

Assignment - 1 (SP)

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Question:

- Create an Employee table with the following properties:
Eid (data type = text, primary key), Ename (data type = text, should not be unknown), Salary (data type = integer, should be at least 25000 and at most 90000), DOB (data type = date, should not be unknown), Pid (data type = text, foreign key refers to Pid of Project table), SuperNum (data type = text, foreign key refers to Eid of Employee table)
- Create a Project table with the following properties:
Pid (data type = text; primary key), Pname (data type = text; default value is "STARTUP"), Plocation (data type = text; should not be unknown; list of possible values include Kolkata, Pune, Delhi and Chennai), Budget (data type = integer, should be at most 500000)
- Insert the following 6 records into the Project table:
 1. ('P1', 'Kolkata', 300000)
 2. ('P2', 'IT', 'Chennai', 400000)
 3. ('P3', 'R&D', 'Delhi', 350000)
 4. ('P4', 'R&D', 'Delhi', 250000)
 5. ('P5', 'Fintech', 'Pune', 480000)
 6. ('P6', 'Big Data', 'Pune', 320000)
- Insert the following 10 records into the Employee table
 1. ('E1', 'Rajesh', 25000, 23rd June 1991, 'P1')
 2. ('E2', 'Rakesh', 52000, 4th January 1993, 'P2', 'E1')
 3. ('E3', 'Sumit', 45000, 7th September 1991, 'P6', 'E1')
 4. ('E4', 'Sharon', 65000, 1st April 1992, 'P3')
 5. ('E5', 'Kavya', 62000, 23rd August 1995, 'P4', 'E4')
 6. ('E6', 'Kriti', 35000, 3rd June 1990, 'P2')
 7. ('E7', 'Ankush', 52000, 13th February 1996, 'P5', 'E6')
 8. ('E8', 'Sameer', 45000, 12th Nov 1993, 'P6', 'E6')
 9. ('E9', 'Nadeem', 56000, 10th June 1993, 'P3', 'E1')
 10. ('E10', 'Shruti', 82000, 30th July 1994, 'P5', 'E4')
- Write SQL statements to solve the following queries:

1. Display the instance of the Project table
2. Display the schema of the Project table
3. Display the instance of the Employee table
4. Display the schema of the Employee table
5. Find the names and DOBs of employees receiving salary between 50000 and 60000
6. Find the names and salaries of employees working on project P5
7. Find the names of employees born in 1993
8. Display details of projects for which the budget allocation is at least 400000
9. List out the names of all the projects
10. List out details of projects being carried out at Kolkata
11. List out project details being carried out at Pune and having a budget at least 300000

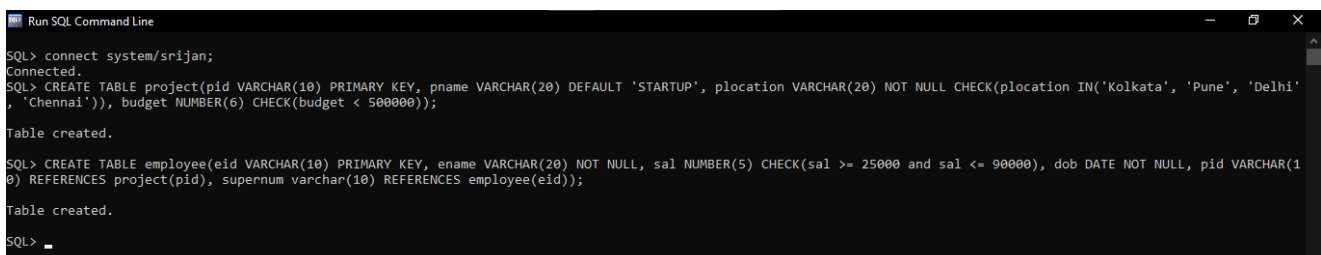
Answers:

```
CREATE TABLE project(pid VARCHAR(10) PRIMARY KEY, pname VARCHAR(20) DEFAULT 'STARTUP', plocation VARCHAR(20) NOT NULL CHECK(plocation IN('Kolkata', 'Pune', 'Delhi', 'Chennai')), budget NUMBER(6) CHECK(budget < 500000));
```



```
Run SQL Command Line
SQL> connect system/srijan;
Connected.
SQL> CREATE TABLE project(pid VARCHAR(10) PRIMARY KEY, pname VARCHAR(20) DEFAULT 'STARTUP', plocation VARCHAR(20) NOT NULL CHECK(plocation IN('Kolkata', 'Pune', 'Delhi', 'Chennai')), budget NUMBER(6) CHECK(budget < 500000));
Table created.
SQL>
```

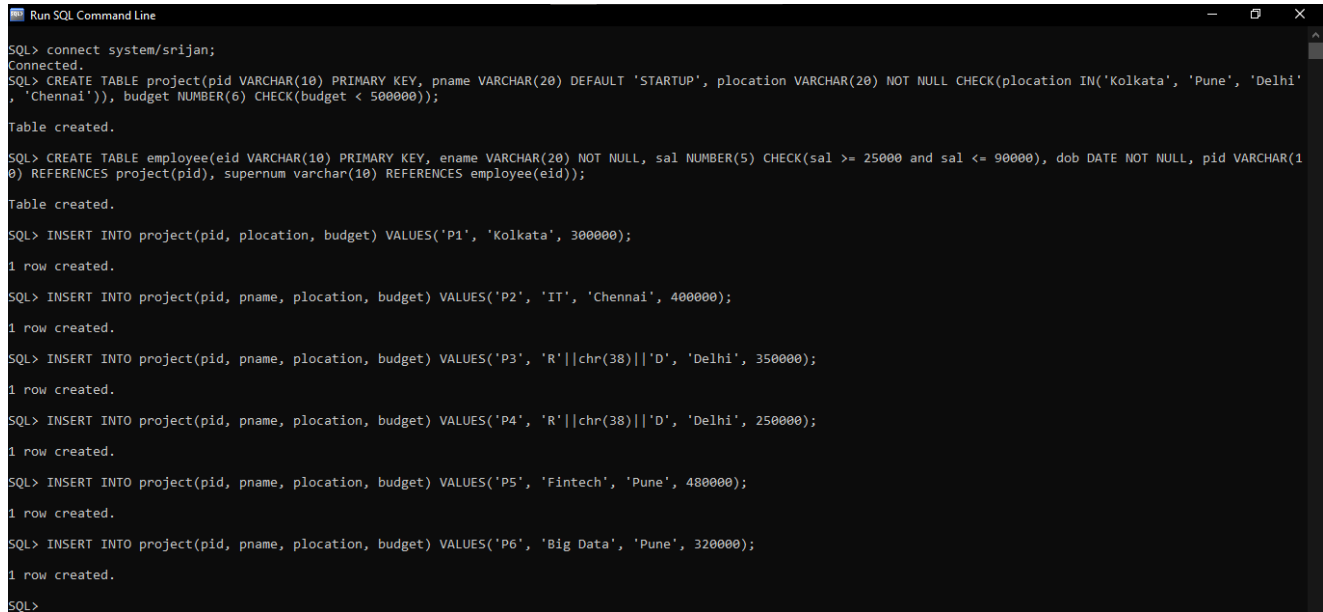
```
CREATE TABLE employee(eid VARCHAR(10) PRIMARY KEY, ename VARCHAR(20) NOT NULL, sal NUMBER(5) CHECK(sal >= 25000 and sal <= 90000), dob DATE NOT NULL, pid VARCHAR(10) REFERENCES project(pid), supernum varchar(10) REFERENCES employee(eid));
```



```
Run SQL Command Line
SQL> connect system/srijan;
Connected.
SQL> CREATE TABLE project(pid VARCHAR(10) PRIMARY KEY, pname VARCHAR(20) DEFAULT 'STARTUP', plocation VARCHAR(20) NOT NULL CHECK(plocation IN('Kolkata', 'Pune', 'Delhi', 'Chennai')), budget NUMBER(6) CHECK(budget < 500000));
Table created.
SQL> CREATE TABLE employee(eid VARCHAR(10) PRIMARY KEY, ename VARCHAR(20) NOT NULL, sal NUMBER(5) CHECK(sal >= 25000 and sal <= 90000), dob DATE NOT NULL, pid VARCHAR(10) REFERENCES project(pid), supernum varchar(10) REFERENCES employee(eid));
Table created.
SQL>
```

```
INSERT INTO project(pid, plocation, budget) VALUES('P1', 'Kolkata', 300000);
INSERT INTO project(pid, pname, plocation, budget) VALUES('P2', 'IT', 'Chennai', 400000);
INSERT INTO project(pid, pname, plocation, budget) VALUES('P3', 'R'||chr(38)||'D', 'Delhi', 350000);
INSERT INTO project(pid, pname, plocation, budget) VALUES('P4', 'R'||chr(38)||'D', 'Delhi', 250000);
```

```
INSERT INTO project(pid, pname, plocation, budget) VALUES('P5', 'Fintech',  
'Pune', 480000);  
INSERT INTO project(pid, pname, plocation, budget) VALUES('P6', 'Big Data',  
'Pune', 320000);
```



```
Run SQL Command Line  
SQL> connect system/srijan;  
Connected.  
SQL> CREATE TABLE project(pid VARCHAR(10) PRIMARY KEY, pname VARCHAR(20) DEFAULT 'STARTUP', plocation VARCHAR(20) NOT NULL CHECK(plocation IN('Kolkata', 'Pune', 'Delhi',  
'Chennai')), budget NUMBER(6) CHECK(budget < 500000));  
Table created.  
SQL> CREATE TABLE employee(eid VARCHAR(10) PRIMARY KEY, ename VARCHAR(20) NOT NULL, sal NUMBER(5) CHECK(sal >= 25000 and sal <= 90000), dob DATE NOT NULL, pid VARCHAR(10)  
REFERENCES project(pid), supernum varchar(10) REFERENCES employee(eid));  
Table created.  
SQL> INSERT INTO project(pid, plocation, budget) VALUES('P1', 'Kolkata', 300000);  
1 row created.  
SQL> INSERT INTO project(pid, pname, plocation, budget) VALUES('P2', 'IT', 'Chennai', 400000);  
1 row created.  
SQL> INSERT INTO project(pid, pname, plocation, budget) VALUES('P3', 'R'||chr(38)||'D', 'Delhi', 350000);  
1 row created.  
SQL> INSERT INTO project(pid, pname, plocation, budget) VALUES('P4', 'R'||chr(38)||'D', 'Delhi', 250000);  
1 row created.  
SQL> INSERT INTO project(pid, pname, plocation, budget) VALUES('P5', 'Fintech', 'Pune', 480000);  
1 row created.  
SQL> INSERT INTO project(pid, pname, plocation, budget) VALUES('P6', 'Big Data', 'Pune', 320000);  
1 row created.  
SQL>
```

```
INSERT INTO employee(eid, ename, sal, dob, pid) VALUES('E1', 'Rajesh', 25000,  
'23-JUN-1991', 'P1');  
INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E2',  
'Rakesh', 52000, '04-JAN-1993', 'P2', 'E1');  
INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E3',  
'Sumit', 45000, '07-SEP-1991', 'P6', 'E1');  
INSERT INTO employee(eid, ename, sal, dob, pid) VALUES('E4', 'Sharon', 65000,  
'01-APR-1992', 'P3');  
INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E5',  
'Kavya', 62000, '23-AUG-1995', 'P4', 'E4');  
INSERT INTO employee(eid, ename, sal, dob, pid) VALUES('E6', 'Kriti', 35000,  
'03-JUN-1990', 'P2');  
INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E7',  
'Ankush', 52000, '13-FEB-1996', 'P5', 'E6');  
INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E8',  
'Sameer', 45000, '12-NOV-1993', 'P6', 'E6');  
INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E9',  
'Nadeem', 56000, '10-JUN-1993', 'P3', 'E1');  
INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E10',  
'Shruti', 82000, '30-JUL-1994', 'P5', 'E4');
```

```
Run SQL Command Line
SQL> INSERT INTO employee(eid, ename, sal, dob, pid) VALUES('E1', 'Rajesh', 25000, '23-JUN-1991', 'P1');
1 row created.
SQL> INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E2', 'Rakesh', 52000, '04-JAN-1993', 'P2', 'E1');
1 row created.
SQL> INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E3', 'Sumit', 45000, '07-SEP-1991', 'P6', 'E1');
1 row created.
SQL> INSERT INTO employee(eid, ename, sal, dob, pid) VALUES('E4', 'Sharon', 65000, '01-APR-1992', 'P3');
1 row created.
SQL> INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E5', 'Kavya', 62000, '23-AUG-1995', 'P4', 'E4');
1 row created.
SQL> INSERT INTO employee(eid, ename, sal, dob, pid) VALUES('E6', 'Kriti', 35000, '03-JUN-1990', 'P2');
1 row created.
SQL> INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E7', 'Ankush', 52000, '13-FEB-1996', 'P5', 'E6');
1 row created.
SQL> INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E8', 'Sameer', 45000, '12-NOV-1993', 'P6', 'E6');
1 row created.
SQL> INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E9', 'Nadeem', 56000, '10-JUN-1993', 'P3', 'E1');
1 row created.
SQL> INSERT INTO employee(eid, ename, sal, dob, pid, supernum) VALUES('E10', 'Shruti', 82000, '30-JUL-1994', 'P5', 'E4');
1 row created.
SQL>
```

```
SELECT * FROM project;
DESC project;
SELECT * FROM employee;
DESC employee;
SELECT ename, dob FROM employee WHERE sal BETWEEN 50000 AND 60000;
SELECT ename, sal FROM employee WHERE pid = 'P5';
SELECT ename FROM employee WHERE dob BETWEEN '01-JAN-1993' AND '31-DEC-1993';
SELECT * FROM project WHERE budget >= 400000;
SELECT DISTINCT pname FROM project;
SELECT * FROM project WHERE plocation = 'Kolkata';
SELECT * FROM project WHERE plocation = 'Pune' AND budget >= 30000;
```

```
Run SQL Command Line
SQL> SELECT * FROM project;

PID      PNAME      PLOCATION      BUDGET
-----
P1       STARTUP    Kolkata        300000
P2       IT         Chennai        400000
P3       R&D       Delhi          350000
P4       R&D       Delhi          250000
P5       Fintech    Pune           480000
P6       Big Data   Pune           320000

6 rows selected.
SQL>
```

```
Run SQL Command Line
SQL> DESC project;

Name                Null?    Type
-----
PID                 NOT NULL VARCHAR2(10)
PNAME                NULL     VARCHAR2(20)
PLOCATION             NOT NULL VARCHAR2(20)
BUDGET               NULL     NUMBER(6)

SQL>
```

```
Run SQL Command Line
SQL> SELECT * FROM employee;

EID      ENAME      SAL DOB      PID      SUPERNUM
-----
E1       Rajesh     25000 23-JUN-01 P1
E2       Rakesh     52000 04-JAN-03 P2      E1
E3       Sumit      45000 07-SEP-01 P6      E1
E4       Sharon     65000 01-APR-02 P3
E5       Kavya      62000 23-AUG-05 P4      E4
E6       Kriti      35000 03-JUN-00 P2
E7       Ankush     52000 13-FEB-06 P5      E6
E8       Sameer     45000 12-NOV-03 P6      E6
E9       Nadeem     56000 10-JUN-03 P3      E1
E10      Shruti     82000 30-JUL-04 P5      E4

10 rows selected.
SQL>
```

```
Run SQL Command Line
SQL> DESC employee;
Name                               Null?   Type
-----
EID                                NOT NULL VARCHAR2(10)
ENAME                              NOT NULL VARCHAR2(20)
SAL                                NUMBER(5)
DOB                                NOT NULL DATE
PID                                VARCHAR2(10)
SUPERNUM                           VARCHAR2(10)
SQL> _
```

```
Run SQL Command Line
SQL> SELECT ename, dob FROM employee WHERE sal BETWEEN 50000 AND 60000;
ENAME          DOB
-----
Rakesh         04-JAN-93
Ankush         13-FEB-96
Nadeem         10-JUN-93
SQL> _
```

```
Run SQL Command Line
SQL> SELECT ename, sal FROM employee WHERE pid = 'P5';
ENAME          SAL
-----
Ankush         52000
Shruti         82000
SQL> _
```

```
Run SQL Command Line
SQL> SELECT ename FROM employee WHERE dob BETWEEN '01-JAN-1993' AND '31-DEC-1993';
ENAME
-----
Rakesh
Sameer
Nadeem
SQL> _
```

```
Run SQL Command Line
SQL> SELECT * FROM project WHERE budget >= 400000;
PID      PNAME          PLOCATION          BUDGET
-----
P2       IT              Chennai          400000
P5       Fintech         Pune             480000
SQL> _
```

```
Run SQL Command Line
SQL> SELECT DISTINCT pname FROM project;
PNAME
-----
IT
Big Data
Fintech
STARTUP
R&D
SQL> _
```

```
Run SQL Command Line
SQL> SELECT * FROM project WHERE plocation = 'Kolkata';
PID      PNAME          PLOCATION          BUDGET
-----
P1       STARTUP        Kolkata           300000
SQL> _
```

```
Run SQL Command Line
SQL> SELECT * FROM project WHERE plocation = 'Pune' AND budget >= 300000;
PID      PNAME          PLOCATION          BUDGET
-----
P5       Fintech        Pune             480000
P6       Big Data       Pune             320000
SQL> _
```