PL EXERCISE 6

1. Write a stored procedure by the name of Comp_intr to calculate the amount of interest on a bank account that compounds interest yearly. The formula is:- I = p (1+ r) y – p
where:-
***I* is the total interest earned.**
***p* is the principal.**
***r* is the rate of interest as a decimal less than 1, and**
***y* is the number of years the money is earning interest.**
Your stored procedure should accept the values of *p*, *r* and *y* as parameters and insert the Interest and Total amount into tempp table.

```
mysql> CREATE TABLE tempp (
    ->     Interest FLOAT,
    ->     TotalAmount FLOAT
    -> );
Query OK, 0 rows affected (0.14 sec)

mysql> DELIMITER //
mysql>
mysql> CREATE PROCEDURE Comp_intr(IN p FLOAT, IN r FLOAT, IN y INT)
    -> BEGIN
    ->     DECLARE interest FLOAT;
    ->     DECLARE total FLOAT;
    ->
    ->     SET total = p * POW((1 + r), y);
    ->     SET interest = total - p;
    ->
    ->     INSERT INTO tempp VALUES (interest, total);
    -> END;
    -> //
Query OK, 0 rows affected (0.11 sec)

mysql>
mysql> DELIMITER ;
mysql>
mysql>
mysql> CALL Comp_intr(1000, 0.05, 3);
Query OK, 1 row affected (0.03 sec)

mysql> SELECT * FROM tempp;
+----------+-------------+
| Interest | TotalAmount |
+----------+-------------+
|  157.625 |     1157.62 |
+----------+-------------+
1 row in set (0.00 sec)
```

2. Create a stored function by the name of Age_calc. Your stored function should accept the date of birth of a person as a parameter. The stored function should calculate the age of the person in years. The stored function should return the age in years.

```
mysql> DELIMITER //
mysql>
mysql> CREATE FUNCTION Age_calc(dob DATE)
   -> RETURNS INT
   -> DETERMINISTIC
   -> BEGIN
   ->     DECLARE age INT;
   ->
   ->     SET age = TIMESTAMPDIFF(YEAR, dob, CURDATE());
   ->
   ->     RETURN age;
   -> END;
   -> //
Query OK, 0 rows affected (0.01 sec)

mysql>
mysql> DELIMITER ;
mysql> SELECT Age_calc('2000-04-20') AS Age;
+------+
| Age  |
+------+
|   25 |
+------+
1 row in set (0.00 sec)
```