

NOT NULL Constraint

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Table Creation [With age as NOT NULL attribute]

```
SQL> create table t4(
  2  name varchar2(10),
  3  age number(10) NOT NULL);

Table created.

SQL> desc t4
Name                                     Null?      Type
-----
NAME                                     VCHAR2(10)
AGE                                     NOT NULL  NUMBER(10)
```

Adding a new column 'gender'

```
SQL> alter table t4 add gender varchar2(30);

Table altered.

SQL> desc t4;
Name                                     Null?      Type
-----
NAME                                     VCHAR2(10)
AGE                                     NUMBER(10)
GENDER                                  VCHAR2(30)
```

Inserting the data into the table

```
SQL> insert into t4 values('Chandler',45,'Male');

1 row created.

SQL> insert into t4 values('Joey',32,'Male');

1 row created.

SQL> insert into t4 values('Ross',43,null);

1 row created.
```

Trying to ADD constraint to the existing column

Note : In row3, under 'gender' NULL values are present

```
SQL> select * from t4;
```

NAME	AGE	GENDER
Chandler	45	Male
Joey	32	Male
Ross	43	

Now it is not possible to make the column 'gender' as NOT NULL constrain since it has already a NULL value.

```
SQL> alter table t4 modify(gender NOT NULL);
alter table t4 modify(gender NOT NULL)
*
ERROR at line 1:
ORA-02296: cannot enable (SYSTEM.) - null values found
```

From here it is clear in-order to add a Constraint to an existing column the column should obey the constrain before the constrain is applied to that column.

Unique Key constraint

Creation of a table

```
Oracle Database 10g Express Edition Release 10.2.0.1.0 - Production

SQL> create table new(
  2  Brand varchar2(30),
  3  Model varchar2(30),
  4  RAM_ROM number(10));

Table created.
```

Inserting the values into the table

```
SQL> insert into new values('Apple','iphone-11',464);

1 row created.

SQL> insert into new values('Samsung','Galaxy Note 4',8128);

1 row created.

SQL> insert into new values('Oneplus','Nord',6128);

1 row created.

SQL> select * from new;
```

BRAND	MODEL	RAM_ROM
Apple	iphone-11	464
Samsung	Galaxy Note 4	8128
Oneplus	Nord	6128

Adding the Unique key constraint to the exiting column

```
SQL> alter table new modify model constraint uniquemodel_nn unique;

Table altered.
```

Trying to enter repeated value and error is triggered

```
SQL> select * from new;
```

BRAND	MODEL	RAM_ROM
Apple	iphone-11	464
Samsung	Galaxy Note 4	8128
Oneplus	Nord	6128

```
SQL> insert into new values('Motorolla','Nord','8256');
insert into new values('Motorolla','Nord','8256')
*
ERROR at line 1:
ORA-00001: unique constraint (SYSTEM.UNIQUEMODEL_NN) violated
```

Primary key constraint

How to find the constraints what are all present in our existing table??

```
SQL> select constraint_name,constraint_type from user_constraints where table_name = 'NEW';
```

CONSTRAINT_NAME	C
-----	-
UNIQUEMODEL_NN	U

Adding the primary key constraint

```
SQL> alter table new add constraint ram_rom_pk primary key(ram_rom);
```

Table altered.

```
SQL> select constraint_name,constraint_type from user_constraints where table_name = 'NEW';
```

CONSTRAINT_NAME	C
-----	-
UNIQUEMODEL_NN	U
RAM_ROM_PK	P

Adding the repeating value, error is triggered

```
SQL> insert into new values('Google','Pixel-4a',8128);
insert into new values('Google','Pixel-4a',8128)
*
ERROR at line 1:
ORA-00001: unique constraint (SYSTEM.RAM_ROM_PK) violated
```

Check constraint

The primary key of table1 becomes the foreign key of table2

```
SQL> desc new1;
  Name                                     Null?   Type
-----
  RAM_ROM                                NUMBER(10)
  OPERATING_SYSTEM                       VARCHAR2(10)

SQL> select * from new1;

  RAM_ROM OPERATING_
-----
    464 Iphone OS
    8128 Samsung OS
    6128 Oneplus OS

SQL> select * from new;

BRAND      MODEL      RAM_ROM
-----
Apple      iphone-11      464
Samsung    Galaxy Note 4  8128
Oneplus     Nord          6128

SQL> select constraint_name,constraint_type from user_constraints where table_name = 'NEW';

CONSTRAINT_NAME      C
-----
UNIQUEMODEL_NN        U
RAM_ROM_PK            P
```

```
SQL> alter table new1
  2  add constraint Ram_Rom_fk foreign key(Ram_Rom)
  3  references new(Ram_Rom) on delete set null;
```

Table altered.

Commit , Rollback and Save point

```
SQL> savepoint s1;

Savepoint created.

SQL> create table go(id number(10),name varchar2(30));

Table created.

SQL> insert into go(123,'prashanth');
insert into go(123,'prashanth')
      *
```

ERROR at line 1:
ORA-00928: missing SELECT keyword

```
SQL> insert into go values(123,'Prashanth');

1 row created.

SQL> insert into go values(619,'Sheez');

1 row created.

SQL> insert into go values(919,'Mothish');

1 row created.

SQL> select * from go;

      ID NAME
-----
      123 Prashanth
      619 Sheez
      919 Mothish
```

```
SQL> roll back to s1;

Rollback complete.

SQL> select * from go;

no rows selected

SQL>
```

```
SQL> savepoint s2;
```

Savepoint created.

```
SQL> insert into go values(456,'Monica');
```

1 row created.

```
SQL> commit;
```

Commit complete.

```
SQL> select * from go;
```

ID	NAME
456	Monica

```
SQL>
```