## **Objectives:**

The aim of this lab is to practice DDL commands: create table, alter table, drop table. Rename and Describe commands.

## **Table definition format:**

CREATE TABLE tableName (

attributeName attributeType[constraint],

attributeName attributeType [constraint],

….);

## **Attribute types:**

* number (precision, scale)
* char(size)
* varchar(size)
* varchar2(size)
* date
* binary\_double
* Notethat Boolean is replaced by number (1).

## **Attribute Constraint:**

Constraint on an attribute can be:

not null, unique, primary key, check, foreign key.

## **Lab Work:**

**To create an Employee table:**

create table emp(

fname varchar(15) not null,

minit char,

lname varchar2(15),

ssn char(9),

bdate date,

address varchar(30),

gender char,

salary decimal(10,2),

dno int not null,

primary key (ssn));

**To add a column to a table:**

alter table emp add(addr1 varchar(10) not null);

**To see the result of this operation:**

Describe emp;

**Add a column salary. The salary should be above 100 dollars:**

alter table emp add(salary number not null check(salary >100));

**To modify a column:**

alter table emp modify(addr1 varchar2(12));

**To see the result of this operation**

describe emp;

**To delete a column (physical delete):**

alter table emp drop column addr1;

or

alter table emp drop (addr, t);

**To drop more than one column or (logical delete)**

alter table emp set unused (gender);

**To rename a field**

alter table emp rename column ssn to ssn1;

**To rename a table**

rename emp to emp1;

**To drop a table:**

drop table emp1;

## **Class Exercise:**

1. Create a table student. A student has name, id and major.
2. Add a new attribute address that can be up to 40 characters.
3. Modify the column address to become a fixed length, size 20.
4. Drop the column major.
5. Show the table attributes.

## **Assignment\_1:**

1. Create table customer with four attributes number, name, address and telephone number. Each customer has a unique number and the name can be up to 14 characters.

CREATE TABLE customer (

c\_no NUMBER PRIMARY KEY,

name VARCHAR2(14) NOT NULL,

address CHAR(30),

pho\_no NUMBER (10) );

1. Add a new attribute ssn to this table. Each customer must have an ssn and it is unique.

ALTER TABLE CUSTOMER ADD (ssn char(9) UNIQUE NOT NULL);

1. Redefine the column address to become fixed length with size=20.

ALTER TABLE CUSTOMER MODIFY (address char(20));

1. Drop the column telephone number

ALTER TABLE CUSTOMER DROP COLUMN pho\_no ;

1. Rename the table customer to customer\_new.

RENAME CUSTOMER TO CUSTOMER\_NEW ;

1. Add a birth date attribute. All customer should be born after Dec 10 2000.

ALTER TABLE CUSTOMER\_NEW ADD (

birthdate DATE NOT NULL CHECK(birthdate > '10 DEC 2000') );