**🎯 1. Procedure: AssignCRBTToCustomer**

**✅ Problem Statement:**

Create a stored procedure to assign a CRBT (Caller Ring Back Tone) to a customer if:

* The customer has sufficient balance.
* The CRBT is active and not expired.
* The customer is not already subscribed to the same CRBT.

If these conditions are not met, throw a customer-defined exception.

**📌 Tables Involved:**

* customers(customer\_id, name, balance)
* crbt\_tones(tone\_id, tone\_name, is\_active, price)
* customer\_crbt(customer\_id, tone\_id, assigned\_on)

**🎯 2. Procedure: RemoveExpiredCRBTSubscriptions**

**✅ Problem Statement:**

Create a stored procedure that removes (or marks inactive) all expired CRBT subscriptions for all customers. Use a cursor to loop through customer\_crbt entries and check if the assigned\_on + validity (30 days) is past the current date. If expired, set is\_active to FALSE.

**📌 Tables Involved:**

* customer\_crbt(customer\_id, tone\_id, assigned\_on, is\_active)
* Use system date comparison to detect expiration.

**🔄 Logic:**

* Use CURSOR to iterate through customer subscriptions.
* Use DATE\_ADD(assigned\_on, INTERVAL 30 DAY) < CURRENT\_DATE() to check for expiry.
* Update those records.

**🎯 3. Procedure: DeductCRBTChargeMonthly**

**✅ Problem Statement:**

Write a stored procedure to deduct monthly CRBT charges from all customers who have active CRBT subscriptions:

* Use a cursor to fetch all active CRBT subscribers.
* Deduct the price of the tone from each customer’s balance.
* If any customer has insufficient balance, skip that customer and log an error (or raise a custom exception).

**📌 Tables Involved:**

* customers(customer\_id, balance)
* customer\_crbt(customer\_id, tone\_id, is\_active)
* crbt\_tones(tone\_id, price)