

Database Lab Take Home Assignment - 4

Roll No. 214161008

DATABASE Creation

```
CREATE DATABASE 214161008_04;
```

```
mysql> CREATE DATABASE 214161008_04;  
Query OK, 1 row affected (0.20 sec)
```

DATABASE SELECTION

```
USE 214161008_04;
```

```
mysql> USE 214161008_04;  
Database changed  
mysql> 
```

1. Construct a table with following details given below:

Product (Pid, Pname, Price, Category, Manufacturer

Purchase (ProdId, buyerName, date, price)

Pid: is primary key for the product table.

PRODUCT Table Creation

```
CREATE TABLE PRODUCT  
(  
    PRODUCT_ID INTEGER NOT NULL,  
    PRODUCT_name VARCHAR(30) NOT NULL,  
    PRICE_IN_USD FLOAT NOT NULL,  
    CATEGORY VARCHAR(30) NOT NULL,  
    MANUFACTURER VARCHAR(30) NOT NULL,  
    PRIMARY KEY (PRODUCT_ID)  
);
```

```
mysql> CREATE TABLE PRODUCT
-> (
->     PRODUCT_ID INTEGER NOT NULL,
->     PRODUCT_name VARCHAR(30) NOT NULL,
->     PRICE_IN_USD FLOAT NOT NULL,
->     CATEGORY VARCHAR(30) NOT NULL,
->     MANUFACTURER VARCHAR(30) NOT NULL,
->     PRIMARY KEY (PRODUCT_ID)
-> );
Query OK, 0 rows affected (1.37 sec)
```

PURCHASE Table Creation

```
CREATE TABLE PURCHASE
(
    PRODUCT_ID INTEGER NOT NULL,
    BUYER_NAME VARCHAR(30) NOT NULL,
    PURCHASE_DATE DATE NOT NULL,
    PRICE_IN_USD FLOAT NOT NULL,
    PRIMARY KEY (PRODUCT_ID,BUYER_NAME),
    FOREIGN KEY (PRODUCT_ID) REFERENCES PRODUCT(PRODUCT_ID)
);
```

```
mysql> CREATE TABLE PURCHASE
-> (
->     PRODUCT_ID INTEGER NOT NULL,
->     BUYER_NAME VARCHAR(30) NOT NULL,
->     PURCHASE_DATE DATE NOT NULL,
->     PRICE_IN_USD FLOAT NOT NULL,
->     PRIMARY KEY (PRODUCT_ID,BUYER_NAME),
->     FOREIGN KEY (PRODUCT_ID) REFERENCES PRODUCT(PRODUCT_ID)
-> );
Query OK, 0 rows affected (1.49 sec)
```

INSERTION INTO PRODUCT Table

```
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(12,'Laptop',500,'Electronics','Dell');
```

```

INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(24,'Laptop',480,'Electronics','HP');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(42,'Laptop',900,'Electronics','Apple');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(65,'Laptop',460,'Electronics','Lenovo');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(47,'Laptop',450,'Electronics','Acer');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(23,'Laptop',540,'Electronics','Asus');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(27,'Laptop',550,'Electronics','Samsung');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(279,'Laptop',650,'Electronics','Huawei');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(7,'Mouse',40,'Electronics','Dell');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(69,'Mouse',35,'Electronics','Logitech');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(352,'Mouse',30,'Electronics','HP');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (689,'Solid State
Drive',120,'Electronics','Kingston');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (64,'Solid State
Drive',115,'Electronics','Corsair');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (353,'Solid State
Drive',130,'Electronics','Samsung');
INSERT INTO PRODUCT(PRODUCT_ID,
PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES
(68,'KEYboard',12,'Electronics','Dell');

```

```

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (12,'Laptop',500,'Electronics','Dell');
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (24,'Laptop',480,'Electronics','HP');
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (42,'Laptop',900,'Electronics','Apple');
Query OK, 1 row affected (0.08 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (65,'Laptop',460,'Electronics','Lenovo');
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (47,'Laptop',450,'Electronics','Acer');
Query OK, 1 row affected (0.15 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (23,'Laptop',540,'Electronics','Asus');
Query OK, 1 row affected (0.22 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (27,'Laptop',550,'Electronics','Samsung');
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (279,'Laptop',650,'Electronics','Huawei');
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (7,'Mouse',40,'Electronics','Dell');
Query OK, 1 row affected (0.08 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (69,'Mouse',35,'Electronics','Logitech');
Query OK, 1 row affected (0.09 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (352,'Mouse',30,'Electronics','HP');
Query OK, 1 row affected (0.13 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (689,'Solid State Drive',120,'Electronics','Kingston');
Query OK, 1 row affected (0.28 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (64,'Solid State Drive',115,'Electronics','Corsair');
Query OK, 1 row affected (0.08 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (353,'Solid State Drive',130,'Electronics','Samsung');
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO PRODUCT(PRODUCT_ID, PRODUCT_name,PRICE_IN_USD,CATEGORY,MANUFACTURER) VALUES (68,'Keyboard',12,'Electronics','Dell');
Query OK, 1 row affected (0.17 sec)

```

INSERTION INTO PURCHASE Table

```

INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(65,'Kamal',DATE('2012-12-17'),460);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(7,'Gaurav',DATE('2012-12-11'),24);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(65,'Neeraj',DATE('2018-12-27'),460);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(7,'Abhinav',DATE('2014-10-18'),12);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(68,'Gaurang',DATE('2019-01-02'),80);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(27,'Kamlesh',DATE('2011-08-22'),550);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(42,'Budhar',DATE('2015-10-17'),900);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(27,'Mann',DATE('2013-04-19'),460);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(47,'Udghosh',DATE('2012-04-05'),309);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES
(42,'Vinay',DATE('2013-04-19'),900);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES

```

```

(279, 'Rakesh', DATE('2014-10-18'), 460);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(27, 'Niranjan', DATE('2014-10-18'), 550);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(65, 'Kuldeep', DATE('2012-04-05'), 460);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(352, 'Rajeev', DATE('2019-01-02'), 82);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(689, 'Atmanand', DATE('2013-04-19'), 270);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(69, 'Jothiprakash', DATE('2011-08-22'), 650);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(65, 'Shubham', DATE('2013-04-19'), 460);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(23, 'Rishabh', DATE('2012-12-17'), 540);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(12, 'Rohan', DATE('2019-01-27'), 60);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(64, 'Akash', DATE('2018-12-27'), 460);
INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES
(353, 'Amit', DATE('2013-04-19'), 120.4);

```

```

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (65, 'Kamal', DATE('2012-12-17'), 460);
Query OK, 1 row affected (0.18 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (7, 'Gaurav', DATE('2012-12-11'), 24);
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (65, 'Neeraj', DATE('2018-12-27'), 460);
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (7, 'Abhinav', DATE('2014-10-18'), 12);
Query OK, 1 row affected (0.08 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (68, 'Gaurang', DATE('2019-01-02'), 80);
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (27, 'Kamlesh', DATE('2011-08-22'), 550);
Query OK, 1 row affected (0.18 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (42, 'Budhar', DATE('2015-10-17'), 900);
Query OK, 1 row affected (0.32 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (27, 'Mann', DATE('2013-04-19'), 460);
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (47, 'Udghosh', DATE('2012-04-05'), 309);
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (42, 'Vinay', DATE('2013-04-19'), 900);
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME, PURCHASE_DATE, PRICE_IN_USD) VALUES (279, 'Rakesh', DATE('2014-10-18'), 460);
Query OK, 1 row affected (0.17 sec)

```

```
mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (27,'Niranjan',DATE('2014-10-18'),550);
Query OK, 1 row affected (0.09 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (65,'Kuldeep',DATE('2012-04-05'),460);
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (352,'Rajeev',DATE('2019-01-02'),82);
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (689,'Atmanand',DATE('2013-04-19'),270);
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (69,'Jothi prakash',DATE('2011-08-22'),650);
Query OK, 1 row affected (0.08 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (65,'Shubham',DATE('2013-04-19'),460);
Query OK, 1 row affected (0.13 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (23,'Rishabh',DATE('2012-12-17'),540);
Query OK, 1 row affected (0.09 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (12,'Rohan',DATE('2019-01-27'),60);
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO PURCHASE(PRODUCT_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (64,'Akash',DATE('2018-12-27'),460);
Query OK, 1 row affected (0.10 sec)

Query OK, 1 row affected (0.09 sec)_ID, BUYER_NAME,PURCHASE_DATE,PRICE_IN_USD) VALUES (353,'Amit',DATE('2013-04-19'),120.4);
mysql> 
```

DATA IN PRODUCT Table

```
SELECT * FROM PRODUCT;
```

```
mysql> SELECT * FROM PRODUCT;
+-----+-----+-----+-----+-----+
| PRODUCT_ID | PRODUCT_name | PRICE_IN_USD | CATEGORY | MANUFACTURER |
+-----+-----+-----+-----+-----+
| 7 | Mouse | 40 | Electronics | Dell |
| 12 | Laptop | 500 | Electronics | Dell |
| 23 | Laptop | 540 | Electronics | Asus |
| 24 | Laptop | 480 | Electronics | HP |
| 27 | Laptop | 550 | Electronics | Samsung |
| 42 | Laptop | 900 | Electronics | Apple |
| 47 | Laptop | 450 | Electronics | Acer |
| 64 | SolID State Drive | 115 | Electronics | Corsair |
| 65 | Laptop | 460 | Electronics | Lenovo |
| 68 | KEYboard | 12 | Electronics | Dell |
| 69 | Mouse | 35 | Electronics | Logitech |
| 279 | Laptop | 650 | Electronics | Huawei |
| 352 | Mouse | 30 | Electronics | HP |
| 353 | SolID State Drive | 130 | Electronics | Samsung |
| 689 | SolID State Drive | 120 | Electronics | Kingston |
+-----+-----+-----+-----+-----+
15 rows in set (0.00 sec)
```

DATA INTO PURCHASE Table

```
SELECT * FROM PURCHASE;
```

```
mysql> SELECT * FROM PURCHASE;
```

PRODUCT_ID	BUYER_NAME	PURCHASE_DATE	PRICE_IN_USD
7	Abhinav	2014-10-18	12
7	Gaurav	2012-12-11	24
12	Rohan	2019-01-27	60
23	Rishabh	2012-12-17	540
27	Kamlesh	2011-08-22	550
27	Mann	2013-04-19	460
27	Niranjan	2014-10-18	550
42	Budhar	2015-10-17	900
42	Vinay	2013-04-19	900
47	Udghosh	2012-04-05	309
64	Akash	2018-12-27	460
65	Kamal	2012-12-17	460
65	Kuldeep	2012-04-05	460
65	Neeraj	2018-12-27	460
65	Shubham	2013-04-19	460
68	Gaurang	2019-01-02	80
69	Jothi prakash	2011-08-22	650
279	Rakesh	2014-10-18	460
352	Rajeev	2019-01-02	82
353	Amit	2013-04-19	120.4
689	Atmanand	2013-04-19	270

```
21 rows in set (0.00 sec)

mysql> 
```

I. Write a stored procedures which outputs the date on which maximum number of products was purchased.

```
DELIMITER //
CREATE PROCEDURE MAX_PRODUCT_PURCHASING_DATE(OUT PURCHASING_DATE DATE)
BEGIN
    SELECT PURCHASE_DATE INTO PURCHASING_DATE
    FROM PURCHASE
    GROUP BY PURCHASE_DATE
    ORDER BY COUNT(PRODUCT_ID) DESC
    LIMIT 1;

    SELECT PURCHASING_DATE;
END;
```

```
//
```

```
DELIMITER ;
```

```
mysql> DELIMITER //
mysql> CREATE PROCEDURE MAX_PRODUCT_PURCHASING_DATE(OUT PURCHASING_DATE DATE)
-> BEGIN
->     SELECT PURCHASE_DATE INTO PURCHASING_DATE
->     FROM PURCHASE
->     GROUP BY PURCHASE_DATE
->     ORDER BY COUNT(PRODUCT_ID) DESC
->     LIMIT 1;
->
->     SELECT PURCHASING_DATE;
-> END;
-> //
Query OK, 0 rows affected (0.18 sec)

mysql> DELIMITER ;
```

```
CALL MAX_PRODUCT_PURCHASING_DATE(@PURCHASING_DATE);
```

```
mysql> CALL MAX_PRODUCT_PURCHASING_DATE(@PURCHASING_DATE);
+-----+
| PURCHASING_DATE |
+-----+
| 2013-04-19      |
+-----+
1 row in set (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

mysql> 
```

II. Write a stored procedure which returns the number of products by a given date.

```
DELIMITER //
```

```
CREATE PROCEDURE PRODUCTS_PURCHASED_ON(IN PURCHASING_DATE DATE)
```

```
BEGIN
```

```
    DECLARE PRODUCTS_PURCHASED INTEGER DEFAULT 0;
```

```
    SELECT COUNT(PRODUCT_ID) INTO PRODUCTS_PURCHASED
```

```
    FROM PURCHASE
```

```
    WHERE PURCHASE_DATE = PURCHASING_DATE
```

```
    GROUP BY PURCHASE_DATE
```

```
    ORDER BY COUNT(PRODUCT_ID);
```

```
    SELECT PRODUCTS_PURCHASED;
```

```
END;
```



```
//  
DELIMITER ;
```

```
mysql> DELIMITER //  
mysql> CREATE PROCEDURE PRODUCTS_PURCHASED_ON(IN PURCHASING_DATE DATE)  
-> BEGIN  
->     DECLARE PRODUCTS_PURCHASED INTEGER DEFAULT 0;  
->     SELECT COUNT(PRODUCT_ID) INTO PRODUCTS_PURCHASED  
->     FROM PURCHASE  
->     WHERE PURCHASE_DATE = PURCHASING_DATE  
->     GROUP BY PURCHASE_DATE  
->     ORDER BY COUNT(PRODUCT_ID);  
->  
->     SELECT PRODUCTS_PURCHASED;  
-> END;  
-> //  
Query OK, 0 rows affected (0.29 sec)  
  
mysql> DELIMITER ;
```

```
CALL PRODUCTS_PURCHASED_ON('2013-04-19');
```

```
mysql> CALL PRODUCTS_PURCHASED_ON('2013-04-19');  
+-----+  
| PRODUCTS_PURCHASED |  
+-----+  
|                    5 |  
+-----+  
1 row in set (0.00 sec)  
  
Query OK, 0 rows affected (0.00 sec)  
  
mysql> 
```

- III. Write a store procedure which takes prodId of a product as input and check the price and print 'GREATER THAN 100', 'EQUAL to 100' or 'LESS THAN 100' after comparing the price

```
DELIMITER //  
CREATE PROCEDURE COMPARE_TO_100(IN ID INTEGER)  
BEGIN  
    DECLARE PRICE INTEGER DEFAULT 0;  
    DECLARE RESULT VARCHAR(50) DEFAULT '';
```

```

SELECT PRICE_IN_USD INTO PRICE
FROM PRODUCT
WHERE PRODUCT_ID = ID;

IF PRICE = 0 THEN
    SET RESULT = 'PRODUCT NOT FOUND';
ELSEIF PRICE > 100 THEN
    SET RESULT = 'GREATER THAN 100';
ELSEIF PRICE = 100 THEN
    SET RESULT = 'EQUAL to 100';
ELSEIF PRICE < 100 THEN
    SET RESULT = 'LESS THAN 100';
END IF;
SELECT CONCAT('COMPARED TO 100 : ', RESULT);
END;
//
DELIMITER ;

```

```

mysql> DELIMITER //
mysql> CREATE PROCEDURE COMPARE_TO_100(IN ID INTEGER)
-> BEGIN
->     DECLARE PRICE INTEGER DEFAULT 0;
->     DECLARE RESULT VARCHAR(50) DEFAULT '';
->
->     SELECT PRICE_IN_USD INTO PRICE
->     FROM PRODUCT
->     WHERE PRODUCT_ID = ID;
->
->     IF PRICE = 0 THEN
->         SET RESULT = 'PRODUCT NOT FOUND';
->     ELSEIF PRICE > 100 THEN
->         SET RESULT = 'GREATER THAN 100';
->     ELSEIF PRICE = 100 THEN
->         SET RESULT = 'EQUAL to 100';
->     ELSEIF PRICE < 100 THEN
->         SET RESULT = 'LESS THAN 100';
->     END IF;
->     SELECT CONCAT('COMPARED TO 100 : ', RESULT);
-> END;
-> //

```

Query OK, 0 rows affected (0.23 sec)

```

mysql> DELIMITER ;
mysql> 

```

```
CALL COMPARE_TO_100(64);
```

```
mysql> CALL COMPARE_TO_100(64);
+-----+
| CONCAT('COMPARED TO 100 : ', RESULT) |
+-----+
| COMPARED TO 100 : GREATER THAN 100    |
+-----+
1 row in set (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

mysql> 
```

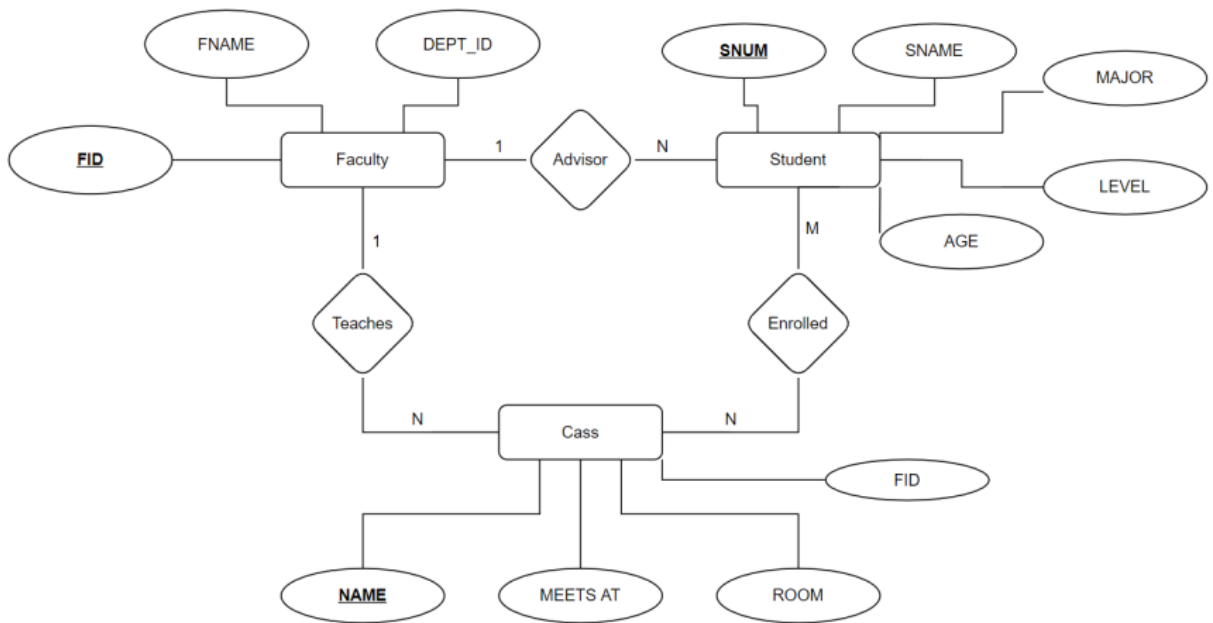
```
CALL COMPARE_TO_100(0);
```

```
mysql> CALL COMPARE_TO_100(0);
+-----+
| CONCAT('COMPARED TO 100 : ', RESULT) |
+-----+
| COMPARED TO 100 : PRODUCT NOT FOUND  |
+-----+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

mysql> 
```

2. Consider the following ER Diagram.



FACULTY Table Creation

```
CREATE TABLE FACULTY
(
    FACULTY_ID INTEGER NOT NULL,
    FACULTY_NAME VARCHAR(30) NOT NULL,
    DEPARTMENT_ID INTEGER NOT NULL,
    PRIMARY KEY (FACULTY_ID)
);
```

```
mysql> CREATE TABLE FACULTY
-> (
->     FACULTY_ID INTEGER NOT NULL,
->     FACULTY_NAME VARCHAR(30) NOT NULL,
->     DEPARTMENT_ID INTEGER NOT NULL,
->     PRIMARY KEY (FACULTY_ID)
-> );
Query OK, 0 rows affected (0.78 sec)
```

STUDENT Table Creation

```
CREATE TABLE STUDENT
```

```
(
  STUDENT_ID INTEGER NOT NULL,
  STUDENT_NAME VARCHAR(30) NOT NULL,
  MAJOR VARCHAR(20) NOT NULL,
  STUDENT_LEVEL VARCHAR(30) NOT NULL,
  AGE INTEGER NOT NULL,
  FACULTY_ID INTEGER,
  PRIMARY KEY (STUDENT_ID),
  CHECK ( AGE>14 and AGE<28),
  FOREIGN KEY (FACULTY_ID) REFERENCES FACULTY(FACULTY_ID)
);
```

```
mysql> CREATE TABLE STUDENT
-> (
->   STUDENT_ID INTEGER NOT NULL,
->   STUDENT_NAME VARCHAR(30) NOT NULL,
->   MAJOR VARCHAR(20) NOT NULL,
->   STUDENT_LEVEL VARCHAR(30) NOT NULL,
->   AGE INTEGER NOT NULL,
->   FACULTY_ID INTEGER,
->   PRIMARY KEY (STUDENT_ID),
->   CHECK ( AGE>14 and AGE<28),
->   FOREIGN KEY (FACULTY_ID) REFERENCES FACULTY(FACULTY_ID)
-> );
Query OK, 0 rows affected (2.35 sec)
```

CLASS Table Creation

```
CREATE TABLE CLASS
(
  CLASS_NAME VARCHAR(30) NOT NULL,
  MEETS_AT time NOT NULL,
  ROOM VARCHAR(5) NOT NULL,
  FACULTY_ID INTEGER ,
  PRIMARY KEY (CLASS_NAME),
  FOREIGN KEY (FACULTY_ID) REFERENCES FACULTY(FACULTY_ID)
);
```

```
mysql> CREATE TABLE CLASS
-> (
->     CLASS_NAME VARCHAR(30) NOT NULL,
->     MEETS_AT time NOT NULL,
->     ROOM VARCHAR(5) NOT NULL,
->     FACULTY_ID INTEGER ,
->     PRIMARY KEY (CLASS_NAME),
->     FOREIGN KEY (FACULTY_ID) REFERENCES FACULTY(FACULTY_ID)
-> );
Query OK, 0 rows affected (1.47 sec)
```

ENROLLED Table Creation

```
CREATE TABLE ENROLLED
(
    STUDENT_ID INTEGER NOT NULL,
    CLASS_NAME VARCHAR(30) NOT NULL,
    PRIMARY KEY (STUDENT_ID,CLASS_NAME),
    FOREIGN KEY (STUDENT_ID) REFERENCES STUDENT(STUDENT_ID),
    FOREIGN KEY (CLASS_NAME) REFERENCES CLASS(CLASS_NAME)
);
```

```
mysql> CREATE TABLE ENROLLED
-> (
->     STUDENT_ID INTEGER NOT NULL,
->     CLASS_NAME VARCHAR(30) NOT NULL,
->     PRIMARY KEY (STUDENT_ID,CLASS_NAME),
->     FOREIGN KEY (STUDENT_ID) REFERENCES STUDENT(STUDENT_ID),
->     FOREIGN KEY (CLASS_NAME) REFERENCES CLASS(CLASS_NAME)
-> );
Query OK, 0 rows affected (0.78 sec)
```

INSERTION IN FACULTY Table

```
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (1,'Piyush Rai',231);
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (3,'Manik Chakraborty',56);
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (2,'PV Subba Reddy',142);
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (5,'Subramanyam',472);
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (4,'Big
```

```

Sur',214));
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (6,'Amey
Karkare',112);
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values
(7,'Ramakrishnudu',321);
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (8,'Rama
Rao',123);
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (9,'Palash
Gosh',86);
INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (10,'Andrew
NG',694);

```

```

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (1,'Piyush Rai',231);
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (3,'Manik Chakraborty',56);
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (2,'PV Subba Reddy',142);
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (5,'Subramanyam',472);
Query OK, 1 row affected (0.13 sec)

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (4,'Big Sur',214);
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (6,'Amey Karkare',112);
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (7,'Ramakrishnudu',321);
Query OK, 1 row affected (0.15 sec)

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (8,'Rama Rao',123);
Query OK, 1 row affected (0.20 sec)

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (9,'Palash Gosh',86);
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO FACULTY(FACULTY_ID, FACULTY_NAME, DEPARTMENT_ID) values (10,'Andrew NG',694);
Query OK, 1 row affected (0.14 sec)

```

INSERTION IN STUDENT Table

```

INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE,
FACULTY_ID) values (1,'Avinash','Mechanical','JR',17,4);
INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE,
FACULTY_ID) values (2,'Nemendra','Computer Science','SOPH',18,null);
INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE,
FACULTY_ID) values (3,'Ankur','Electronics','JR',18,5);
INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE,
FACULTY_ID) values (4,'Mayank','History','SOPH',20,1);
INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE,
FACULTY_ID) values (5,'NEERAJ','Accounting','SR',21,4);
INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE,

```

```
FACULTY_ID) values (6,'Shubham','Zoology','SOPH',19,3);
INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE,
FACULTY_ID) values (7,'Sukhdev','Biotechnology','JR',17,1);
INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE,
FACULTY_ID) values (8,'Kamal','Mathematics','JR',16,2);
INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE,
FACULTY_ID) values (9,'Ashutosh','Astronomy','SR',22,null);
```

```
mysql> INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE, FACULTY_ID) values (1,'Avinash','Mechanical','JR',17,4);
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE, FACULTY_ID) values (2,'Nemendra','Computer Science','SOPH',18,null);
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE, FACULTY_ID) values (3,'Ankur','Electronics','JR',18,5);
Query OK, 1 row affected (0.17 sec)

mysql> INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE, FACULTY_ID) values (4,'Mayank','History','SOPH',20,1);
Query OK, 1 row affected (0.11 sec)

mysql> INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE, FACULTY_ID) values (5,'NEERAJ','Accounting','SR',21,4);
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE, FACULTY_ID) values (6,'Shubham','Zoology','SOPH',19,3);
Query OK, 1 row affected (0.08 sec)

mysql> INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE, FACULTY_ID) values (7,'Sukhdev','Biotechnology','JR',17,1);
Query OK, 1 row affected (0.09 sec)

mysql> INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE, FACULTY_ID) values (8,'Kamal','Mathematics','JR',16,2);
Query OK, 1 row affected (0.23 sec)

mysql> INSERT INTO STUDENT (STUDENT_ID, STUDENT_NAME, MAJOR, STUDENT_LEVEL, AGE, FACULTY_ID) values (9,'Ashutosh','Astronomy','SR',22,null);
Query OK, 1 row affected (0.13 sec)
```

INSERTION IN CLASS Table

```
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Thermodynamics','08:00:00','R128',1);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Database','10:00:00','F220',5);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Algorithms','08:00:00','C102',7);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Mathematics','09:00:00','I028',8);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Operating
System','08:00:00','C102',3);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Social
Popular Movements','08:30:00','I028',8);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Deep
Learning','09:30:00','I028',9);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Statistics','11:30:00','R128',5);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Automata
```



```

Theory', '09:00:00', 'C102', 1);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Fluid
Mechanics', '10:00:00', 'I028', 5);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Economic
History', '09:30:00', 'C102', 3);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Power
Electronics', '09:00:00', 'R128', 2);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('State and
Power', '10:00:00', 'F220', 1);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Compiler
Design', '10:00:00', 'F220', 8);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Data
Structures', '11:00:00', 'C102', 7);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Physics', '08:00:00', 'F220', 7);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Communications', '12:00:00', 'I028', 4);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Biomolecules', '10:00:00', 'C102', 1);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Biochemistry', '08:00:00', 'R128', 6);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Ecology', '09:30:00', 'F220', 7);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Psychology', '11:00:00', 'C102', 5);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values
('Programming', '01:00:00', 'R128', 3);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Integrated
Circuits', '10:30:00', 'F220', 4);
INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Business
Management', '01:00:00', 'I028', 7);

```

```

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Thermodynamics','08:00:00','R128',1);
Query OK, 1 row affected (0.43 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Database','10:00:00','F220',5);
Query OK, 1 row affected (0.19 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Algorithms','08:00:00','C102',7);
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Mathematics','09:00:00','I028',8);
Query OK, 1 row affected (0.18 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Operating System','08:00:00','C102',3);
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Social Popular Movements','08:30:00','I028',8);
Query OK, 1 row affected (0.07 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Deep Learning','09:30:00','I028',9);
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Statistics','11:30:00','R128',5);
Query OK, 1 row affected (0.41 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Automata Theory','09:00:00','C102',1);
Query OK, 1 row affected (0.18 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Fluid Mechanics','10:00:00','I028',5);
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Economic History','09:30:00','C102',3);
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Power Electronics','09:00:00','R128',2);
Query OK, 1 row affected (0.09 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('State and Power','10:00:00','F220',1);
Query OK, 1 row affected (0.26 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Compiler Design','10:00:00','F220',8);
Query OK, 1 row affected (0.11 sec)

```

```

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Data Structures','11:00:00','C102',7);
Query OK, 1 row affected (0.13 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Physics','08:00:00','F220',7);
Query OK, 1 row affected (0.11 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Communications','12:00:00','I028',4);
Query OK, 1 row affected (0.11 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Biomolecules','10:00:00','C102',1);
Query OK, 1 row affected (0.21 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Biochemistry','08:00:00','R128',6);
Query OK, 1 row affected (0.13 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Ecology','09:30:00','F220',7);
Query OK, 1 row affected (0.15 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Psychology','11:00:00','C102',5);
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Programming','01:00:00','R128',3);
Query OK, 1 row affected (0.18 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Integrated Circuits','10:30:00','F220',4);
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO CLASS (CLASS_NAME, MEETS_AT, ROOM, FACULTY_ID) values ('Business Management','01:00:00','I028',7);
Query OK, 1 row affected (0.16 sec)

```

INSERTION IN ENROLLED Table

```

INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Thermodynamics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Automata Theory');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Fluid Mechanics');

```

```

INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Database');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Algorithms');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Statistics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'Social Popular
Movements');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Mathematics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Mathematics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Operating System');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'Economic History');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Deep Learning');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Power Electronics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'State and Power');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Deep Learning');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Compiler Design');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Data Structures');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Integrated Circuits');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Data Structures');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'Physics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (6,'Biomolecules');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (7,'Deep Learning');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (6,'Biochemistry');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (5,'Communications');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (5,'Business Management');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (6,'Mathematics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (8,'Deep Learning');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (7,'Mathematics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (6,'Ecology');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'Deep Learning');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Programming');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (5,'Statistics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (8,'Physics');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Programming');
INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (5,'Mathematics');

```

```
mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Thermodynamics');
Query OK, 1 row affected (0.23 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Automata Theory');
Query OK, 1 row affected (0.25 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Fluid Mechanics');
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Database');
Query OK, 1 row affected (0.13 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Algorithms');
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Statistics');
Query OK, 1 row affected (0.18 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'Social Popular Movements');
Query OK, 1 row affected (0.13 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Mathematics');
Query OK, 1 row affected (0.28 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Mathematics');
Query OK, 1 row affected (0.23 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Operating System');
Query OK, 1 row affected (0.13 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'Economic History');
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Deep Learning');
Query OK, 1 row affected (0.16 sec)
```

```
mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Power Electronics');
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'State and Power');
Query OK, 1 row affected (0.09 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Deep Learning');
Query OK, 1 row affected (0.11 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Compiler Design');
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Data Structures');
Query OK, 1 row affected (0.13 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Integrated Circuits');
Query OK, 1 row affected (0.15 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (2,'Data Structures');
Query OK, 1 row affected (0.15 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'Physics');
Query OK, 1 row affected (0.11 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (6,'Biomolecules');
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (7,'Deep Learning');
Query OK, 1 row affected (0.14 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (6,'Biochemistry');
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (5,'Communications');
```

```

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (5,'Business Management');
Query OK, 1 row affected (0.11 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (6,'Mathematics');
Query OK, 1 row affected (0.18 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (8,'Deep Learning');
Query OK, 1 row affected (0.11 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (7,'Mathematics');
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (6,'Ecology');
Query OK, 1 row affected (0.18 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (4,'Deep Learning');
Query OK, 1 row affected (0.12 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (1,'Programming');
Query OK, 1 row affected (0.10 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (5,'Statistics');
Query OK, 1 row affected (0.09 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (8,'Physics');
Query OK, 1 row affected (0.16 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (3,'Programming');
Query OK, 1 row affected (0.11 sec)

mysql> INSERT INTO ENROLLED (STUDENT_ID,CLASS_NAME) values (5,'Mathematics');
Query OK, 1 row affected (0.16 sec)

mysql> 

```

DATA IN FACULTY Table

```
SELECT * FROM FACULTY;
```

```

mysql> SELECT * FROM FACULTY;
+-----+-----+-----+
| FACULTY_ID | FACULTY_NAME          | DEPARTMENT_ID |
+-----+-----+-----+
|          1 | Piyush Rai            |          231   |
|          2 | PV Subba Reddy        |          142   |
|          3 | Manik Chakraborty    |           56   |
|          4 | Big Sur               |          214   |
|          5 | Subramanyam           |          472   |
|          6 | Amey Karkare          |          112   |
|          7 | Ramakrishnudu         |          321   |
|          8 | Rama Rao              |          123   |
|          9 | Palash Gosh           |           86   |
|         10 | Andrew NG             |          694   |
+-----+-----+-----+
10 rows in set (0.00 sec)

```

DATA IN STUDENT Table

```
SELECT * FROM STUDENT;
```

```
mysql> SELECT * FROM STUDENT;
```

STUDENT_ID	STUDENT_NAME	MAJOR	STUDENT_LEVEL	AGE	FACULTY_ID
1	Avinash	Mechanical	JR	17	4
2	Nemendra	Computer Science	SOPH	18	NULL
3	Ankur	Electronics	JR	18	5
4	Mayank	History	SOPH	20	1
5	NEERAJ	Accounting	SR	21	4
6	Shubham	Zoology	SOPH	19	3
7	Sukhdev	Biotechnology	JR	17	1
8	Kamal	Mathematics	JR	16	2
9	Ashutosh	Astronomy	SR	22	NULL

9 rows in set (0.00 sec)

DATA IN CLASS Table

```
SELECT * FROM CLASS;
```

```
mysql> SELECT * FROM CLASS;
```

CLASS_NAME	MEETS_AT	ROOM	FACULTY_ID
Algorithms	08:00:00	C102	7
Automata Theory	09:00:00	C102	1
Biochemistry	08:00:00	R128	6
Biomolecules	10:00:00	C102	1
Business Management	01:00:00	I028	7
Communications	12:00:00	I028	4
Compiler Design	10:00:00	F220	8
Data Structures	11:00:00	C102	7
Database	10:00:00	F220	5
Deep Learning	09:30:00	I028	9
Ecology	09:30:00	F220	7
Economic History	09:30:00	C102	3
Fluid Mechanics	10:00:00	I028	5
Integrated Circuits	10:30:00	F220	4
Mathematics	09:00:00	I028	8
Operating System	08:00:00	C102	3
Physics	08:00:00	F220	7
Power Electronics	09:00:00	R128	2
Programming	01:00:00	R128	3
Psychology	11:00:00	C102	5
Social Popular Movements	08:30:00	I028	8
State and Power	10:00:00	F220	1
Statistics	11:30:00	R128	5
Thermodynamics	08:00:00	R128	1

24 rows in set (0.00 sec)

DATA IN ENROLLED Table

```
SELECT * FROM ENROLLED;
```

```
mysql> SELECT * FROM ENROLLED;
```

STUDENT_ID	CLASS_NAME
2	Algorithms
2	Automata Theory
6	Biochemistry
6	biomolecules
5	Business Management
5	Communications
2	Compiler Design
2	Data Structures
3	Data Structures
2	Database
1	Deep Learning
2	Deep Learning
4	Deep Learning
7	Deep Learning
8	Deep Learning
6	Ecology
4	Economic History
1	Fluid Mechanics
3	Integrated Circuits
1	Mathematics
2	Mathematics
5	Mathematics
6	Mathematics
7	Mathematics
2	Operating System
4	Physics
8	Physics
3	Power Electronics
1	Programming
3	Programming
4	Social Popular Movements
4	State and Power
3	Statistics
5	Statistics
1	Thermodynamics

```
35 rows in set (0.00 sec)
```

- I. Write a stored procedure which takes student_level as input and return the average age of the students of the particular level.

```
DELIMITER //
```

```
CREATE PROCEDURE AVG_AGE(IN LEVEL VARCHAR(5), OUT AVERAGE_AGE FLOAT)
```

```
BEGIN
```

```
    SELECT AVG(AGE) INTO AVERAGE_AGE
```

```
    FROM STUDENT
```

```
    WHERE STUDENT_LEVEL = LEVEL;
```

```
    SELECT AVERAGE_AGE;
```

```
END;
```

```
//
```

```
DELIMITER ;
```

```
mysql> DELIMITER //
```

```
mysql> CREATE PROCEDURE AVG_AGE(IN LEVEL VARCHAR(5), OUT AVERAGE_AGE FLOAT)
```

```
-> BEGIN
```

```
->     SELECT AVG(AGE) INTO AVERAGE_AGE
```

```
->     FROM STUDENT
```

```
->     WHERE STUDENT_LEVEL = LEVEL;
```

```
->
```

```
->     SELECT AVERAGE_AGE;
```

```
-> END;
```

```
-> //
```

```
Query OK, 0 rows affected (0.20 sec)
```

```
mysql> DELIMITER ;
```

```
mysql> 
```

```
CALL AVG_AGE('JR', @AVERAGE_AGE);
```

```
mysql> CALL AVG_AGE('JR', @AVERAGE_AGE);
```

```
+-----+
```

```
| AVERAGE_AGE |
```

```
+-----+
```

```
|          17 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
CALL AVG_AGE('SR', @AVERAGE_AGE);
```



```
mysql> CALL AVG_AGE('SR', @AVERAGE_AGE);
+-----+
| AVERAGE_AGE |
+-----+
|          21.5 |
+-----+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)
```

```
CALL AVG_AGE('SOPH', @AVERAGE_AGE);
```

```
mysql> CALL AVG_AGE('SOPH', @AVERAGE_AGE);
+-----+
| AVERAGE_AGE |
+-----+
|          19 |
+-----+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)
```

- II. Write a stored procedure which takes faculty_id as input and return the list of all the students those are taught by faculty faculty_id.

```
DELIMITER //
CREATE PROCEDURE STUDENTS_OF_FACULTY(IN FID INTEGER, OUT STUDENTS_NAME
VARCHAR(30))
BEGIN
    SELECT DISTINCT STUDENT_NAME
    FROM STUDENT S, ENROLLED E, CLASS C
    WHERE S.STUDENT_ID = E.STUDENT_ID AND E.CLASS_NAME = C.CLASS_NAME AND
    C.FACULTY_ID = FID;
END;
//
DELIMITER ;
```

```
mysql> DELIMITER //
mysql> CREATE PROCEDURE STUDENTS_OF_FACULTY(IN FID INTEGER, OUT STUDENTS_NAME VARCHAR(30))
-> BEGIN
->   SELECT DISTINCT STUDENT_NAME
->   FROM STUDENT S, ENROLLED E, CLASS C
->   WHERE S.STUDENT_ID = E.STUDENT_ID AND E.CLASS_NAME = C.CLASS_NAME AND C.FACULTY_ID = FID;
-> END;
-> //
Query OK, 0 rows affected (0.23 sec)

mysql> DELIMITER ;
mysql>
```

CALL STUDENTS_OF_FACULTY(3);

```
mysql> CALL STUDENTS_OF_FACULTY(3, @STUDENTS_NAME);
+-----+
| STUDENT_NAME |
+-----+
| Mayank       |
| Nemendra     |
| Avinash      |
| Ankur        |
+-----+
4 rows in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

mysql>
```

III. Write a stored procedure which return all the class having keyword “ics” in its name and those either meet in room R128 or having 3 or more students enrolled.

```
DELIMITER //
CREATE PROCEDURE SUBJECTS_WITH_GIVEN_RESTRICTION()
BEGIN
  SELECT CLASS_NAME
  FROM CLASS
  WHERE CLASS_NAME LIKE '%ics%' AND
  (
    ROOM = 'R128' OR
    CLASS_NAME IN
    (
      SELECT CLASS_NAME
      FROM ENROLLED E
      GROUP BY CLASS_NAME
      HAVING COUNT(STUDENT_ID) >= 3
    )
  );
END;
```

```
//  
DELIMITER ;
```

```
mysql> DELIMITER //  
mysql> CREATE PROCEDURE SUBJECTS_WITH_GIVEN_RESTRICTION()  
-> BEGIN  
->     SELECT CLASS_NAME  
->     FROM CLASS  
->     WHERE CLASS_NAME LIKE '%ics%' AND  
->     (  
->         ROOM = 'R128' OR  
->         CLASS_NAME IN  
->         (  
->             SELECT CLASS_NAME  
->             FROM ENROLLED E  
->             GROUP BY CLASS_NAME  
->             HAVING COUNT(STUDENT_ID) >= 3  
->         )  
->     );  
-> END;  
-> //  
Query OK, 0 rows affected (0.20 sec)  
  
mysql> DELIMITER ;  
mysql> 
```

```
CALL SUBJECTS_WITH_GIVEN_RESTRICTION;
```

```
mysql> CALL SUBJECTS_WITH_GIVEN_RESTRICTION;  
+-----+  
| CLASS_NAME |  
+-----+  
| Mathematics |  
| Power Electronics |  
| Statistics |  
| Thermodynamics |  
+-----+  
4 rows in set (0.00 sec)  
  
Query OK, 0 rows affected (0.00 sec)  
  
mysql> 
```

IV. Write a stored procedure which return the reduced age of oldest student by 20% who is either a mathematics major or enrolled in a course taught by Teacher id 1.

```
DELIMITER //
```

```

CREATE PROCEDURE MANIPULATED_AGE()
BEGIN
    DECLARE REDUCED_AGE FLOAT DEFAULT 0.0;
    DECLARE ORIGINAL_AGE FLOAT DEFAULT 0.0;
    SELECT DISTINCT MAX(S.AGE) INTO ORIGINAL_AGE
    FROM STUDENT S, ENROLLED E, CLASS C
    WHERE MAJOR = 'Mathematics' OR
    (
        S.STUDENT_ID = E.STUDENT_ID
        AND
        E.CLASS_NAME = C.CLASS_NAME
        AND
        C.FACULTY_ID = 1
    );
    SET REDUCED_AGE = (1-0.2)*ORIGINAL_AGE;
    SELECT REDUCED_AGE;
END;
//
DELIMITER ;

```

```

mysql> DELIMITER //
mysql> CREATE PROCEDURE MANIPULATED_AGE()
-> BEGIN
->     DECLARE REDUCED_AGE FLOAT DEFAULT 0.0;
->     DECLARE ORIGINAL_AGE FLOAT DEFAULT 0.0;
->     SELECT DISTINCT MAX(S.AGE) INTO ORIGINAL_AGE
->     FROM STUDENT S, ENROLLED E, CLASS C
->     WHERE MAJOR = 'Mathematics' OR
->     (
->         S.STUDENT_ID = E.STUDENT_ID
->         AND
->         E.CLASS_NAME = C.CLASS_NAME
->         AND
->         C.FACULTY_ID = 1
->     );
->     SET REDUCED_AGE = (1-0.2)*ORIGINAL_AGE;
->     SELECT REDUCED_AGE;
-> END;
-> //

```

Query OK, 0 rows affected (0.21 sec)

```

mysql> DELIMITER ;
mysql> 

```

```

CALL MANIPULATED_AGE;

```

```
mysql> CALL MANIPULATED_AGE;
+-----+
| REDUCED_AGE |
+-----+
|          16 |
+-----+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

mysql> 
```

- V. Write a stored procedure having IN and OUT parameter which take the room number as an IN parameter and write the count of all the classes held in a particular room into the OUT parameter.

```
DELIMITER //
CREATE PROCEDURE NUMBER_OF_CLASSES(IN INPUT_ROOM VARCHAR(5), OUT CLASS_COUNT
INTEGER)
BEGIN
    SELECT COUNT(*) INTO CLASS_COUNT
    FROM CLASS
    WHERE ROOM = INPUT_ROOM
    GROUP BY ROOM;

    SELECT CLASS_COUNT;
END;
//
DELIMITER ;
```

```
mysql> DELIMITER //
mysql> CREATE PROCEDURE NUMBER_OF_CLASSES(IN INPUT_ROOM VARCHAR(5), OUT CLASS_COUNT INTEGER)
-> BEGIN
->     SELECT COUNT(*) INTO CLASS_COUNT
->     FROM CLASS
->     WHERE ROOM = INPUT_ROOM
->     GROUP BY ROOM;
->
->     SELECT CLASS_COUNT;
-> END;
-> //
Query OK, 0 rows affected (0.21 sec)

mysql> DELIMITER ;
```

```
CALL NUMBER_OF_CLASSES('C102', @CLASS_COUNT);
CALL NUMBER_OF_CLASSES('R128', @CLASS_COUNT);
CALL NUMBER_OF_CLASSES('I028', @CLASS_COUNT);
```

```
mysql> CALL NUMBER_OF_CLASSES('C102', @CLASS_COUNT);
```

```
+-----+
```

```
| CLASS_COUNT |
```

```
+-----+
```

```
|          7 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> CALL NUMBER_OF_CLASSES('R128', @CLASS_COUNT);
```

```
+-----+
```

```
| CLASS_COUNT |
```

```
+-----+
```

```
|          5 |
```

```
+-----+
```

```
1 row in set (0.01 sec)
```

```
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> CALL NUMBER_OF_CLASSES('I028', @CLASS_COUNT);
```

```
+-----+
```

```
| CLASS_COUNT |
```

```
+-----+
```

```
|          6 |
```

```
+-----+
```

```
1 row in set (0.00 sec)
```

3. Implement the following scenario using LOOPS in stored procedures. Procedure should take 2 IN parameter start and end and 2 OUT parameter. evensum and oddsum and write the total sum of odd integers into the oddsum parameter and total sum of even integers into the even sum parameter.

```
DELIMITER //
```

```
CREATE PROCEDURE SUM_PROC(IN start_value INTEGER, IN end_value INTEGER,OUT  
EVENSUM INTEGER,OUT ODDSUM INTEGER)
```

```
BEGIN
```

```
DECLARE COUNTER INTEGER DEFAULT 0;
```

```

SET COUNTER = start_value;
SET EVENSUM = 0;
SET ODDSUM = 0;
LOOP_LABEL : LOOP

    IF COUNTER > end_value THEN
        LEAVE LOOP_LABEL;
    END IF;

    IF (COUNTER mod 2) THEN
        SET ODDSUM = ODDSUM + COUNTER;
    ELSE
        SET EVENSUM = EVENSUM + COUNTER;
    END IF;

    SET COUNTER = COUNTER + 1;
    ITERATE LOOP_LABEL;

END LOOP;
END;
//
DELIMITER ;

```

```

mysql> DELIMITER //
mysql> CREATE PROCEDURE SUM_PROC(IN start_value INTEGER, IN end_value INTEGER,OUT EVENSUM INTEGER,OUT ODDSUM INTEGER)
-> BEGIN
->     DECLARE COUNTER INTEGER DEFAULT 0;
->     SET COUNTER = start_value;
->     SET EVENSUM = 0;
->     SET ODDSUM = 0;
->     LOOP_LABEL : LOOP
->
->         IF COUNTER > end_value THEN
->             LEAVE LOOP_LABEL;
->         END IF;
->
->         IF (COUNTER mod 2) THEN
->             SET ODDSUM = ODDSUM + COUNTER;
->         ELSE
->             SET EVENSUM = EVENSUM + COUNTER;
->         END IF;
->
->         SET COUNTER = COUNTER + 1;
->         ITERATE LOOP_LABEL;
->
->     END LOOP;
-> END;
-> //
Query OK, 0 rows affected (0.23 sec)

mysql> DELIMITER ;
mysql> 

```

```
CALL SUM_PROC(1, 100, @EVENSUM, @ODDSUM);
```

```
mysql> CALL SUM_PROC(1, 100, @EVENSUM, @ODDSUM);  
Query OK, 0 rows affected (0.00 sec)
```

```
SELECT @EVENSUM;
```

```
mysql> SELECT @EVENSUM;  
+-----+  
| @EVENSUM |  
+-----+  
|      2550 |  
+-----+  
1 row in set (0.00 sec)
```

```
SELECT @ODDSUM;
```

```
mysql> SELECT @ODDSUM;  
+-----+  
| @ODDSUM |  
+-----+  
|      2500 |  
+-----+  
1 row in set (0.00 sec)
```