  
 **ADD CONSTRAINT** salgrade\_pk  
 **PRIMARY KEY** (grade);  
  
**ALTER TABLE** BONUS  
 **ADD CONSTRAINT** bonus\_pk  
 **PRIMARY KEY** (ename, job);  
  
**ALTER TABLE** PROJECT  
 **ADD CONSTRAINT** project\_pk  
 **PRIMARY KEY** (projectno);  
   
**ALTER TABLE** PROJECT\_PARTICIPATION  
 **ADD CONSTRAINT** participation\_pk  
 **PRIMARY KEY** (projectno, empno, start\_date);  
 **ALTER TABLE** ROLE  
 **ADD CONSTRAINT** role\_pk  
 **PRIMARY KEY** (role\_id);  
  
*-- EMPLOYEE to DEPARTMENT*  
**ALTER TABLE** EMPLOYEE  
 **ADD CONSTRAINT** department  
 **FOREIGN KEY** (deptno)  
 **REFERENCES** DEPARTMENT (deptno);  
  
*-- EMPLOYEE to EMPLOYEE*  
**ALTER TABLE** EMPLOYEE  
 **ADD CONSTRAINT** boss  
 **FOREIGN KEY** (boss)  
 **REFERENCES** EMPLOYEE (empno);  
   
*-- EMPLOYEE to PROJECT\_PARTICIPATION*  
**ALTER TABLE** PROJECT\_PARTICIPATION  
 **ADD CONSTRAINT** employee  
 **FOREIGN KEY** (empno)  
 **REFERENCES** EMPLOYEE (empno);  
  
*-- PROJECT to PROJECT\_PARTICIPATION*  
**ALTER TABLE** PROJECT\_PARTICIPATION  
 **ADD CONSTRAINT** project  
 **FOREIGN KEY** (projectno)  
 **REFERENCES** PROJECT (projectno);  
 *-- ROLE to PROJECT\_PARTICIPATION*

**ALTER TABLE** PROJECT\_PARTICIPATION  
 **ADD CONSTRAINT** role  
 **FOREIGN KEY** (role\_id)

**REFERENCES** ROLE (role\_id);  
  
*-- data*  
**INSERT INTO** DEPARTMENT **VALUES** (10, 'ACCOUNTING', 'NEW YORK');  
**INSERT INTO** DEPARTMENT **VALUES** (20, 'RESEARCH', 'DALLAS');  
**INSERT INTO** DEPARTMENT **VALUES** (30, 'SALES', 'CHICAGO');  
**INSERT INTO** DEPARTMENT **VALUES** (40, 'OPERATIONS', 'BOSTON');  
   
**INSERT INTO** EMPLOYEE **VALUES** (7839, 'KING', 'PRESIDENT', **NULL**, '1981-11-17', 5000, **NULL**, 10);  
 **INSERT INTO** EMPLOYEE **VALUES** (7566, 'JONES', 'MANAGER', 7839, '1981-04-02', 2975, **NULL**, 20);  
 **INSERT INTO** EMPLOYEE **VALUES**(7788, 'SCOTT', 'ANALYST', 7566, '1982-12-09', 3000, **NULL**, 20);  
 **INSERT INTO** EMPLOYEE **VALUES**(7876, 'ADAMS', 'CLERK', 7788, '1983-01-12', 1100, **NULL**, 20);  
 **INSERT INTO** EMPLOYEE **VALUES**(7902, 'FORD', 'ANALYST', 7566, '1981-12-03', 3000, **NULL**, 20);  
 **INSERT INTO** EMPLOYEE **VALUES**(7369, 'SMITH', 'CLERK', 7902, '1980-12-17', 800, **NULL**, 20);  
 **INSERT INTO** EMPLOYEE **VALUES** (7698, 'BLAKE', 'MANAGER', 7839, '1981-05-01', 2850, **NULL**, 30);  
 **INSERT INTO** EMPLOYEE **VALUES**(7499, 'ALLEN', 'SALESMAN', 7698, '1981-02-20', 1600, 300, 30);  
 **INSERT INTO** EMPLOYEE **VALUES**(7521, 'WARD', 'SALESMAN', 7698, '1981-02-22', 1250, 500, 30);  
 **INSERT INTO** EMPLOYEE **VALUES**(7654, 'MARTIN', 'SALESMAN', 7698, '1981-09-28', 1250, 1400, 30);  
 **INSERT INTO** EMPLOYEE **VALUES**(7844, 'TURNER', 'SALESMAN', 7698, '1981-09-08', 1500, 0, 30);  
 **INSERT INTO** EMPLOYEE **VALUES**(7900, 'JAMES', 'CLERK', 7698, '1981-12-03', 950, **NULL**, 30);  
 **INSERT INTO** EMPLOYEE **VALUES**(7782, 'CLARK', 'MANAGER', 7839, '1981-06-09', 2450, **NULL**, 10);  
 **INSERT INTO** EMPLOYEE **VALUES**(7934, 'MILLER', 'CLERK', 7782, '1982-01-23', 1300, **NULL**, 10);  
   
**INSERT INTO** SALARYGRADE **VALUES** (1, 700, 1200);  
**INSERT INTO** SALARYGRADE **VALUES** (2, 1201, 1400);  
**INSERT INTO** SALARYGRADE **VALUES** (3, 1401, 2000);  
**INSERT INTO** SALARYGRADE **VALUES** (4, 2001, 3000);  
**INSERT INTO** SALARYGRADE **VALUES** (5, 3001, 9999);  
   
**INSERT INTO** ROLE **VALUES** (100, 'Developer');

**INSERT INTO** ROLE **VALUES** (101, 'Researcher');

**INSERT INTO** ROLE **VALUES** (102, 'Project manager');  
  
**INSERT INTO** PROJECT **VALUES** (1001, 'Development of Novel Magnetic Suspension System', '2006-01-01', '2007-08-13');  
**INSERT INTO** PROJECT **VALUES** (1002, 'Research on thermofluid dynamics in Microdroplets', '2006-08-22', '2007-03-20');  
**INSERT INTO** PROJECT **VALUES** (1003, 'Foundation of Quantum Technology', '2007-02-24', '2008-07-31');  
**INSERT INTO** PROJECT **VALUES** (1004, 'High capacity optical network', '2008-01-01', **null**);  
   
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1001, 7902, '2006-01-01', '2006-12-30', 102);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1001, 7369, '2006-01-01', '2007-08-13', 100);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1001, 7788, '2006-05-15', '2006-11-01', 100);  
  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1002, 7876, '2006-08-22', '2007-03-20', 102);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1002, 7782, '2006-08-22', '2007-03-20', 101);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1002, 7934, '2007-01-01', '2007-03-20', 101);  
 **INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1003, 7566, '2007-02-24', '2008-07-31', 102);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1003, 7900, '2007-02-24', '2007-01-31', 101);  
 **INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1004, 7499, '2008-01-01', **null**, 102);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1004, 7521, '2008-05-01', **null**, 101);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1004, 7654, '2008-04-15', **null**, 101);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1004, 7844, '2008-02-01', **null**, 101);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1004, 7900, '2008-03-01', '2008-04-01', 101);  
**INSERT INTO** PROJECT\_PARTICIPATION **VALUES** (1004, 7900, '2008-05-20', **null**, 101);