Theory and Concept
Assignment #3

Objective:- To Implement the restrictions on the table.

Data constraints: Besides the cell name, cell length and cell data type there are other parameters i.e. other data constrains that can be passed to the DBA at check creation time. The constraints can either be placed at column level or at the table level.

i. **Column Level Constraints:** If the constraints are defined along with the column definition, it is called a column level constraint.

ii. **Table Level Constraints:** If the data constraint attached to a specify cell in a table reference the contents of another cell in the table then the user will have to use table level constraints.

Null Value Concepts:- while creating tables if a row locks a data value for particular column that value is said to be null . Column of any data types may contain null values unless the column was defined as not null when the table was created

Syntax:

Create table tablename
(columnname data type (size) not null ……)

Primary Key: primary key is one or more columns is a table used to uniquickly identity each row in the table. Primary key values must not be null and must be uniQuestion across the column. A multicolumn primary key is called composite primary key.

Syntax: primary key as a column constraint
Create table tablename
(columnname datatype (size) primary key,….)
Primary key as a table constraint
Create table tablename
(columnname datatype (size), columnname datatype(size)…
Primary key (columnname,columnname));

UniQuestion key concept:-A uniQuestion is similar to a primary key except that the purpose of a uniQuestion key is to ensure that information in the column for each record is uniQuestion as with telephone or devices license numbers. A table may have many uniQuestion keys.

Syntax: UniQuestion as a column constraint.
Create table table name
(columnname datatype (size) uniQuestion);
UniQuestion as table constraint:
Create table tablename

(columnname datatype (size),columnname datatype (size)…uniQuestion (columnname,columnname));

Default value concept: At the line of cell creation a default value can be assigned to it. When the user is loading a record with values and leaves this cell empty, the DBA wil automatically load this cell with the default value specified. The data type of the default value should match the data type of the column

Syntax:

Create table tablename
(columnname datatype (size) default value,….);

Foreign Key Concept : Foreign key represents relationship between tables. A foreign key is column whose values are derived from the primary key of the same of some other table . the existence of foreign key implies that the table with foreign key is related to the primary key table from which the foreign key is derived .A foreign key must have corresponding primary key value in the primary key table to have meaning.
Foreign key as a column constraint

Syntax :
Create table table name
(columnname datatype (size) references another table name);

Foreign key as a table constraint:

Syntax :
Create table name
(columnname datatype (size)….
primary key (columnname);
foreign key (columnname)references table name);

Check Integrity Constraints: Use the check constraints when you need to enforce intergrity rules that can be evaluated based on a logical expression following are a few examples of appropriate check constraints.

- A check constraints name column of the coient_master so that the name is entered in upper case.
- A check constraint on the client_no column of the client _master so that no client_no value starts with ‘c’

Syntax:
Create table tablename
(columnname datatype (size) CONSTRAINT constraintname)
Check (expression));

Question.2 Create the following tables:

i. Sales_master

Columnname	Datatype	Size	Attributes
Salesman_no	varchar2	6	Primary key/first letter must start with 's'
Sal_name	varchar2	20	Not null
Address	varchar2		Not null
City	varchar2	20	
State	varchar2	20	
Pincode	Number	6	
Sal_amt	Number	8,2	Not null, cannot be 0
Tgt_to_get	Number	6,2	Not null, cannot be 0
Ytd_sales	Number	6,2	Not null, cannot be 0
Remarks	Varchar2	30	

ii. Sales_order

Columnname	Datatype	Size	Attributes
S_order_no	varchar2	6	Primary/first letter must be 0
S_order_date	Date	6	Primary key reference clientno of client_master table
Client_no	Varchar2	25	
Dely_add	Varchar2	6	
Salesman_no	Varchar2	6	Foreign key references salesman_no of salesman_master table
Dely_type	Char	1	Delivery part(p)/full(f),default f
Billed_yn	Char	1	
Dely_date	Date		Can not be lessthan s_order_date
Order_status	Varchar2	10	Values ('in process';'fulfilled';back order';'canceled

I. Sales_order_details

Column	Datatype	Size	Attributes
S_order_no	Varchar2	6	Primary key/foreign key references s_order_no of sales_order
Product_no	Varchar2	6	Primary key/foreign key references product_no of product_master
Qty_order	Number	8	
Qty_disp	Number	8	
Product_rate	Number	10,2	

Insert the following data into their respective tables using insert statement:

Data for sales_man master table

Salesman_ no	Salesman name	Address	City	Pin code	State	Salamt	Tgt_to_get	Ytd Sales	Remark
500001	Kiran	A/14 worli	Bom bay	400002	Mah	3000	100	50	Good
500002	Manish	65,nariman	Bom bay	400001	Mah	3000	200	100	Good
500003	Ravi	P-7 Bandra	Bom bay	400032	Mah	3000	200	100	Good
500004	Ashish	A/5 Juhu	Bom bay	400044	Mah	3500	200	150	Good

(ii)

Data for salesorder table:

S_orderno	S_orderdate	Client no	Dely type	Bill yn	Salesman no	Delay date	Orderstatus
019001	12-jan-96	0001	F	N	50001	20-jan-96	Ip
019002	25-jan-96	0002	P	N	50002	27-jan-96	C
016865	18-feb-96	0003	F	Y	500003	20-feb-96	F
019003	03-apr-96	0001	F	Y	500001	07-apr-96	F
046866	20-may-96	0004	P	N	500002	22-may-96	C
010008	24-may-96	0005	F	N	500004	26-may-96	Ip

(iii)

Data for sales_order_details table:

S_order no	Product no	Qty ordered	Qty disp	Product_rate
019001	P00001	4	4	525
019001	P07965	2	1	8400
019001	P07885	2	1	5250
019002	P00001	10	0	525
046865	P07868	3	3	3150
046865	P07885	10	10	5250
019003	P00001	4	4	1050
019003	P03453	2	2	1050
046866	P06734	1	1	12000
046866	P07965	1	0	8400
010008	P07975	1	0	1050
010008	P00001	10	5	525