**Exercise 3: Stored Procedures**

**Scenario 1:**

The bank needs to process monthly interest for all savings accounts.

**PL/SQL Query:**

CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest IS

BEGIN

FOR rec IN (

SELECT account\_id, balance

FROM accounts

WHERE LOWER(account\_type) = 'savings'

) LOOP

UPDATE accounts

SET balance = balance + (rec.balance \* 0.01)

WHERE account\_id = rec.account\_id;

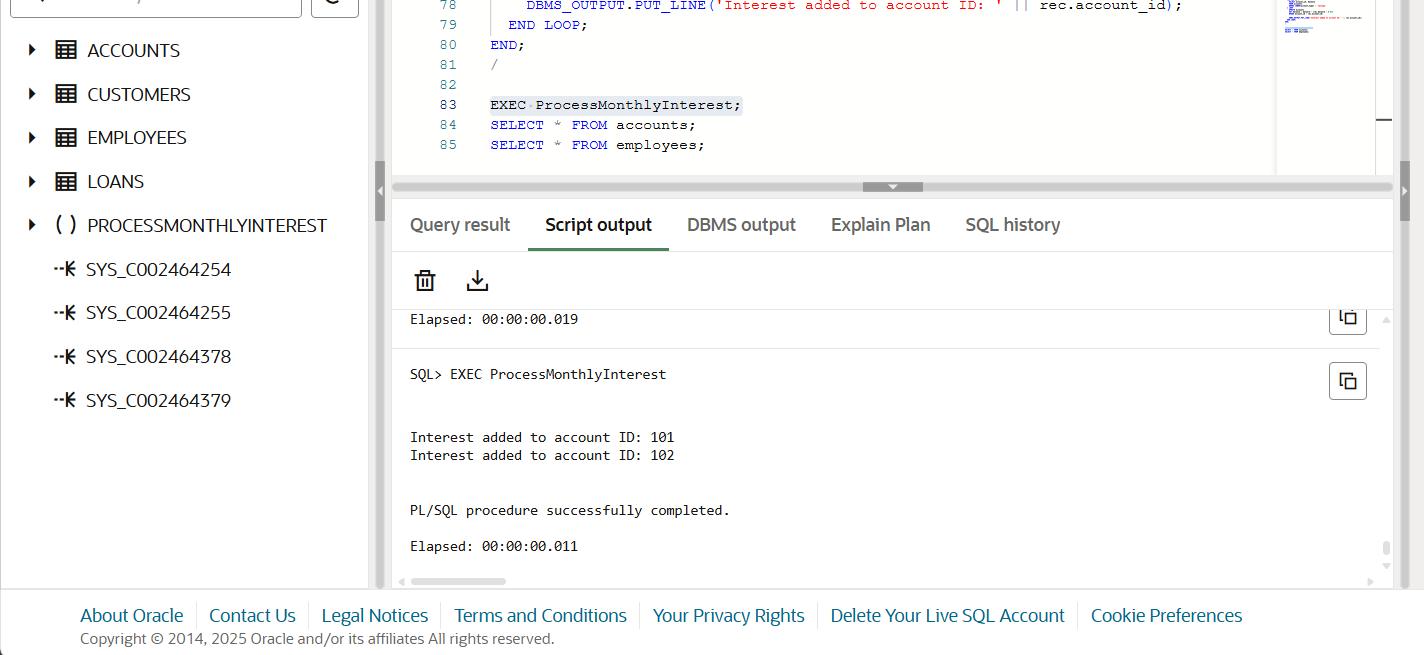
DBMS\_OUTPUT.PUT\_LINE('Interest added to account ID: ' || rec.account\_id);

END LOOP;

END;

/

**Script Output:**

****

**Scenario 2:**

The bank wants to implement a bonus scheme for employees based on their performance**.**

**PL/SQL Query:**

CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus (

dept\_id IN NUMBER,

bonus\_percent IN NUMBER

) IS

BEGIN

FOR rec IN (

SELECT employee\_id, salary

FROM employees

WHERE department\_id = dept\_id

) LOOP

UPDATE employees

SET salary = salary + (rec.salary \* bonus\_percent / 100)

WHERE employee\_id = rec.employee\_id;

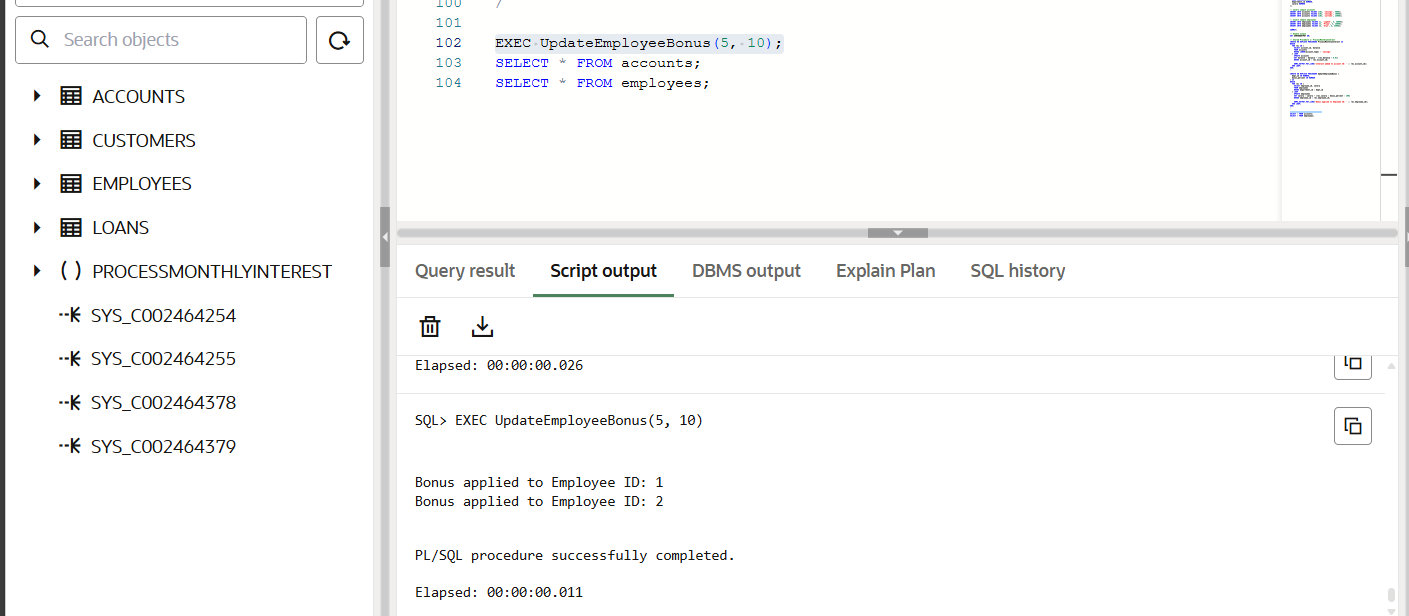
DBMS\_OUTPUT.PUT\_LINE('Bonus applied to Employee ID: ' || rec.employee\_id);

END LOOP;

END;

/

**Script Output:**

****

**Scenario 3:**

Customers should be able to transfer funds between their accounts.

**PL/SQL Query:**

CREATE OR REPLACE PROCEDURE TransferFunds (

from\_account\_id IN NUMBER,

to\_account\_id IN NUMBER,

amount IN NUMBER

) IS

from\_balance NUMBER;

BEGIN

-- Get source account balance

SELECT balance INTO from\_balance

FROM accounts

WHERE account\_id = from\_account\_id;

IF from\_balance < amount THEN

DBMS\_OUTPUT.PUT\_LINE('Transfer failed: Insufficient funds.');

ELSE

-- Deduct from source

UPDATE accounts

SET balance = balance - amount

WHERE account\_id = from\_account\_id;

-- Add to destination

UPDATE accounts

SET balance = balance + amount

WHERE account\_id = to\_account\_id;

DBMS\_OUTPUT.PUT\_LINE('Transfer successful from Account ' || from\_account\_id || ' to ' || to\_account\_id);

END IF;

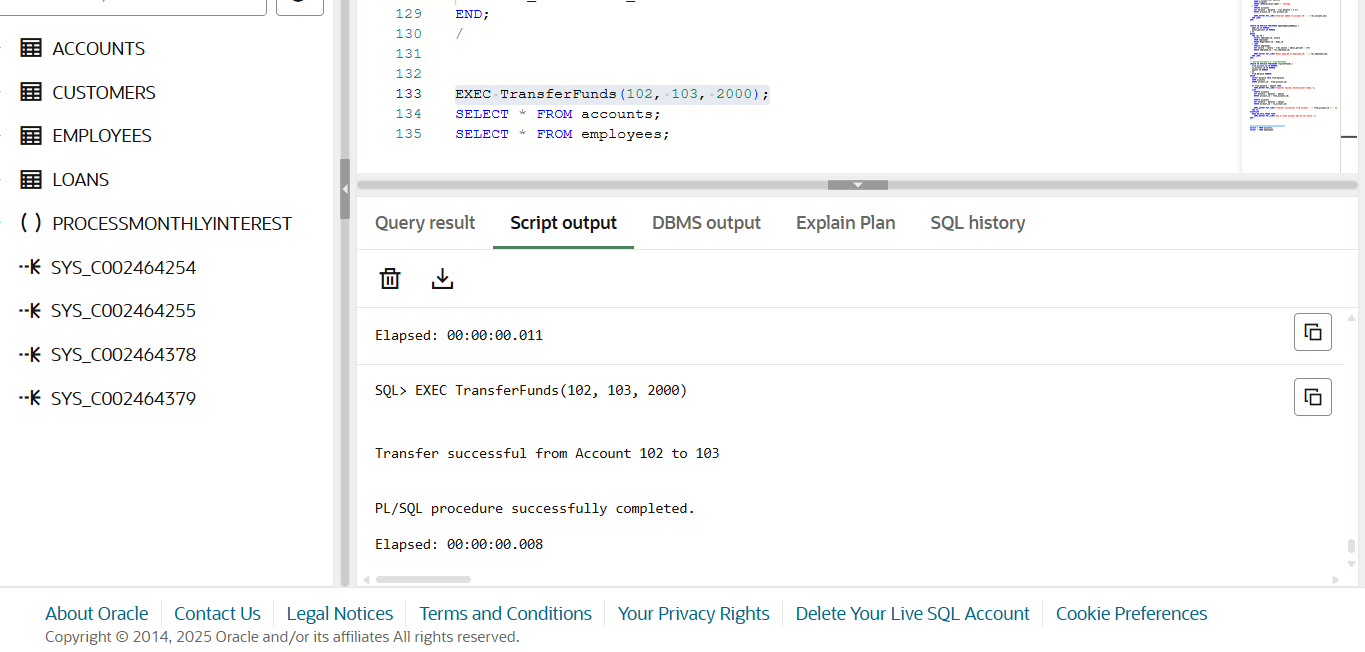
EXCEPTION

WHEN NO\_DATA\_FOUND THEN

DBMS\_OUTPUT.PUT\_LINE('One or both account IDs do not exist.');

END;

/

**Script Output:  
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