

Some SQL Statements in Object-oriented Oracle

--Creating a Type --

```
SQL> create type Name as object(
```

```
2  firstName varchar2(20),
```

```
3  lastName varchar2(20))
```

```
4  /
```

Type created.

```
SQL> desc Name
```

Name	Null?	Type
------	-------	------

FIRSTNAME		VARCHAR2(20)
-----------	--	--------------

LASTNAME		VARCHAR2(20)
----------	--	--------------

```
SQL> create type Address as object(
```

```
2  street varchar2(20),
```

```
3  city varchar2(20),
```

```
4  zip integer)
```

```
5  /
```

Type created.

--Creating a Table using Type --

```
SQL> create table person(
```

```
2  name Name,
```

```
3  addr Address,
```

```
4  dob date)
```

```
5  /
```

Table created.

```
SQL> desc person
```

Name	Null?	Type

NAME		NAME
ADDR		ADDRESS
DOB		DATE

```
SQL> desc Address
```

Name	Null?	Type

STREET		VARCHAR2(20)
CITY		VARCHAR2(20)
ZIP		NUMBER(38)

--Insertion of rows into the table --

SQL> insert into person values (new Name('Alice','Huq'), new Address('Aftabnagar','Dhaka',1212), '01-J

1 row created.

SQL> select * from person;

NAME(FIRSTNAME, LASTNAME)

ADDR(STREET, CITY, ZIP)

DOB

NAME('Alice', 'Huq')

ADDRESS('Aftabnagar', 'Dhaka', 1212)

01-JAN-94

--Unnesting the tuple --

```
SQL> select t.name.firstName, t.addr.zip, dob from person t;
```

```
NAME.FIRSTNAME    ADDR.ZIP DOB
```

```
-----
```

```
Alice            1212 01-JAN-94
```

```
SQL> select * from person;
```

```
NAME(FIRSTNAME, LASTNAME)
```

```
-----
```

```
ADDR(STREET, CITY, ZIP)
```

```
-----
```

```
DOB
```

```
-----
```

```
NAME('Alice', 'Huq')
```

```
ADDRESS('Aftabnagar', 'Dhaka', 1212)
```

```
01-JAN-94
```

```
SQL> SELECT X.NAME.FIRSTNAME FROM PERSON X;
```

```
NAME.FIRSTNAME
```

```
-----
```

```
Alice
```

```
SQL> SELECT X.NAME.FIRSTNAME, X.NAME.LASTNAME FROM PERSON X;
```

```
NAME.FIRSTNAME    NAME.LASTNAME
```

```
-----
```

```
Alice            Huq
```

```
SQL> SELECT X.NAME.FIRSTNAME AS FIRST, X.NAME.LASTNAME AS LAST FROM PERSON X;
```

FIRST	LAST
-------	------

Alice	Huq
-------	-----

--Create a type contains Multiple Values of the same type --

```
SQL> CREATE TYPE ADDRESS_TAB IS TABLE OF ADDRESS;
```

2 /

Type created.

```
SQL> DESC ADDRESS_TAB
```

ADDRESS_TAB TABLE OF ADDRESS

Name	Null?	Type
------	-------	------

STREET		VARCHAR2(20)
--------	--	--------------

CITY		VARCHAR2(20)
------	--	--------------

ZIP		NUMBER(38)
-----	--	------------

-- Create a table contains another table (Nested Table) --

```
SQL> CREATE TABLE PERSON1
```

```
2 ( name Name,
```

```
3   addr address_tab,
```

```
4   dob date
```

```
5 )
```

```
6 nested table addr store as person1_addresses
```

```
7 /
```

Table created.

```
SQL> desc person1
```

Name	Null?	Type
------	-------	------

NAME		NAME
------	--	------

ADDR		ADDRESS_TAB
------	--	-------------

DOB		DATE
-----	--	------

-- Inserting rows into a nested table --

```
SQL> insert into person1 values (Name('A','B'),Address_tab(Address('Aftabnagar','Dhaka',1212),Address(
1000)), '01-JAN-1980');
```

1 row created.

```
SQL> select * from person1;
```

NAME(FIRSTNAME, LASTNAME)

ADDR(STREET, CITY, ZIP)

DOB

NAME('A', 'B')

ADDRESS_TAB(ADDRESS('Aftabnagar', 'Dhaka', 1212), ADDRESS('Coxsbazar', 'CBA', 10

00))

01-JAN-80

-- Unnesting row of a Nested Table --

```
SQL> select p.name.firstName, q.* from person1 p, table(p.addr) q;
```

NAME.FIRSTNAME	STREET	CITY	ZIP
----------------	--------	------	-----

A	Aftabnagar	Dhaka	1212
---	------------	-------	------

A	Coxsbazar	CBA	1000
---	-----------	-----	------

```
SQL> select p.name.firstName, q.city, q.zip from person1 p, table(p.addr) q;
```

NAME.FIRSTNAME	CITY	ZIP
----------------	------	-----

A	Dhaka	1212
---	-------	------

A	CBA	1000
---	-----	------