**Create Tables**

**SQL-**

SQL (Structured Query Language) is a nonprocedural language, you specify what you want, not how to get it. A block structured format of English key words is used in this Query language. It has the following components.

##### DDL (Data Definition Language)-

The SQL DDL provides command for defining relation schemas, deleting relations and modifying relation schema.

##### DML (DATA Manipulation Language)-

It includes commands to insert tuples into, delete tuples from and modify tuples in the database.

##### View definition-

The SQL DDL includes commands for defining views.

Transaction Control- SQL includes for specifying the beginning and ending of transactions.

##### Embedded SQL and Dynamic SQL-

Embedded and Dynamic SQL define how SQL statements can be embedded with in general purpose programming languages, such as C, C++, JAVA, COBOL and Pascal.

##### Integrity-

The SQL DDL includes commands for specifying integrity constraints that the data stored in the database must specify. Updates that violate integrity constraints are allowed.

##### Authorization-

The SQL DDL includes commands for specifying access rights to relations and views.

##### Data Definition Language-

The SQL DDL allows specification of not only a set of relations but also information about each relation, including-

* Schema for each relation
* The domain of values associated with each attribute.
* The integrity constraints.
* The set of indices to be maintained for each relation.
* The security and authorization information for each relation.
* The physical storage structure of each relation on disk.

##### Domain types in SQL-

**The SQL standard supports a variety of built in domain types, including-**

* Char (n)- A fixed length character length string with user specified length.
* Varchar (n)- A variable character length string with user specified maximum length n.
* Int- An integer.
* Small integer- A small integer.
* Numeric (p, d)-A Fixed point number with user defined precision.
* Real, double precision- Floating point and double precision floating point numbers with machine dependent precision.
* Float (n)- A floating point number, with precision of at least n digits.
* Date- A calendar date containing a (four digit) year, month and day of the month.
* Time- The time of day, in hours, minutes and seconds Eg. Time ’09:30:00’.
* Number- Number is used to store numbers (fixed or floating point).

##### DDL statement for creating a table-

**Syntax-**

Create table tablename

(columnname datatype(size), columnname datatype(size)); Creating a table from a table-

##### Syntax-

CREATE TABLE TABLENAME

[(columnname, columnname, ………)]

AS SELECT columnname, columnname……..FROM tablename;

##### Insertion of data into tables-

**Syntax-**

INSERT INTO tablename [(columnname, columnname, ………)] Values(expression, expression);

##### Inserting data into a table from another table:

**Syntax-**

INSERT INTO tablename

SELECT columnname, columnname, ……. FROM tablename;

##### Insertion of selected data into a table from another table:

**Syntax-**

INSERT INTO tablename

SELECT columnname, columnname…….. FROM tablename

WHERE columnname= expression;

##### Retrieving of data from the tables-

**Syntax-**

SELECT \* FROM tablename;

##### The retrieving of specific columns from a table-

**Syntax-**

SELECT columnname, columnname, …. FROM tablename;

##### Elimination of duplicates from the select statement-

**Syntax-**

SELECT DISTINCT columnname, columnname FROM tablename;

##### Selecting a data set from table data-

**Syntax-**

SELECT columnname, columnname FROM tablename

WHERE searchcondition;

## Assignment No.1

##### Q1. Create the following tables:

1. **client\_master**

columnname datatype size client\_no varchar2 6

name varchar2 20

address1 varchar2 30

address2 varchar2 30

city varchar2 15

pincode number 6

bal\_due number 10,2

##### Product\_master

Columnname datatype size Product\_no varchar2 10

Description varchar2 10

Profit\_percent number 4,2

Unit\_measure varchar2 10

Qty\_on\_hand number 6

Reoder\_lvl number 6

Sell\_price number 6

Cost\_price number 6

##### Q2- Insert the following data into their respective tables:

##### Data for Client Master:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Clientno | Name | city | Pincode | bal.due |
| 0001 | Ahmad | Riyadh | 400054 | 15000 |
| 0002 | Ali | Jeddah | 780001 | 0 |
| 0003 | Nourah | Dammam | 400057 | 5000 |
| 0004 | Bushra | Riyadh | 400056 | 0 |
| 0005 | Omar | Hail | 100001 | 2000 |
| 0006 | Sami | Jeddah | 400050 | 0 |

##### Data for Product Master:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Product No. | Description | Profit % | Unit\_measure | Qty\_on\_hand | Reoder\_lvl | Sell\_price | cost\_price |
| P00001 | 1.44floppies | 5 | piece | 100 | 20 | 525 | 500 |
| P03453 | Monitors | 6 | piece | 10 | 3 | 12000 | 11200 |
| P06734 | Mouse | 5 | piece | 20 | 5 | 1050 | 500 |
| P07865 | 1.22 floppies | 5 | piece | 100 | 20 | 525 | 500 |
| P07868 | Keyboards | 2 | piece | 10 | 3 | 3150 | 3050 |
| P07885 | CD Drive | 2.5 | piece | 10 | 3 | 5250 | 5100 |
| P07965 | 540 HDD | 4 | piece | 10 | 3 | 8400 | 8000 |
| P07975 | 1.44 Drive | 5 | piece | 10 | 3 | 1050 | 1000 |
| P08865 | 1.22 Drive | 5 | piece | 2 | 3 | 1050 | 1000 |

##### Q3:- On the basis of above two tables answer the following:

* 1. Find out the names of all the clients.
  2. Retrieve the list of names and cities of all the clients.
  3. List the various products available from the product\_master table.
  4. List all the clients who are located in Riyadh.
  5. Display the information for client no 0001 and 0002.
  6. Find the products with description as ‘1.44 drive’ and ‘1.22 Drive’.
  7. Find all the products whose sell price is greater than 5000.
  8. Find the list of all clients who stay in in city ‘Dammam’ or city ‘Hail’ or ‘Jeddah’.
  9. Find the product whose selling price is greater than 2000 and less than or equal to 5000.
  10. List the name, city of clients not in 'Riyadh' city.