Advanced Database Management Systems
Experiment-2

To understand the concept of data constraints that is enforced on data being stored in thetable. Focus on Primary Key and the Foreign Key

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Batch- 2

```sql
CREATE DATABASE LabExperiment2;

USE LabExperiment2;

--Create the tables
CREATE TABLE client_master_1( CLIENT_NO CHAR(6) CHECK
(CLIENT_NO like 'C%'), NAME VARCHAR(20) NOT NULL, ADDRESS1
VARCHAR(30), ADDRESS2 VARCHAR(30), CITY VARCHAR(15),
PINCODE INTEGER, STATE VARCHAR(15), BAL_DUE DECIMAL(10,2),
PRIMARY KEY(CLIENT_NO));

CREATE TABLE PRODUCT_MASTER_1( PRODUCT_NO CHAR(6) PRIMARY
KEY, DESCRIPTION VARCHAR(15) NOT NULL, PROFITPERCENT
DECIMAL (4,2) NOT NULL, UNITMEASURE VARCHAR(10) NOT NULL,
QTYONHAND INTEGER NOT NULL, REORDERLVL INTEGER NOT NULL,
SELLPRICE DECIMAL(8,2) NOT NULL, COSTPRICE DECIMAL(8,2)
NOT NULL, CHECK(PRODUCT_NO like 'P%'));

CREATE TABLE SALESMAN_MASTER_1( SALESMAN_NO CHAR(6) NOT
NULL, SALESMANNAME VARCHAR(20) NOT NULL, ADDRESS1
VARCHAR(30) NOT NULL, ADDRESS2 VARCHAR(30), CITY
VARCHAR(20), PINCODE INTEGER, STATE VARCHAR(20), SALAMT
DECIMAL(8,2) CHECK(SALAMT!=0) NOT NULL, TGTTOGET
DECIMAL(6,2)CHECK(TGTTOGET!=0) NOT NULL, YTDSALES
DECIMAL(6,2) NOT NULL, REMARKS VARCHAR(60), PRIMARY
KEY(SALESMAN_NO), CONSTRAINT check_SALESMAN1_NO CHECK
(SALESMAN_NO like 'S%'));

-- Reinsert the data in these two tables based upon Lab 1.
```

```sql
INSERT INTO client_master_1 VALUES('C00001', 'Ivan bayross','','', 'Mumbai', 400054,'Maharashtra', 15000);
INSERT INTO client_master_1 VALUES('C0002', 'Mamta muzumdar','','', 'Madras',780001,'Tamilnadu', 0);
INSERT INTO client_master_1 VALUES('C0003', 'Chhaya bankar','','', 'Mumbai','400057','Maharashtra', 5000);
INSERT INTO client_master_1 VALUES('C0004', 'Ashwini joshi','','', 'Bangalore','560001', 'Karnataka', 0);
INSERT INTO client_master_1 VALUES('C0005', 'Hansel colaco','','', 'Mumbai','400060','Maharashtra', 2000);
INSERT INTO client_master_1 VALUES('C0006', 'Deepak sharma','','', 'Mangalore','560050', 'Karnataka',0);

INSERT INTO PRODUCT_MASTER_1 VALUES('P00345','Shirts',6,'Piece',150,50,500,350);
INSERT INTO PRODUCT_MASTER_1 VALUES('P06734','Cotton jeans',5,'Piece',100,20,600,450);
INSERT INTO PRODUCT_MASTER_1 VALUES('P07865','Jeans',5,'Piece',100,20,750,500);
INSERT INTO PRODUCT_MASTER_1 VALUES('P07868','Trous',2,'Piece',150,50,850,550);
INSERT INTO PRODUCT_MASTER_1 VALUES('P07885','Pull Overs',2.5,'Piece',80,30,700,450);
INSERT INTO PRODUCT_MASTER_1 VALUES('P07965','Denim jeans',4,'Piece',100,40,350,250);
insert into PRODUCT_MASTER_1 values ('P07975','Lycra tops',5,'Piece',70,30,300,175);
insert into PRODUCT_MASTER_1 values ('P08865','Skirts',5,'Piece',75,30,450,300);

insert into SALESMAN_MASTER_1 values ('S00001', 'Aman', 'A/14', 'Worli', 'Mumbai',400002,'Maharashtra',100,60,80,'EXCELLENT');
insert into SALESMAN_MASTER_1 values ('S00002','Omkar','hno65','Nariman','Mumbai',400001,'Maharasht ra',70,500,170,'sat');
insert into SALESMAN_MASTER_1 values ('S00003','Raj','P7','Bandra','Mumbai',400032,'Maharashtra',85 ,75,100,'');
insert into SALESMAN_MASTER_1 values ('S00004','Ashish','A/5','Juhu','Mumbai',400044,'Maharasht ra',50,500,800,'');
```

```sql
--Display the contents of each table.
select * from PRODUCT_MASTER_1;
select * from SALESMAN_MASTER_1;
```

Output:

	PRODUCT_NO	DESCRIPTION	PROFITPERCENT	UNITMEASURE	QTYONHAND	REORDERLVL	SELLPRICE	COSTPRICE
1	P00345	Shirts	6.00	Piece	150	50	500.00	350.00
2	P06734	Cotton jeans	5.00	Piece	100	20	600.00	450.00
3	P07865	Jeans	5.00	Piece	100	20	750.00	500.00
4	P07868	Trous	2.00	Piece	150	50	850.00	550.00
5	P07885	Pull Overs	2.50	Piece	80	30	700.00	450.00
6	P07965	Denim jeans	4.00	Piece	100	40	350.00	250.00
7	P07975	Lycra tops	5.00	Piece	70	30	300.00	175.00
8	P08865	Skirts	5.00	Piece	75	30	450.00	300.00

	SALESMAN_NO	SALESMANNAME	ADDRESS1	ADDRESS2	CITY	PINCODE	STATE	SALAMT	TGTTOGET	YTDSALES	REMARKS
1	S00001	Aman	A/14	Worli	Mumbai	400002	Maharashtra	100.00	60.00	80.00	EXCELLENT
2	S00002	Omkar	hno65	Nariman	Mumbai	400001	Maharasht ra	70.00	500.00	170.00	sat
3	S00003	Raj	P7	Bandra	Mumbai	400032	Maharashtra	85.00	75.00	100.00	
4	S00004	Ashish	A/5	Juhu	Mumbai	400044	Maharashtra	50.00	500.00	800.00	

```sql
--Create table AUTHOR
Create table AUTHOR( Author_ID varchar(5) PRIMARY KEY NOT
NULL, Lastname VARCHAR(15) NOT NULL, Firstname VARCHAR(15)
NOT NULL, Email VARCHAR(50), City VARCHAR (15), Country
VARCHAR(15) );
exec sp_columns AUTHOR;
```

Output:


```sql
--Create Table BOOK
Create Table BOOK( Book_ID VARCHAR(5) PRIMARY KEY
CHECK(Book_ID LIKE 'B%'), Book_Title VARCHAR(40) NOT NULL,
Copies INTEGER check(Copies>2) NOT NULL  );
exec sp_columns BOOK;
```

Output:

```sql
--Create table AUTHOR_LIST
Create table AUTHOR_LIST ( Author_ID VARCHAR(5), Book_ID
VARCHAR(5), Role VARCHAR(15), PRIMARY KEY(Author_ID,
Book_ID), FOREIGN KEY(Author_ID) REFERENCES
AUTHOR(Author_ID) );
exec sp_columns AUTHOR_LIST;
```

Output:


```sql
--Add four records in each tables AUTHOR, BOOK, BOOK_LIST.
insert into AUTHOR values ('A1011', 'Srinivasan',
'Singh','Srinivasan@gmail.com','Chennai', 'India');
insert into AUTHOR values ('A2121', 'Wu', 'JHOU',
'WU@YAHOO.COM','HONKONG', 'CHINA');
insert into AUTHOR values ('A5151', 'Mozart', 'GUPTA',
'GUPTA@GMAIL.COM', 'DELHI','INDIA');
insert into AUTHOR values ('A4001', 'vijendra', 'singh',
'vsingh@GMAIL.COM', 'dehradhun', 'INDIA');

select * from AUTHOR; insert into BOOK values ('B1001',
'DATA BASE SYSTEM',20); select * from BOOK;
```

Output:

	Author_ID	Lastname	Firstname	Email	City	Country
1	A1011	Srinivasan	Singh	Srinivasan@gmail.com	Chennai	India
2	A2121	Wu	JHOU	WU@YAHOO.COM	HONKONG	CHINA
3	A4001	vijendra	singh	vsingh@GMAIL.COM	dehradhun	INDIA
4	A5151	Mozart	GUPTA	GUPTA@GMAIL.COM	DELHI	INDIA

	Book_ID	Book_Title	Copies
1	B1001	DATA BASE SYSTEM	20

```sql
--Alter structure of table AUTHOR_LIST add the field
Publisher data type of 30Character.
```

```sql
INSERT INTO AUTHOR_LIST VALUES('A1011', 'B1001',
'publisher');
select * from AUTHOR_LIST; alter table AUTHOR_LIST add
Publisher varchar(30);
exec sp_columns AUTHOR_LIST;
select * from AUTHOR_LIST;
```

Output: