

Spool File For Oracle Students Trained By Mr. Balram

```
SQL> CREATE TABLE SAMPLESELPK01
  2  (
  3  SAMPID  NUMBER(2)
  4  CONSTRAINT  SAMPLESELPK01_SAMPID_PK  PRIMARY KEY,
  5  SAMPNAME  VARCHAR2(10),
  6  SAMPDATE  DATE,
  7  SAMPIDFK  NUMBER(2)
  8  CONSTRAINT  SAMPLESELPK01_SAMPIDFK_FK
  9  REFERENCES  SAMPLESELPK01(SAMPID)
 10  );
```

Table created.

```
SQL> INSERT INTO SAMPLESELPK01
  2  VALUES(01, 'Sample01', SYSDATE, NULL);
```

1 row created.

```
SQL> INSERT INTO SAMPLESELPK01
  2  VALUES(02, 'Sample02', SYSDATE, 1);
```

1 row created.

```
SQL> INSERT INTO SAMPLESELPK01
  2  VALUES(03, 'Sample03', SYSDATE, 1);
```

1 row created.

```
SQL> INSERT INTO SAMPLESELPK01
  2  VALUES(04, 'Sample04', SYSDATE, 2);
```

1 row created.

```
SQL> INSERT INTO SAMPLESELPK01
  2  VALUES(05, 'Sample05', SYSDATE, 2);
```

1 row created.

```
SQL> COMMIT;
```

Commit complete.

```
SQL> SELECT * FROM SAMPLESELPK01;
```

SAMPID	SAMPNAME	SAMPDATE	SAMPIDFK
1	Sample01	14-APR-20	
2	Sample02	14-APR-20	1
3	Sample03	14-APR-20	1
4	Sample04	14-APR-20	2
5	Sample05	14-APR-20	2

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```
SQL> CREATE TABLE SAMPLESELPK02
 2  (
 3  SAMPID  NUMBER(2)
 4  CONSTRAINT  SAMPLESELPK02_SAMPID_PK  PRIMARY KEY,
 5  SAMPNAME  VARCHAR2(10),
 6  SAMPDATE  DATE,
 7  SAMPIDFK  NUMBER(2)
 8  CONSTRAINT  SAMPLESELPK02_SAMPIDFK_NN  NOT NULL
 9  CONSTRAINT  SAMPLESELPK02_SAMPIDFK_FK
10  REFERENCES  SAMPLESELPK02(SAMPID)
11  );
```

Table created.

```
SQL> INSERT INTO SAMPLESELPK02
 2  VALUES(01, 'Sample01', SYSDATE, 1);
```

1 row created.

```
SQL> INSERT INTO SAMPLESELPK02
 2  VALUES(02, 'Sample02', SYSDATE, 1);
```

1 row created.

```
SQL> COMMIT;
```

Commit complete.

```
SQL> SELECT * FROM SAMPLESELPK01;
```

	SAMPID	SAMPNAME	SAMPDATE	SAMPIDFK
-----	-----	-----	-----	-----
	1	Sample01	14-APR-20	
	2	Sample02	14-APR-20	1
	3	Sample02	14-APR-20	1
	4	Sample04	14-APR-20	2
	5	Sample05	14-APR-20	2

```
SQL> DELETE FROM SAMPLESELPK01
 2  WHERE SAMPID = 1;
```

```
DELETE FROM SAMPLESELPK01
```

```
*
```

ERROR at line 1:

ORA-02292: integrity constraint (SCOTT.SAMPLESELPK01_SAMPIDFK_FK)
violated - child record found

```
SQL> DELETE FROM SAMPLESELPK01
 2  WHERE SAMPID = 2;
```

```
DELETE FROM SAMPLESELPK01
```

```
*
```

ERROR at line 1:

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ORA-02292: integrity constraint (SCOTT.SAMPLESELFPK01_SAMPIDFK_FK)
violated - child record found

```
SQL> DELETE FROM SAMPLESELFPK01
      2 WHERE SAMPID =4;
```

1 row deleted.

```
SQL> DELETE FROM SAMPLESELFPK01
      2 WHERE SAMPID =5;
```

1 row deleted.

```
SQL> DELETE FROM SAMPLESELFPK01
      2 WHERE SAMPID =3;
```

1 row deleted.

```
SQL> DELETE FROM SAMPLESELFPK01
      2 WHERE SAMPID =2;
```

1 row deleted.

```
SQL> DELETE FROM SAMPLESELFPK01
      2 WHERE SAMPID =1;
```

1 row deleted.

```
SQL> SELECT * FROM SAMPLESELFPK01;
```

no rows selected

SQL> --We Can Delete A Parental Record Only When It's Child Records are Deleted First.

```
SQL> CREATE TABLE SAMPLEPK01
      2 (
      3 SAMPID NUMBER(2)
      4 CONSTRAINT SAMPLEPK01_SAMPID_PK PRIMARY KEY,
      5 SAMPNAME VARCHAR2(10),
      6 SAMPDATE DATE
      7 );
```

Table created.

```
SQL> CREATE TABLE SAMPLEFK01
      2 (
      3 SAMPID NUMBER(2)
      4 CONSTRAINT SAMPLEFK01_SAMPID_PK PRIMARY KEY,
      5 SAMPNAME VARCHAR2(10),
      6 SAMPDATE DATE,
      7 SAMPIDFK NUMBER(2)
      8 CONSTRAINT SAMPLEFK01_SAMPIDFK_NN NOT NULL
```

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```
9  CONSTRAINT SAMPLEFK01_SAMPIDFK_FK
10 REFERENCES SAMPLEPK01(SAMPID)
11 ON DELETE CASCADE
12 );
```

Table created.

```
SQL> CREATE TABLE SAMPLEFK02
2  (
3  SAMPID  NUMBER(2)
4  CONSTRAINT SAMPLEFK02_SAMPID_PK  PRIMARY KEY,
5  SAMPNAME  VARCHAR2(10),
6  SAMPDATE  DATE,
7  SAMPIDFK  NUMBER(2)
8  CONSTRAINT SAMPLEFK02_SAMPIDFK_FK
9  REFERENCES SAMPLEPK01(SAMPID)
10 ON DELETE SET NULL
11 );
```

Table created.

```
SQL> BEGIN
2  INSERT INTO SAMPLEPK01
3  VALUES (1, 'SAMPLE01', SYSDATE);
4  INSERT INTO SAMPLEPK01
5  VALUES (2, 'SAMPLE02', SYSDATE);
6  INSERT INTO SAMPLEPK01
7  VALUES (3, 'SAMPLE03', SYSDATE);
8  INSERT INTO SAMPLEPK01
9  VALUES (4, 'SAMPLE04', SYSDATE);
10 INSERT INTO SAMPLEPK01
11 VALUES (5, 'SAMPLE05', SYSDATE);
12 INSERT INTO SAMPLEPK01
13 VALUES (6, 'SAMPLE06', SYSDATE);
14 INSERT INTO SAMPLEPK01
15 VALUES (7, 'SAMPLE07', SYSDATE);
16 INSERT INTO SAMPLEPK01
17 VALUES (8, 'SAMPLE08', SYSDATE);
18 INSERT INTO SAMPLEPK01
19 VALUES (9, 'SAMPLE09', SYSDATE);
20 COMMIT;
21 END;
22 /
```

PL/SQL procedure successfully completed.

```
SQL> BEGIN
2  INSERT INTO SAMPLEFK01
3  VALUES (10, 'SAMPLE10', SYSDATE, 1);
4  INSERT INTO SAMPLEFK01
5  VALUES (11, 'SAMPLE11', SYSDATE, 1);
6  INSERT INTO SAMPLEFK01
7  VALUES (12, 'SAMPLE12', SYSDATE, 1);
```

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```
8  INSERT INTO SAMPLEFK01
9  VALUES (13, 'SAMPLE13', SYSDATE, 3);
10 INSERT INTO SAMPLEFK01
11 VALUES (14, 'SAMPLE14', SYSDATE, 3);
12 INSERT INTO SAMPLEFK01
13 VALUES (15, 'SAMPLE15', SYSDATE, 6);
14 INSERT INTO SAMPLEFK01
15 VALUES (16, 'SAMPLE16', SYSDATE, 6);
16 INSERT INTO SAMPLEFK01
17 VALUES (17, 'SAMPLE17', SYSDATE, 6);
18 COMMIT;
19 END;
20 /
```

PL/SQL procedure successfully completed.

```
SQL> BEGIN
2  INSERT INTO SAMPLEFK02
3  VALUES (20, 'SAMPLE20', SYSDATE, 1);
4  INSERT INTO SAMPLEFK02
5  VALUES (21, 'SAMPLE21', SYSDATE, 1);
6  INSERT INTO SAMPLEFK02
7  VALUES (22, 'SAMPLE22', SYSDATE, 1);
8  INSERT INTO SAMPLEFK02
9  VALUES (23, 'SAMPLE23', SYSDATE, 4);
10 INSERT INTO SAMPLEFK02
11 VALUES (24, 'SAMPLE24', SYSDATE, 4);
12 INSERT INTO SAMPLEFK02
13 VALUES (25, 'SAMPLE25', SYSDATE, 7);
14 INSERT INTO SAMPLEFK02
15 VALUES (26, 'SAMPLE26', SYSDATE, 7);
16 INSERT INTO SAMPLEFK02
17 VALUES (27, 'SAMPLE17', SYSDATE, 7);
18 COMMIT;
19 END;
20 /
```

PL/SQL procedure successfully completed.

```
SQL> SELECT * FROM SAMPLEPK01;
```

SAMPID	SAMPNAME	SAMPDATE
1	SAMPLE01	14-APR-20
2	SAMPLE02	14-APR-20
3	SAMPLE03	14-APR-20
4	SAMPLE04	14-APR-20
5	SAMPLE05	14-APR-20
6	SAMPLE06	14-APR-20
7	SAMPLE07	14-APR-20
8	SAMPLE08	14-APR-20
9	SAMPLE09	14-APR-20

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9 rows selected.

```
SQL> SELECT * FROM SAMPLEFK01;
```

SAMPID	SAMPNAME	SAMPDATE	SAMPIDFK
10	SAMPLE10	14-APR-20	1
11	SAMPLE11	14-APR-20	1
12	SAMPLE12	14-APR-20	1
13	SAMPLE13	14-APR-20	3
14	SAMPLE14	14-APR-20	3
15	SAMPLE15	14-APR-20	6
16	SAMPLE16	14-APR-20	6
17	SAMPLE17	14-APR-20	6

8 rows selected.

```
SQL> SELECT * FROM SAMPLEFK02;
```

SAMPID	SAMPNAME	SAMPDATE	SAMPIDFK
20	SAMPLE20	14-APR-20	1
21	SAMPLE21	14-APR-20	1
22	SAMPLE22	14-APR-20	1
23	SAMPLE23	14-APR-20	4
24	SAMPLE24	14-APR-20	4
25	SAMPLE25	14-APR-20	7
26	SAMPLE26	14-APR-20	7
27	SAMPLE17	14-APR-20	7

8 rows selected.

```
SQL> DELETE FROM SAMPLEPK01  
2 WHERE SAMPID=8;
```

1 row deleted.

```
SQL> SELECT * FROM SAMPLEPK01;
```

SAMPID	SAMPNAME	SAMPDATE
1	SAMPLE01	14-APR-20
2	SAMPLE02	14-APR-20
3	SAMPLE03	14-APR-20
4	SAMPLE04	14-APR-20
5	SAMPLE05	14-APR-20
6	SAMPLE06	14-APR-20
7	SAMPLE07	14-APR-20
9	SAMPLE09	14-APR-20

8 rows selected.

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```
SQL> DELETE FROM SAMPLEPK01
      2 WHERE SAMPID=7;
```

1 row deleted.

```
SQL> SELECT * FROM SAMPLEPK01;
```

SAMPID	SAMPNAME	SAMPDATE
1	SAMPLE01	14-APR-20
2	SAMPLE02	14-APR-20
3	SAMPLE03	14-APR-20
4	SAMPLE04	14-APR-20
5	SAMPLE05	14-APR-20
6	SAMPLE06	14-APR-20
9	SAMPLE09	14-APR-20

7 rows selected.

```
SQL> DELETE FROM SAMPLEPK01
      2 WHERE SAMPID=3;
```

1 row deleted.

```
SQL> SELECT * FROM SAMPLEFK01;
```

SAMPID	SAMPNAME	SAMPDATE	SAMPIDFK
10	SAMPLE10	14-APR-20	1
11	SAMPLE11	14-APR-20	1
12	SAMPLE12	14-APR-20	1
15	SAMPLE15	14-APR-20	6
16	SAMPLE16	14-APR-20	6
17	SAMPLE17	14-APR-20	6

6 rows selected.

```
SQL> SELECT * FROM SAMPLEPK01;
```

SAMPID	SAMPNAME	SAMPDATE
1	SAMPLE01	14-APR-20
2	SAMPLE02	14-APR-20
4	SAMPLE04	14-APR-20
5	SAMPLE05	14-APR-20
6	SAMPLE06	14-APR-20
9	SAMPLE09	14-APR-20

6 rows selected.

```
SQL> DELETE FROM SAMPLEPK01
      2 WHERE SAMPID=1;
```

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1 row deleted.

```
SQL> SELECT * FROM SAMPLEPK01;
```

SAMPID	SAMPNAME	SAMPDATE
2	SAMPLE02	14-APR-20
4	SAMPLE04	14-APR-20
5	SAMPLE05	14-APR-20
6	SAMPLE06	14-APR-20
9	SAMPLE09	14-APR-20

```
SQL> SELECT * FROM SAMPLEPK01;
```

SAMPID	SAMPNAME	SAMPDATE
2	SAMPLE02	14-APR-20
4	SAMPLE04	14-APR-20
5	SAMPLE05	14-APR-20
6	SAMPLE06	14-APR-20
9	SAMPLE09	14-APR-20

```
SQL> SELECT * FROM SAMPLEFK01;
```

SAMPID	SAMPNAME	SAMPDATE	SAMPIDFK
15	SAMPLE15	14-APR-20	6
16	SAMPLE16	14-APR-20	6
17	SAMPLE17	14-APR-20	6

```
SQL> SELECT * FROM SAMPLEFK02;
```

SAMPID	SAMPNAME	SAMPDATE	SAMPIDFK
20	SAMPLE20	14-APR-20	
21	SAMPLE21	14-APR-20	
22	SAMPLE22	14-APR-20	
23	SAMPLE23	14-APR-20	4
24	SAMPLE24	14-APR-20	4
25	SAMPLE25	14-APR-20	
26	SAMPLE26	14-APR-20	
27	SAMPLE17	14-APR-20	

8 rows selected.

```
SQL> --COMPOSITE PRIMARY KEY AND FOREIGN KEY EXAMPLES
```

```
SQL> CREATE TABLE SAMPLECKPK02
```

```
2  (  
3  SAMPID  NUMBER(2),  
4  SAMPNAME VARCHAR2(10),
```


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```
5  SAMPDATE  DATE,
6  CONSTRAINT SAMPLECKPK02_SAMPIDNAME_CKPK
7  PRIMARY KEY (SAMPID, SAMPNAME)
8  );
```

Table created.

```
SQL> CREATE TABLE SAMPLECKFK02
2  (
3  SAMPID  NUMBER(2)
4  CONSTRAINT SAMPLECKFK02_SAMPID_PK PRIMARY KEY,
5  SAMPNAME  VARCHAR2(10),
6  SAMPDATE  DATE,
7  SAMPIDCKFK  NUMBER(2),
8  SAMPNAMECKFK  VARCHAR2(10),
9  CONSTRAINT SAMPLECKFK02_SAMPIDNAME_CKPK
10 FOREIGN KEY (SAMPIDCKFK, SAMPNAMECKFK)
11 REFERENCES SAMPLECKPK02 (SAMPID, SAMPNAME)
12 );
```

Table created.

```
SQL> CREATE TABLE SAMPLEPK03
2  (
3  SAMPID  NUMBER(2)
4  CONSTRAINT SAMPLEPK03_SAMPID_PK PRIMARY KEY,
5  SAMPNAME  VARCHAR2(10),
6  SAMPDATE  DATE
7  );
```

Table created.

```
SQL> CREATE TABLE SAMPLEFK03
2  (
3  SAMPID  NUMBER(2),
4  SAMPNAME  VARCHAR2(10),
5  SAMPDATE  DATE,
6  CONSTRAINT SAMPLEFK03_SAMPID_FK
7  FOREIGN KEY (SAMPID)
8  REFERENCES SAMPLEPK03 (SAMPID),
9  CONSTRAINT SAMPLEFK_03_SAMPID_PK
10 PRIMARY KEY (SAMPID)
11 );
```

Table created.

```
SQL> CREATE TABLE SAMPLEPK04
2  (
3  SAMPID  NUMBER(2)
4  CONSTRAINT SAMPLEPK04_SAMPID_PK PRIMARY KEY,
5  SAMPNAME  VARCHAR2(10),
6  SAMPDATE  DATE,
```

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```
7  SAMPIDUNQ  NUMBER(2)
8  CONSTRAINT  SAMPLEPK04_SAMPIDUNQ_UNQ  UNIQUE
9  );
```

Table created.

```
SQL> CREATE TABLE SAMPLEFK04
2  (
3  SAMPID  NUMBER(2)
4  CONSTRAINT  SAMPLEFK04_SAMPID_PK  PRIMARY KEY,
5  SAMPNAME  VARCHAR2(10),
6  SAMPDATE  DATE,
7  SAMPIDFK  NUMBER(2)
8  CONSTRAINT  SAMPLEFK04_SAMPIDFK_FK
9  REFERENCES  SAMPLEPK04(SAMPID),
10 SAMPIDUNQ  NUMBER(2)
11 CONSTRAINT  SAMPLEFK04_SAMPIDUNQ_FK
12 REFERENCES  SAMPLEPK04(SAMPIDUNQ)
13 );
```

Table created.

```
SQL> SPOOL OFF
```