**Exercise 2 - Stored Procedures:**

**Scenario 1:**

CREATE OR REPLACE PROCEDURE process\_monthly\_interest

AS

BEGIN

UPDATE accounts

SET balance = balance \* 1.01,

lastmodified = SYSDATE

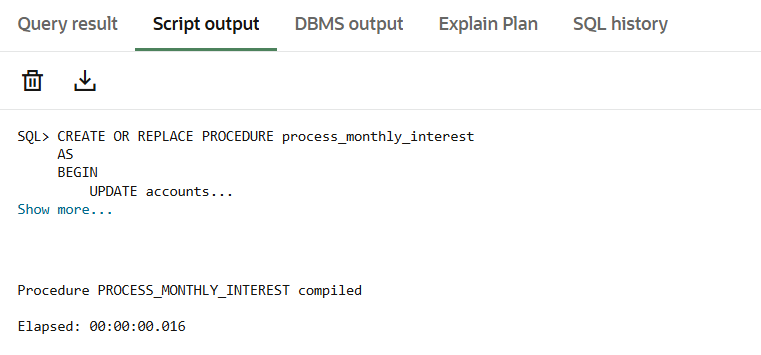
WHERE LOWER(accounttype) = 'savings';

DBMS\_OUTPUT.PUT\_LINE(SQL%ROWCOUNT || ' savings accounts updated.');

END;

/





**Scenario 2:**

CREATE OR REPLACE PROCEDURE update\_employee\_bonus (

p\_department IN VARCHAR2,

p\_bonus\_percent IN NUMBER -- 5 means +5 %

)

AS

BEGIN

UPDATE employees

SET salary = salary \* (1 + p\_bonus\_percent/100)

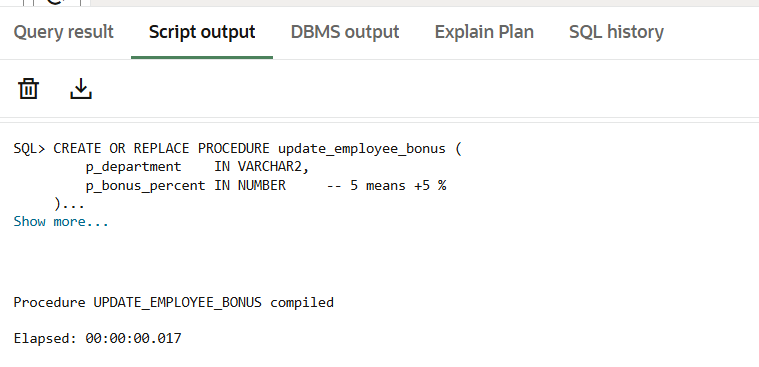
WHERE department = p\_department;

DBMS\_OUTPUT.PUT\_LINE(SQL%ROWCOUNT ||

' employee(s) got a '||p\_bonus\_percent||'% bonus in '||p\_department);

END;

/



**Scenario 3:**

CREATE OR REPLACE PROCEDURE transfer\_funds (

p\_from\_account IN NUMBER,

p\_to\_account IN NUMBER,

p\_amount IN NUMBER

)

AS

v\_balance NUMBER;

BEGIN

/\* Lock both rows so nothing else changes them mid‑transfer \*/

SELECT balance

INTO v\_balance

FROM accounts

WHERE accountid = p\_from\_account

FOR UPDATE;

IF v\_balance < p\_amount THEN

RAISE\_APPLICATION\_ERROR(

-20001,

'Insufficient funds in account '||p\_from\_account

);

END IF;

UPDATE accounts

SET balance = balance - p\_amount,

lastmodified = SYSDATE

WHERE accountid = p\_from\_account;

UPDATE accounts

SET balance = balance + p\_amount,

lastmodified = SYSDATE

WHERE accountid = p\_to\_account;

DBMS\_OUTPUT.PUT\_LINE(

'Transferred '||p\_amount||

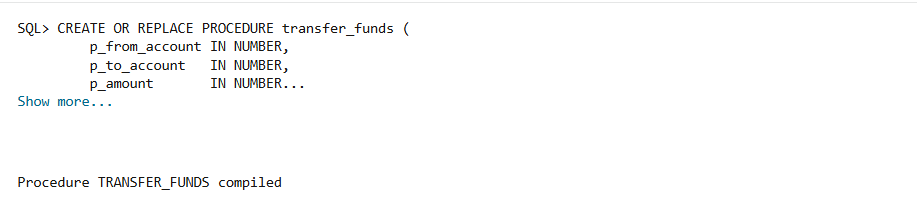
' from '||p\_from\_account||

' to '||p\_to\_account

);

END;

/



**Test / Run the Procedure:**

BEGIN

process\_monthly\_interest;

END;

/

BEGIN

update\_employee\_bonus('IT', 7);

END;

/

BEGIN

transfer\_funds(101, 104, 2000);

END;

/

SELECT accountid, accounttype, balance FROM accounts ORDER BY accountid;

SELECT employeeid, department, salary FROM employees ORDER BY employeeid;

Select \* from accounts;

