**Lab for ORDBMS support in Oracle**

The following two tables are used to store the data about employees and departments:

**EMPLOYEE table with data DEPARTMENT table with data**

|  |  |  |  |
| --- | --- | --- | --- |
| ***EmpNo*** | ***EmpName*** | ***DepNo*** | ***SupervisorEmpNo*** |
| 9001 | John Smith | 1 | NULL |
| 9002 | Jack Black | 2 | 9001 |
| 9003 | Anne White | 2 | 9002 |
| 9004 | Sue Perry | NULL | 9001 |

|  |  |
| --- | --- |
| ***DepNo*** | ***DepName*** |
| 1 | Research |
| 2 | Analysis |
| 3 | Training |

1. Write a DDL statement to create a UDT for store address composed of street, city, state, and pcode.

CREATE TYPE udt\_address AS OBJECT(

street VARCHAR2(25),

city VARCHAR2(15),

province VARCHAR2(2),

postal\_code VARCHAR2(6)

);

1. Write a DDL statement to create table EMPLOYEE with the columns (as required for the above data) and including the address column (using UDT address\_type).

CREATE TABLE "ST24"."EMPLOYEE"

( "EMPNO" NUMBER(5,0),

"EMPNAME" VARCHAR2(25 BYTE),

"DEPNO" NUMBER(3,0),

"SUPERVISOREMPNO" NUMBER(5,0),

"ADDRESS" UDT\_ADDRESS" ,

PRIMARY KEY (EMPNO),

CONSTRAINT DEPFOREIGNKEY FOREIGN KEY (DEPNO)

REFERENCES DEPARTMENT (DEPNO) ENABLE,

CONSTRAINT SUP\_FOREIGNKEY FOREIGN KEY (SUPERVISOREMPNO)

REFERENCES EMPLOYEE (EMPNO) ENABLE

);

1. Add John Smith with address: 23 Special Street, Kamloops, BC, V2C 0C8.
2. Write a DML statement to list Employee from Kamloops.
3. Write a DML statement to list the employees and their supervisors (names).

Answers ☺

create type udt\_address\_type as object

(street varchar2(30),

city varchar2(30),

province char(2),

pcode char(6));

CREATE TABLE employee

( emp\_no NUMBER(4) PRIMARY KEY,

emp\_name VARCHAR2(20),

dep\_no NUMBER (3),

supervisor\_emp\_no NUMBER(4)

REFERENCES employee(emp\_no) ON DELETE SET NULL,

emp\_address udt\_address\_type );

INSERT INTO employee VALUES

(9001,'John Smith',1,NULL,

udt\_address\_type('23 Special Street', 'Kamloops','BC', 'V2C0C8') );

SELECT e.emp\_name FROM employee e WHERE e.emp\_address.city = 'Kamloops';