

14-2: PRIMARY KEY, FOREIGN KEY, and CHECK Constraints

Vocabulary

- 1.ON DELETE CASCADE
- 2.Check Constraint
- 3.PRIMARY KEY
- 4.NOT NULL
- 5.ON DELETE SET NULL
- 6.FOREIGN KEY Constraint

Try It / Solve It

1.
 - a. PRIMARY KEY
Uniquely identify each row in table.
 - b. FOREIGN KEY
Referential integrity constraint links back parent table's primary/unique key to child table's column.
 - c. CHECK CONSTRAINT
Explicitly define condition to be met by each row's fields. This condition must be returned as true or unknown.
2.
animal_id NUMBER(6)-primary key
name VARCHAR2(25)
license_tag_number NUMBER(10) -unique
admit_date DATE--not null
adoption_id NUMBER(5),
vaccination_date DATE -not null
3.
CREATE TABLE animals
(animal_id NUMBER(6,0) CONSTRAINT anl_anl_id_pk PRIMARY KEY ,
name VARCHAR2(25),
license_tag_number NUMBER(10,0) CONSTRAINT anl_l_tag_num_uk UNIQUE,
admit_date DATE CONSTRAINT anl_adt_dat_nn NOT NULL ENABLE,
adoption_id NUMBER(5,0),
vaccination_date DATE CONSTRAINT anl_vcc_dat_nn NOT NULL ENABLE);

4.

```
INSERT INTO animals
VALUES( 101, 'Spot', 35540, TO_DATE('10-Oct-2004', 'DD-Mon-YYYY'), 205,
TO_DATE('12-Oct-2004', 'DD-Mon-YYYY'));
SELECT * FROM ANIMALS;
```

5.

```
UPDATE animals
SET adoption_id = NULL;
ALTER TABLE animals
MODIFY ( adoption_id NUMBER(5,0) CONSTRAINT anl_adopt_id_fk REFERENCES
adoptions(id) ENABLE );
```

6.

A. But in fact child table also lost the row referring to this parent row:

B. Value in animals.adoption_id where 500 adoptions.id from parent was referred is now set to NULL;

7.

I cannot specify check constraint for a view however in this case I could use WITH CHECK OPTION clause

- I am restricted to columns from self table and fields in self row.
- I cannot use subqueries and scalar subquery expressions.
- I cannot call functions that are not deterministic e.g. CURRENT_DATE, CURRENT_TIMESTAMP, DBTIMEZONE, LOCALTIMESTAMP, SESSIONTIMEZONE, SYSDATE, SYSTIMESTAMP, UID, USER, and USERENV