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Assignment - 04

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Q1 EXPLANATION

1	A trigger is created to handle the updates. If the update for the corresponding row exceeds the cost for the respective year, :n.sal value for that particular employee is to :o.sal, so the entire effect of increment for that employee is nullified. The trigger doesn't raise any error because, raising error at a single employee rolls back the entire transaction, leaving increment of salaries for none of the employees, even if a single employee's increment is disapproved.
2	A nested query in which the idea is to filter the number of records that have a salary greater than the corresponding employee in that department and we select the employee if this value is less than 3.
3	A simple view is created with a single base table, so any changes in the view will reflect in the base table.
4	On inserting a record in the employee table, I assume the employee joins, so, I update the eno and joining_date of the corresponding employee in the employee_history table using a trigger. When the employee leaves the organisation, the corresponding entry in the emp table is deleted and hence on delete trigger is fired to track the leaving_date and the last_sal_drawn. A compound trigger is written for on insert and on delete for the same purpose and if-else statements are used to perform the specific actions.

Q2 EXPLANATION

1	The trigger exposes an interface for on update statements on the account table. If someone wants to withdraw a sum of x, and his current bank balance is y, a query, UPDATE account SET balance = y-x WHERE acctno = XXXX; is expected. And the trigger just checks if the :n.balance goes below the minimum balance (0 in this case), then that raises an application error, else this trigger approves the transaction.
2	Method 1: This is a simple plsql program that takes the change of balance and uses the above trigger and the transaction history from the table transaction to decide whether to approve or disapprove a transaction. Method 2: In this method, for every transaction, a trigger is fired and the trigger takes on the responsibility to decide whether to approve or disapprove the transaction. This uses the transaction history to check if the person made more than three withdrawals on that specific day and accordingly take actions.

NOTE 1: The structure of the transaction table (of Q2) does not contain a field to specify whether the transaction is a withdrawal or a deposit. Instead, the amount itself is negative for withdrawals and positive for deposits.
NOTE 2: In addition, all the codes are well commented for better understanding.
NOTE 3: In naming files, all Q1 files are named q2 and all Q2 files are named q3.