**/\*TE CMPN A-27\*/**

**Expt**: 3

**Aim**: Implementation of Structure Types and Type Inheritance.

**STRUCTURE TYPE**

**A) Implementation of composite Attributes:-**

SQL> create type Name27 as object(F\_Name varchar(10),M\_Name varchar(10),L\_Name varchar(10))Final;

2 /

Type created.

SQL> create type Address27 as object(Street varchar(20),City varchar(20),Zip\_code varchar(8)) Not Final;

2 /

Type created.

SQL> create table Customer027(c\_name Name27,c\_add Address27,DOB date);

Table created.

SQL> Insert into Customer027 values(Name27('Flevia','Francis','Fargose'),Address27('CH Road','Nallasopara','401203'),'05-oct-1992');

1 row created.

SQL> Insert into Customer027 values(Name27('Glancy','Cajitan','Rodrigues'),Address27('NM Road','Virar','401201'),'27-oct-1992');

1 row created.

SQL> Insert into Customer027 values(Name27('Stalen','Peter','Rumao'),Address27('RR Road','Virar','401201'),'27-dec-1992');

1 row created.

SQL> Insert into Customer027 values(Name27('Nicolette','Dolores','Furtado'),Address27('IC Colony','Borivali','400103'),'16-sep-1992');

1 row created.

SQL> Insert into Customer027 values(Name27('Gloria','Francis','Fargose'),Address27('SN Road','Nallasopara','401203'),'13-jun-1995');

1 row created.

SQL> Select \* from Customer027;

C\_NAME(F\_NAME, M\_NAME, L\_NAME)

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C\_ADD(STREET, CITY, ZIP\_CODE)

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DOB

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NAME27('Flevia', 'Francis', 'Fargose')

ADDRESS27('CH Road', 'Nallasopara', '401203')

05-OCT-92

NAME27('Glancy', 'Cajitan', 'Rodrigues')

ADDRESS27('NM Road', 'Virar', '401201')

27-OCT-92

C\_NAME(F\_NAME, M\_NAME, L\_NAME)

--------------------------------------------------------------------------------

C\_ADD(STREET, CITY, ZIP\_CODE)

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DOB

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NAME27('Stalen', 'Peter', 'Rumao')

ADDRESS27('RR Road', 'Virar', '401201')

27-DEC-92

NAME27('Nicolette', 'Dolores', 'Furtado')

ADDRESS27('IC Colony', 'Borivali', '400103')

C\_NAME(F\_NAME, M\_NAME, L\_NAME)

--------------------------------------------------------------------------------

C\_ADD(STREET, CITY, ZIP\_CODE)

--------------------------------------------------------------------------------

DOB

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16-SEP-92

NAME27('Gloria', 'Francis', 'Fargose')

ADDRESS27('SN Road', 'Nallasopara', '401203')

13-JUN-95

SQL> select c.c\_name.m\_name from customer027 c;

C\_NAME.M\_N

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Francis

Cajitan

Peter

Dolores

Francis

SQL> select c.c\_name.m\_name from customer027 c where c.c\_add.city='Virar';

C\_NAME.M\_N

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Cajitan

Peter

**B) Implementation of composite Attributes where rows are UDT:-**

create type Name27 as object(F\_Name varchar(10),M\_Name varchar(10),L\_Name varchar(10))Final;

2 /

Type created.

SQL> create type Address27 as object(Street varchar(20),City varchar(20),Zip\_code varchar(8)) Not Final;

2 /

Type created.

SQL> create type Customer0027\_type as Object(c\_name Name27,c\_add Address27,Dob date)Not Final;

2 /

Type created.

SQL> create Table Customer027\_1 of Customer0027\_type;

Table created.

SQL> Insert into Customer027\_1 values(Customer0027\_type(Name27('Gloria','Francis','Fargose'),Address27('SN Road','Nallasopara','401203'),'13-jun-1995'));

1 row created.

SQL> Insert into Customer027\_1 values(Customer0027\_type(Name27('Flevia','Francis','Fargose'),Address27('CH Road','Nallasopara','401203'),'05-oct-1992'));

1 row created.

SQL> Insert into Customer027\_1 values(Customer0027\_type(Name27('Glancy','Cajitan','Rodrigues'),Address27('NM Road','Virar','401201'),'27-oct-1992'));

1 row created.

SQL> Insert into Customer027\_1 values(Customer0027\_type(Name27('Stalen','Peter','Rumao'),Address27('RR Road','Virar','401201'),'27-dec-1992'));

1 row created.

SQL> select \* from Customer027\_1;

C\_NAME(F\_NAME, M\_NAME, L\_NAME)

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C\_ADD(STREET, CITY, ZIP\_CODE)

--------------------------------------------------------------------------------

DOB

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NAME27('Gloria', 'Francis', 'Fargose')

ADDRESS27('SN Road', 'Nallasopara', '401203')

13-JUN-95

NAME27('Flevia', 'Francis', 'Fargose')

ADDRESS27('CH Road', 'Nallasopara', '401203')

05-OCT-92

C\_NAME(F\_NAME, M\_NAME, L\_NAME)

--------------------------------------------------------------------------------

C\_ADD(STREET, CITY, ZIP\_CODE)

--------------------------------------------------------------------------------

DOB

---------

NAME27('Glancy', 'Cajitan', 'Rodrigues')

ADDRESS27('NM Road', 'Virar', '401201')

27-OCT-92

NAME27('Stalen', 'Peter', 'Rumao')

ADDRESS27('RR Road', 'Virar', '401201')

C\_NAME(F\_NAME, M\_NAME, L\_NAME)

--------------------------------------------------------------------------------

C\_ADD(STREET, CITY, ZIP\_CODE)

--------------------------------------------------------------------------------

DOB

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27-DEC-92

SQL> select c.c\_name.l\_name from customer027\_1 c;

C\_NAME.L\_N

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Fargose

Fargose

Rodrigues

Rumao

SQL> select c.c\_name.f\_name from customer027 c where c.c\_add.city='Nallasopara' and c.c\_add.street='CH Road';

C\_NAME.F\_N

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Flevia

**TYPE INHERITANCE**

SQL> create type Person27 as Object(p\_name varchar(10),p\_add varchar(20))Not Final;

2 /

Type created.

SQL> create type Student27\_type UNDER Person27(degree varchar(10),dept varchar(20))Final;

2 /

Type created.

SQL> create type Teacher27\_type UNDER Person27(salary number(20),dept varchar(20))Final;

2 /

Type created.

SQL> create table Student27\_tab of Student27\_type;

Table created.

SQL> create table Teacher27\_tab of Teacher27\_type;

Table created.

SQL> desc Student27\_tab

Name Null? Type

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P\_NAME VARCHAR2(10)

P\_ADD VARCHAR2(20)

DEGREE VARCHAR2(10)

DEPT VARCHAR2(20)

SQL> desc Teacher27\_tab

Name Null? Type

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P\_NAME VARCHAR2(10)

P\_ADD VARCHAR2(20)

SALARY NUMBER(20)

DEPT VARCHAR2(20)

SQL> Insert into Student27\_tab values(Student27\_type('Flevia','Bandra','B.E','CMPN'));

1 row created.

SQL> Insert into Student27\_tab values(Student27\_type('Glancy','Virar','B.E','CMPN'));

1 row created.

SQL> Insert into Student27\_tab values(Student27\_type('Stalen','Virar','B.E','EXTC'));

1 row created.

SQL> select \* from Student27\_tab;

P\_NAME P\_ADD DEGREE DEPT

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Flevia Bandra B.E CMPN

Glancy Virar B.E CMPN

Stalen Virar B.E EXTC

SQL> Insert into Teacher27\_tab values(Teacher27\_type('Aasha','Virar',40000,'EXTC'));

1 row created.

SQL> Insert into Teacher27\_tab values(Teacher27\_type('Raj','Andheri',55000,'CMPN'));

1 row created.

SQL> Insert into Teacher27\_tab values(Teacher27\_type('Jhanvi','Dadar',35000,'IT'));

1 row created.

SQL> select \* from Teacher27\_tab;

P\_NAME P\_ADD SALARY DEPT

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Aasha Virar 40000 EXTC

Raj Andheri 55000 CMPN

Jhanvi Dadar 35000 IT