

MySQL 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.

```
D2_92814_Krushna>DELIMITER //
D2_92814_Krushna>
D2_92814_Krushna>CREATE PROCEDURE Comp_intr(IN p DECIMAL(12,2), IN r DECIMAL(5,4), IN y INT)
-> BEGIN
->     DECLARE I DECIMAL(12,2);
->     DECLARE total DECIMAL(12,2);
->
->     SET total = p * POW((1 + r), y);
->     SET I = total - p;
->
->     INSERT INTO tempp1(principal, rate, years, interest, total_amount)
->     VALUES (p, r, y, I, total);
-> END //
Query OK, 0 rows affected (0.07 sec)

D2_92814_Krushna>
D2_92814_Krushna>DELIMITER ;
D2_92814_Krushna>CALL Comp_intr(10000, 0.05, 3);
Query OK, 1 row affected (0.01 sec)

D2_92814_Krushna>SELECT * FROM tempp1;
+-----+-----+-----+-----+-----+
| principal | rate  | years | interest | total_amount |
+-----+-----+-----+-----+-----+
| 10000.00 | 0.0500 | 3 | 1576.25 | 11576.25 |
+-----+-----+-----+-----+-----+
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.

```
D2_92814_Krushna>CREATE FUNCTION Age_calc(dob DATE)
-> RETURNS INT
-> DETERMINISTIC
-> BEGIN
->     DECLARE age INT;
->     SET age = YEAR(CURDATE()) - YEAR(dob);
->
->     -- Adjust if birthday hasn't occurred yet this year
->     IF DATE_FORMAT(CURDATE(), '%m%d') < DATE_FORMAT(dob, '%m%d') THEN
->         SET age = age - 1;
->     END IF;
->
->     RETURN age;
-> END //
```

Query OK, 0 rows affected (0.06 sec)

```
D2_92814_Krushna>SELECT Age_calc('1995-05-20') AS age;
+-----+
| age |
+-----+
| 30 |
+-----+
1 row in set (0.00 sec)
```