Assignment No	4
Title	Implementation of ORDBMS using ADT(Abstract Data Type)
Objective	Abstract Datatype , objects , member Functions
Roll No	MCA2565

1) Create object type 'data_type1' with object attribute 'year' and function 'Prod(Invest number)', use this function to return the sum of year and invest value

Query:-

```
SQL> create type data_type1 as
  2  object(Year number,
  3  member function Prod(Invest number)
  4  return number);
  5  /

Type created.

SQL> create type body data_type1 is member
  2  function Prod(Invest number) return
  3  number is
  4  begin
  5  return(Year+Invest);
  6  end;
  7  end;
  8  /

Type body created.
```

```
SQL> create table Data(Col data_type1);

Table created.

SQL> insert into Data values(data_type1(5));

1 row created.

SQL> select d.Col.Prod(20) from Data d;

D.COL.PROD(20)
--------------
            25
```

2) Create Object type 'Name' with object attributes 'Fname ' and 'Lname'.Display the first and last name of a person using table 'Person'

Query:-

```
SQL> create type Name as
  2  object(
  3  Fname varchar(10),
  4  Lname varchar(10));
  5  /

Type created.
```

```
SQL> create table
  2  Person(PName Name);

Table created.

SQL> insert into Person values(Name('Atharva','Gore'));

1 row created.

SQL> desc Person;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 PNAME                                              NAME
```

```
SQL> select p.Pname.FName from Person p;

PNAME.FNAM
----------
Atharva

SQL> select p.Pname.FName || ' ' || p.PName.LName from Person p;

P.PNAME.FNAME||''||P.
---------------------
Atharva Gore
```

3) Create Object type 'Name' with object attributes 'Street' and 'City'. Display the street and city of a Person using table 'People' , also Display the person 'Name' and 'DOB' using 'Name' and 'Date' Object type.

Query :-

```
SQL> create type Address as
  2  object(
  3  Street varchar(10),
  4  City varchar(10));
  5  /

Type created.

SQL> create table
  2  People(Name Name,
  3  Addrs Address,
  4  DOB date);

Table created.
```

```
SQL> insert into People values(Name('Atharva','Gore'),
  2  Address('VileParle','Mumbai'),
  3  to_date('06-12-2003','dd-mm-yyyy'));

1 row created.
```

```
SQL> select * from People;

NAME(FNAME, LNAME)
--------------------------------------------------------------------------------
ADDRS(STREET, CITY)
--------------------------------------------------------------------------------
DOB
---------
NAME('Atharva', 'Gore')
ADDRESS('VileParle', 'Mumbai')
06-DEC-03


SQL> select pd.Name.FName || ' ' || pd.Name.LName from People pd;

PD.NAME.FNAME||''||PD
--------------------
Atharva Gore

SQL> select pd.Addrs.Street || ' ' || pd.Addrs.City from People pd;

PD.ADDRS.STREET||''||
--------------------
VileParle Mumbai

SQL> select DOB from People;

DOB
---------
06-DEC-03
```

4) Create Object type 'Demo' with Object attributes 'ID' and Function 'get_square' . Use this function to return the square of ID Attribute value.

Query:

```
SQL> create type Demo1 as
  2
  3  object(
  4  ID number,
  5  member function get_square
  6  return number);
  7  /

Type created.
```

```
SQL> create table
  2  Demo1_Tbl(Col Demo1);

Table created.
```

```
SQL> insert into Demo1_Tbl values(Demo1(5));

1 row created.
```

```
SQL> create type body Demo1 is member function get_square
  2  return number
  3  is n number;
  4  begin
  5  select s.Col.ID*s.Col.ID into n from Demo1_Tbl s;
  6  return(n);
  7  end;
  8  end;
  9  /

Warning: Type Body created with compilation errors.
```

```
SQL> select v.Col.get_square() from Demo1_Tbl v;

V.COL.GET_SQUARE()
------------------
                25
```