❖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.

⇒ DELIMITER //

```
CREATE PROCEDURE Comp_intr(
    IN p DECIMAL(15, 2),  -- Principal amount
    IN r DECIMAL(5, 4),   -- Rate of interest (as a decimal)
    IN y INT              -- Number of years
)
BEGIN
    DECLARE I DECIMAL(15, 2);  -- Total interest earned
    DECLARE total_amount DECIMAL(15, 2);  -- Total amount after interest

    -- Calculate total interest earned
    SET I = p * (POWER((1 + r), y)) - p;

    -- Calculate total amount after interest
    SET total_amount = p + I;
```

```
    -- Create temporary table if it doesn't exist
    CREATE TEMPORARY TABLE IF NOT EXISTS tempp (
        Interest DECIMAL(15, 2),
        TotalAmount DECIMAL(15, 2)
    );

    -- Insert interest and total amount into the temporary table
    INSERT INTO tempp (Interest, TotalAmount)
    VALUES (I, total_amount);
END //
DELIMITER ;
CALL Comp_intr(1000.00, 0.05, 5);
SELECT * FROM tempp;
```

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.

⇒

```
DELIMITER //
CREATE FUNCTION Age_calc(dob DATE)
RETURNS INT
DETERMINISTIC
BEGIN
    DECLARE age INT;
```

```
    -- Calculate the age in years
    SET age = TIMESTAMPDIFF(YEAR, dob, CURDATE());

    -- Adjust if the birthday has not occurred yet this year
    IF (MONTH(dob) > MONTH(CURDATE())) OR
       (MONTH(dob) = MONTH(CURDATE()) AND DAY(dob) > DAY(CURDATE())) THEN
        SET age = age - 1;
    END IF;

    RETURN age;
END //
DELIMITER ;
SELECT Age_calc('1990-05-15') AS Age;  -- Replace with the desired date of birth
```