

School of Information Technology and Engineering
Department of Information Technology
B. Tech. (IT)
Database Management Systems (ITE1003)
Lab CAT II – March 2020

Slot: L33+L34

Duration: Eighty Minutes

Class Number: 4375 (SET C)

Maximum Marks: 25

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Instructions: (i) Take screenshot of show user command.

```
SQL> show user
USER is "EXAM033"
```

(ii) Take screenshot of all SQL statements along with their response.

Consider the following relational database schema relating to suppliers supplying product. The primary keys are underlined. The foreign keys are self-explanatory.

SUPPLIERS(S_code, S_Name, Email, Phone_no)

PRODUCTS(P_Code, P_Name, Category, Price_per_unit)

SUPPLY(S_code, P_code, Quantity, S_Date)

1. Implement the necessary SQL statements for creating the above tables with necessary primary key and foreign key and enter at least two rows into each table. (7)

```
SQL> create table suppliers(
  2  s_code      number(5) primary key,
  3  s_name      varchar(20) ,
  4  email       varchar(25) ,
  5  phone_no    number(10)
  6  );
```

Table created.

```
SQL> desc suppliers;
```

Name	Null?	Type
<u>S_CODE</u>	NOT NULL	NUMBER (5)
<u>S_NAME</u>		VARCHAR2 (20)
<u>EMAIL</u>		VARCHAR2 (25)
<u>PHONE_NO</u>		NUMBER (10)

```
SQL> insert into suppliers values(11223,'Balaji Suppliers','balaji@supply.com',9424157184);

1 row created.

SQL> insert into suppliers values(12345,'Tata Suppliers','tata@supply.com',9407980184);

1 row created.
```

```
SQL> select * from suppliers;
```

S_CODE	S_NAME	EMAIL	PHON E_NO
11223	Balaji Suppliers	balaji@supply.com	9424157184
12345	Tata Suppliers	tata@supply.com	9407980184

```
SQL> create table products(
2  p_code      number(5) primary key,
3  p_name      varchar(20),
4  category    varchar(20),
5  price_per_unit number(6,2)
6  );
```

Table created.

```
SQL> desc products;
```

Name	Null?	Type
P_CODE	NOT NULL	NUMBER(5)
P_NAME		VARCHAR2(20)
CATEGORY		VARCHAR2(20)
PRICE_PER_UNIT		NUMBER(6,2)

```
SQL> insert into products values(22334,'Shirts','Clothing',499.99);

1 row created.

SQL> insert into products values(54321,'Shoes','Footwear',299.99);

1 row created.
```

```
SQL> select * from products;
```

P_CODE	P_NAME	CATEGORY	PRICE_PER_UNIT
22334	Shirts	Clothing	499.99
54321	Shoes	Footwear	299.99

```
SQL> create table supply(
  2  s_code    references suppliers,
  3  p_code    references products,
  4  quantity  number(10),
  5  s_date    date,
  6  primary key(s_code,p_code)
  7 );
```

Table created.

```
SQL> desc supply;
```

Name	Null?	Type
S_CODE	NOT NULL	NUMBER(5)
P_CODE	NOT NULL	NUMBER(5)
QUANTITY		NUMBER(10)
S_DATE		DATE

```
SQL> insert into supply values(11223,22334,6,to_date('28-02-2020','dd-mm-yyyy'));
```

1 row created.

```
SQL> insert into supply values(12345,54321,8,to_date('09-03-2020','dd-mm-yyyy'));
```

1 row created.

```
SQL> select * from supply;
```

S_CODE	P_CODE	QUANTITY	S_DATE
11223	22334	6	28-FEB-20
12345	54321	8	09-MAR-20

2. Implement SQL statement for the following queries.

(a) Display name of suppliers who supplied all products on February 28, 2020. (3)

```
SQL> select s_name from suppliers natural join supply where s_date='28-FEB-2020';
```

```
S_NAME
-----
Balaji Suppliers
```

(b) Use interactive nested query to display quantity and supply date of product for a given product supplied by a given supplier. (3)

```
SQL> select quantity,s_date from supply where p_code in(
  2  select p_code from products) and s_code in(
  3  select s_code from suppliers);
```

QUANTITY	S_DATE
6	28-FEB-20
8	09-MAR-20

(c) Display name of suppliers who do not supply products with price less than Rs. 400 per unit. (3)

```
SQL> select s_name from suppliers natural join supply natural join products
  2  where price_per_unit>=400;
```

S_NAME
Balaji Suppliers

(d) Display name of products costing higher than Rs. 300 supplied by at least three suppliers. (3)

```
SQL> select p_name from products natural join supply
  2  where price_per_unit>300 and s_code in(
  3  select s_code from suppliers group by s_code
  4  having count(*)>=3);
```

no rows selected

(e) Display name of products that had no demand for the last three months. (3)

```
SQL> select p_name from products natural join supply
  2  where to_char(months_between(sysdate,s_date))>3;
```

no rows selected

(f) Display name of suppliers, name of product and total quantity of each product supplied by the suppliers. (3)

```
SQL> select s_name,p_name,quantity from suppliers natural join supply natural join products;
```

S_NAME	P_NAME	QUANTITY
Balaji Suppliers	Shirts	6
Tata Suppliers	Shoes	8