Program No:	7
Roll No :	1525
Title of Program :	
Objective :	BATCH 1_IMPLEMENTATION OF ORDBMS USING ADT,OBJECT TABLE,REFERENCE AND DREF

Source code:

```
create type type_name13 As object
(
    fname varchar(20),
    mname varchar(20),
    lname varchar(20)

);
 /

create type type_address13 As object
(
    street varchar(20),
    city varchar(20),
    pincode number(20)

);
/

CREATE TABLE table_customer013 (
    c_id NUMBER(5) PRIMARY KEY,
    c_name type_name13,
    c_add type_address13,
    c_phno NUMBER(10)
);
```

```sql
INSERT INTO table_customer013
VALUES (
    1,
    type_name13('james', 'D', 'Bond'),
    type_address13('andheri', 'mumbai', 'maharashtra', '400061'),
    123798
);




INSERT INTO table_customer013
VALUES (
    2,
    type_name13('Thomas', 'Elva', 'Edison'),
    type_address13('Kalyan', 'Thane', 'Maharashtra', '400071'),
    123798
);

INSERT INTO table_customer013
VALUES (
    3,
    type_name13('omkar', 'D', 'Edison'),
    type_address13('Goa', 'Goa', 'Maharashtra', '400071'),
    563798
);



select * from table_customer013;


select c.c_add.street from table_customer013 c where c_id=1;
select c.c_name.fname from table_customer013 c where c_id=1;
select c_id,c.c_name.lname from table_customer013 c;

select c.c_name.fname||' ' ||c.c_name.mname||' '||c.cname.lname from
```

table_customer013 c;

OUTPUT:

```
SQL> INSERT INTO table_customer013
  2  VALUES (
  3      3,
  4      type_name13('omkar', 'D', 'Edison'),  -- Object for name with 3 arguments (first_name, last_name, middle_name)
  5      type_address13('Goa', 'Goa', 'Maharashtra', '400071'),  -- Object for address with 4 arguments (street, city, s
tate, zip)
  6      563798  -- Phone number
  7  );

1 row created.

SQL>
```

```
SQL> INSERT INTO table_customer013
  2  VALUES (
  3      2,
  4      type_name13('Thomas', 'Elva', 'Edison'),  -- Object for name with 3 arguments (first_name, last_name, middle_na
me)
  5      type_address13('Kalyan', 'Thane', 'Maharashtra', '400071'),  -- Object for address with 4 arguments (street, ci
ty, state, zip)
  6      123798  -- Phone number
  7  );

1 row created.

SQL>
SQL> INSERT INTO table_customer013
  2  VALUES (
  3      1,
  4      type_name13('james', 'D', 'Bond'),  -- Object for name with 3 arguments (first_name, last_name, middle_name)
  5      type_address13('andheri', 'mumbai', 'maharashtra', '400061'),  -- Object for address with 4 arguments (street,
city, state, zip)
  6      123798  -- Phone number
  7  );

1 row created.

SQL>
```

```
SQL> select c.c_add.street from table_customer013 c where c_id=1;

C_ADD.STREET
----------------------------------------------------------------------------------
andheri

SQL> select c.c_name.fname from table_customer013 c where c_id=1;

C_NAME.FNAME
-------------------
james

SQL> select c_id,c.c_name.lname from table_customer013 c;

      C_ID C_NAME.LNAME
---------- -------------------
         1 Bond
         2 Edison
         3 Edison

SQL> _
```

Program No:	
Roll No :	**1525**
Title of Program :	
Objective :	BATCH 1_IMPLEMENTATION OF ORDBMS USING ADT,OBJECT TABLE,REFERENCE AND DREF

SOURCE CODE:

```
CREATE TYPE ANIMAL_TY12 AS OBJECT (
   Breed VARCHAR2(25),
   Name VARCHAR2(25),
   BirthDate DATE
);

CREATE TABLE animal OF ANIMAL_TY12;

INSERT INTO animal VALUES ('Mule', 'Frances', TO_DATE('01-APR-2024', 'DD-MON-YYYY'));
INSERT INTO animal VALUES ('germna shepherd', 'dog', TO_DATE('11-JUN-2024', 'DD-MON-YYYY'));
INSERT INTO animal VALUES ('Bulldog', 'BRUNO', TO_DATE('02-JUL-2024', 'DD-MON-YYYY'));
INSERT INTO animal VALUES ('rabbit', 'Gharbosh', TO_DATE('03-AUG-2002', 'DD-MON-YYYY'));

//reference
SELECT REF(A) FROM animal A;


SELECT DEREF(REF(A)) FROM animal A;


create table KEEPER12
(KeeperName varchar2(25),AnimalKept
REF ANIMAL_TY12);
```

insert into KEEPER12 select
'CATHERINE',REF(A) from animal
A where Name="Frances";

describe keeper12

INSERT INTO KEEPER12
SELECT 'CATHERINE', REF(A)
FROM animal A
WHERE Name = 'Frances';

OUTPUT:

```
 Table created
SQL> select * from animal;

BREED                         NAME                        BIRTHDATE
_____   _____ _____

Mule                          Frances                     01-APR-24
germna shepherd               dog                         11-JUN-24
Bulldog                       BRUNO                       02-JUL-24
rabbit                        Gharbosh                    03-AUG-02

SQL> drop table KEEPER12;

Table dropped.

SQL> CREATE TABLE KEEPER12 (
  2      KeeperName VARCHAR2(25),
  3      AnimalKept REF ANIMAL_TY12
  4  );

Table created.

SQL> INSERT INTO KEEPER12
  2  SELECT 'CATHERINE', REF(A)
  3  FROM animal A
  4  WHERE Name = 'Frances';

1 row created.

SQL>
```

```
SQL> select * from keeper12;

KEEPERNAME
-------------------------
ANIMALKEPT
--------------------------------------------------------------------------------
CATHERINE
000022020891FBB7C050B54A0B89F159F14BE0DB5E4C9A47789A404F5D8FD7B87570B50058
```

```
SQL> describe keeper12
 Name                                      Null?    Type
 ----------------------------------------- -------- ------------------------------
 KEEPERNAME                                         VARCHAR2(25)
 ANIMALKEPT                                         REF OF ANIMAL_TY12

SQL>
```