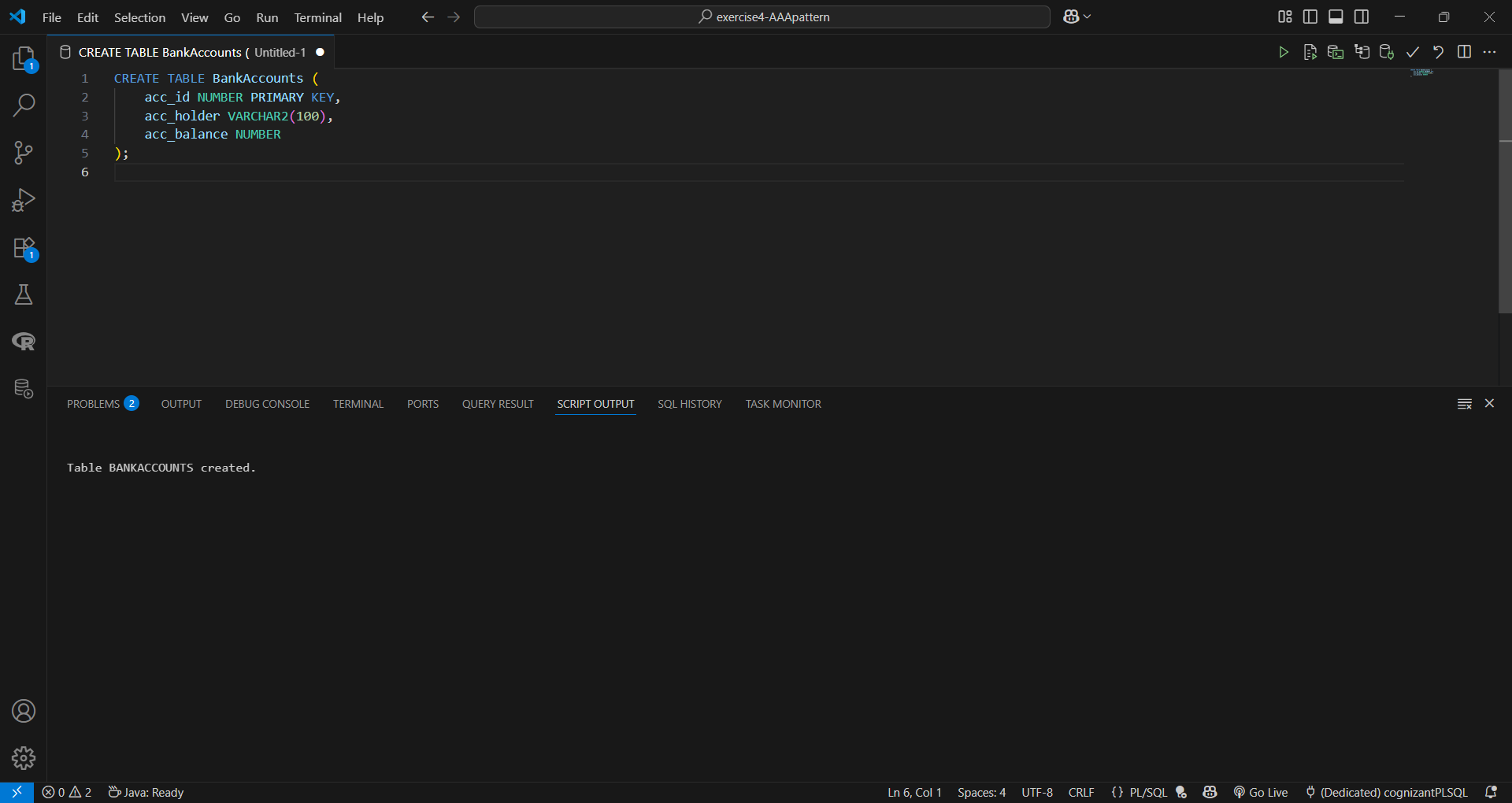
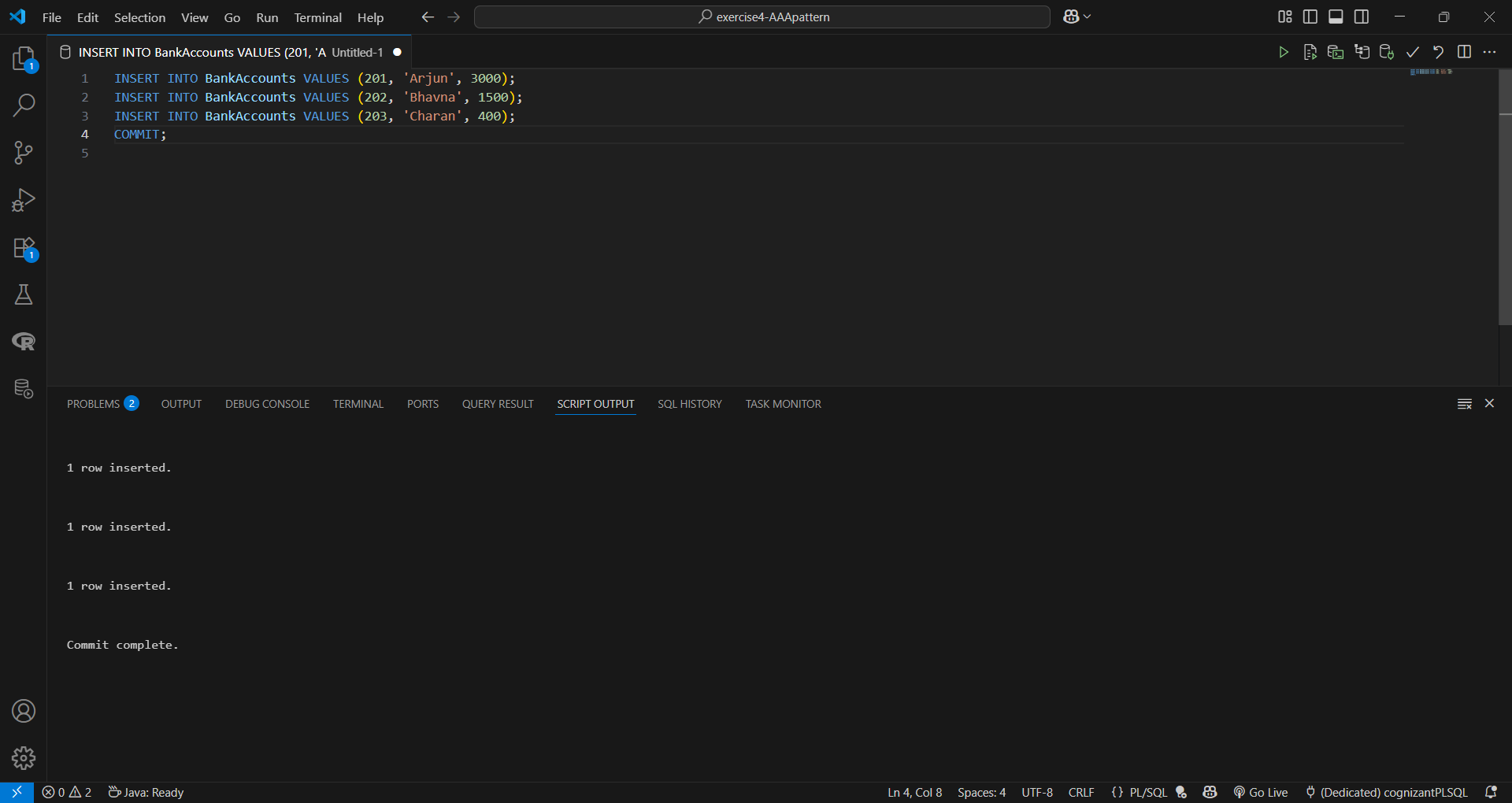
**PL/SQL SafeTransferFunds**

Scenario 1

1. Table Creation and Data Insertion

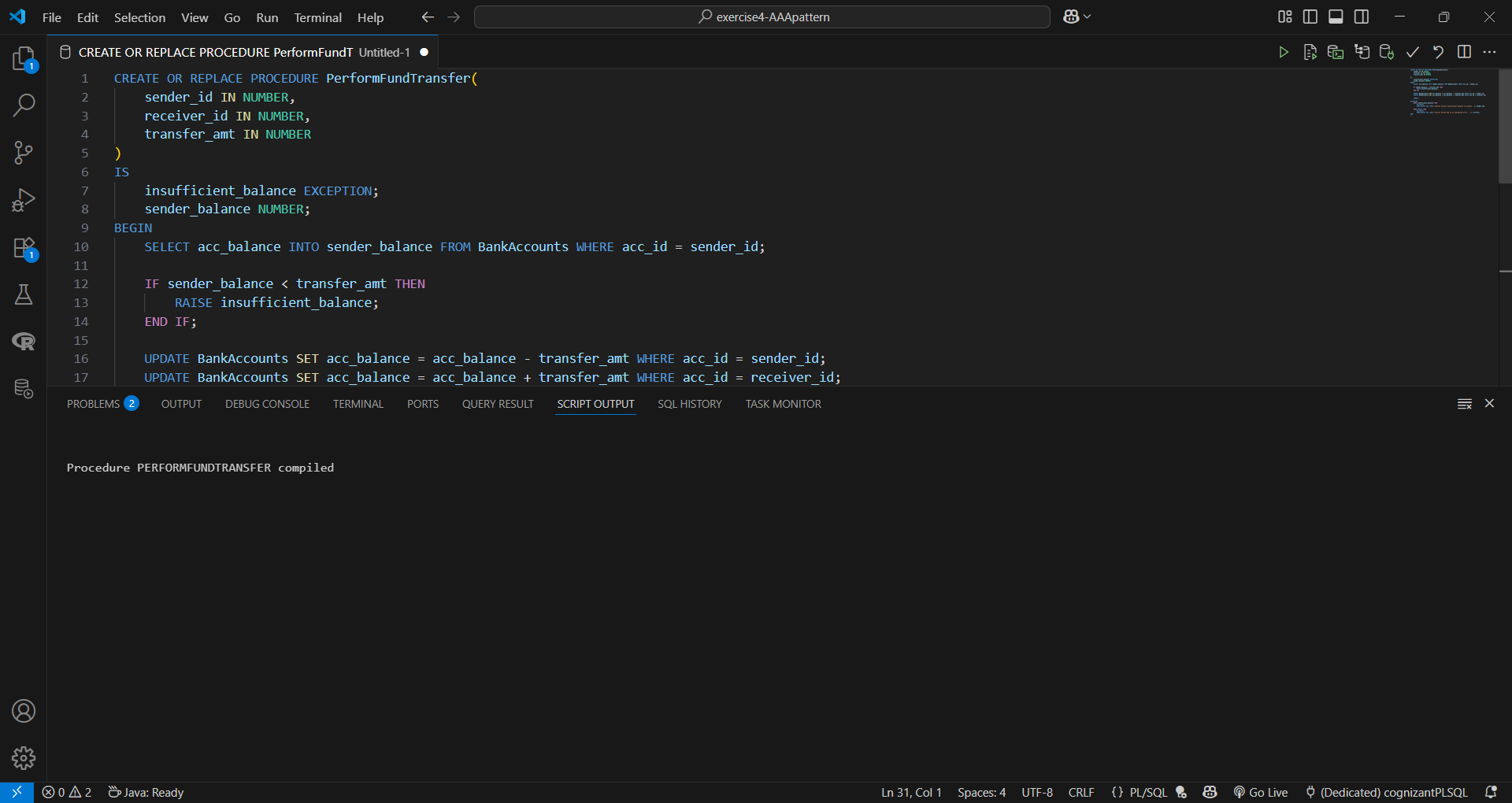
-- Create BankAccounts table:  
CREATE TABLE BankAccounts (  
 acc\_id NUMBER PRIMARY KEY,  
 acc\_holder VARCHAR2(100),  
 acc\_balance NUMBER  
);

  
  
-- Insert sample data  
INSERT INTO BankAccounts VALUES (201, 'Arjun', 3000);  
INSERT INTO BankAccounts VALUES (202, 'Bhavna', 1500);  
INSERT INTO BankAccounts VALUES (203, 'Charan', 400);  
  
COMMIT;



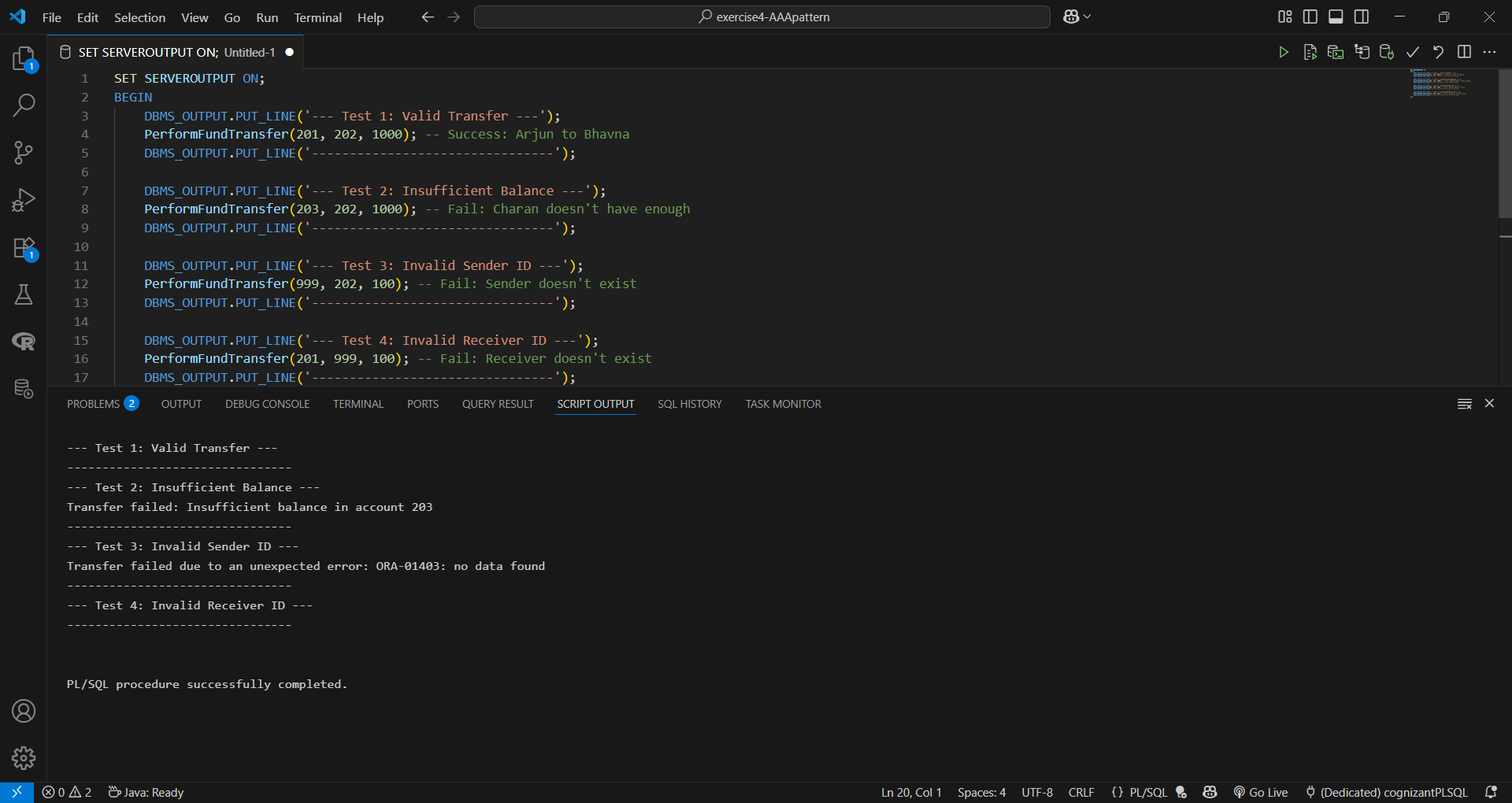
2. Procedure: PerformFundTransfer

CREATE OR REPLACE PROCEDURE PerformFundTransfer(  
 sender\_id IN NUMBER,  
 receiver\_id IN NUMBER,  
 transfer\_amt IN NUMBER  
)  
IS  
 insufficient\_balance EXCEPTION;  
 sender\_balance NUMBER;  
BEGIN  
 SELECT acc\_balance INTO sender\_balance FROM BankAccounts WHERE acc\_id = sender\_id;  
  
 IF sender\_balance < transfer\_amt THEN  
 RAISE insufficient\_balance;  
 END IF;  
  
 UPDATE BankAccounts SET acc\_balance = acc\_balance - transfer\_amt WHERE acc\_id = sender\_id;  
 UPDATE BankAccounts SET acc\_balance = acc\_balance + transfer\_amt WHERE acc\_id = receiver\_id;  
  
 COMMIT;  
  
EXCEPTION  
 WHEN insufficient\_balance THEN  
 ROLLBACK;  
 DBMS\_OUTPUT.PUT\_LINE('Transfer failed: Insufficient balance in account ' || sender\_id);  
  
 WHEN OTHERS THEN  
 ROLLBACK;  
 DBMS\_OUTPUT.PUT\_LINE('Transfer failed due to an unexpected error: ' || SQLERRM);  
END;  
/



3. Test Block with Outputs

SET SERVEROUTPUT ON;  
BEGIN  
 DBMS\_OUTPUT.PUT\_LINE('--- Test 1: Valid Transfer ---');  
 PerformFundTransfer(201, 202, 1000); -- Success: Arjun to Bhavna  
 DBMS\_OUTPUT.PUT\_LINE('--------------------------------');  
  
 DBMS\_OUTPUT.PUT\_LINE('--- Test 2: Insufficient Balance ---');  
 PerformFundTransfer(203, 202, 1000); -- Fail: Charan doesn't have enough  
 DBMS\_OUTPUT.PUT\_LINE('--------------------------------');  
  
 DBMS\_OUTPUT.PUT\_LINE('--- Test 3: Invalid Sender ID ---');  
 PerformFundTransfer(999, 202, 100); -- Fail: Sender doesn't exist  
 DBMS\_OUTPUT.PUT\_LINE('--------------------------------');  
  
 DBMS\_OUTPUT.PUT\_LINE('--- Test 4: Invalid Receiver ID ---');  
 PerformFundTransfer(201, 999, 100); -- Fail: Receiver doesn't exist  
 DBMS\_OUTPUT.PUT\_LINE('--------------------------------');  
END;  
/



4. Verify Final Balances

SELECT \* FROM BankAccounts ORDER BY acc\_id;  
