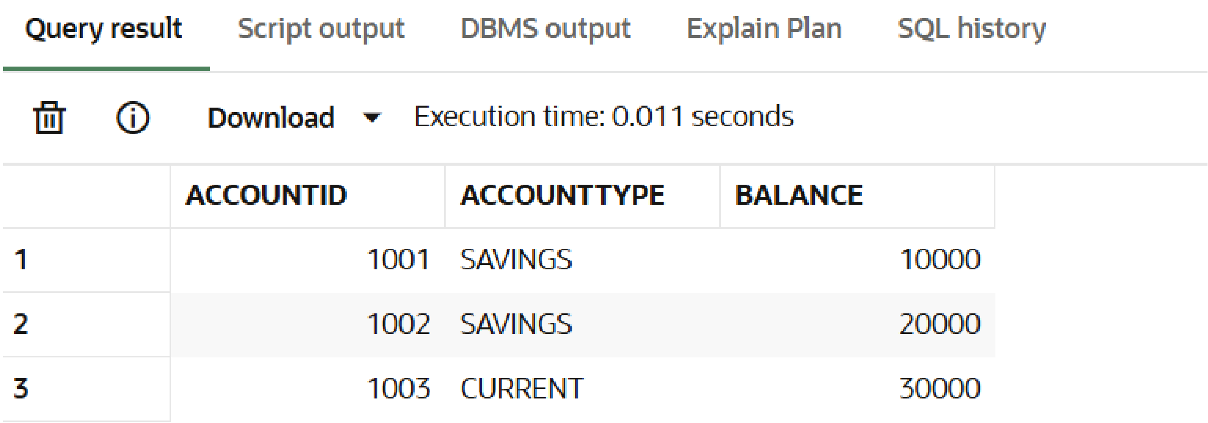
PL/SQL EXERCISES

Exercise 2:Stored Procedures

Scenario 1:

Accounts Table:



Execution time: 0.011 seconds

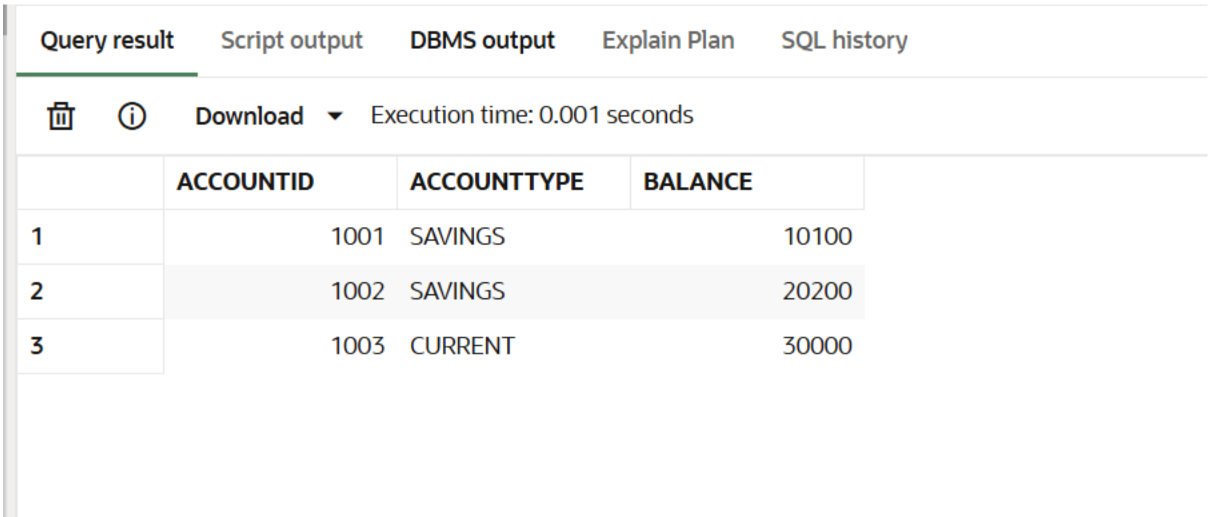
	ACCOUNTID	ACCOUNTTYPE	BALANCE
1	1001	SAVINGS	10000
2	1002	SAVINGS	20000
3	1003	CURRENT	30000

PL/SQL CODE:

```
CREATE OR REPLACE PROCEDURE ProcessMonthlyInterest AS
BEGIN
  FOR acc IN (SELECT AccountID FROM Accounts WHERE AccountType = 'SAVINGS') LOOP
    UPDATE Accounts
    SET Balance = Balance * 1.01
    WHERE AccountID = acc.AccountID;
  END LOOP;
  COMMIT;
END;
/
BEGIN
  ProcessMonthlyInterest;
END;
```

Output:

Accounts Table

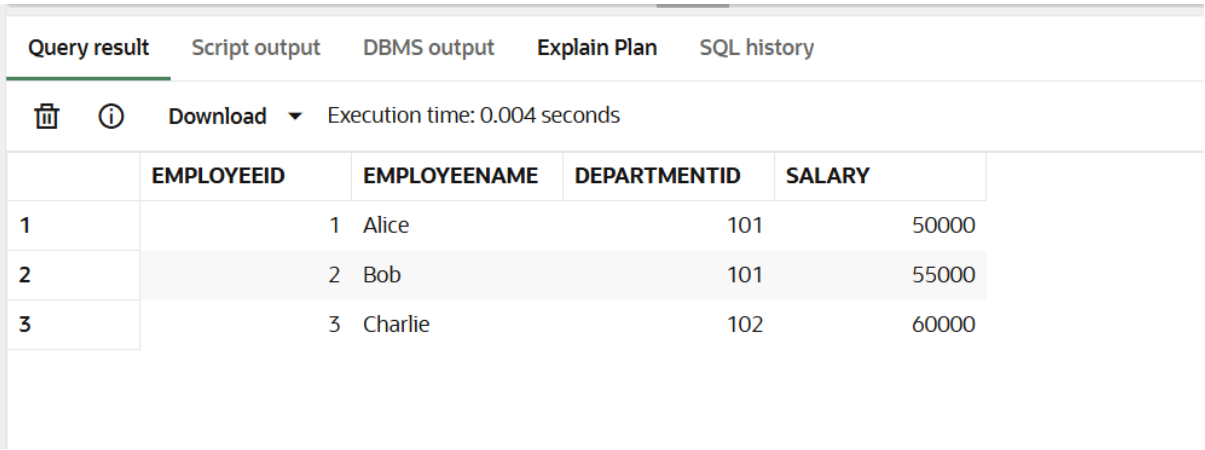


Execution time: 0.001 seconds

	ACCOUNTID	ACCOUNTTYPE	BALANCE
1	1001	SAVINGS	10100
2	1002	SAVINGS	20200
3	1003	CURRENT	30000

Scenario 2:

Employee Table:



Execution time: 0.004 seconds

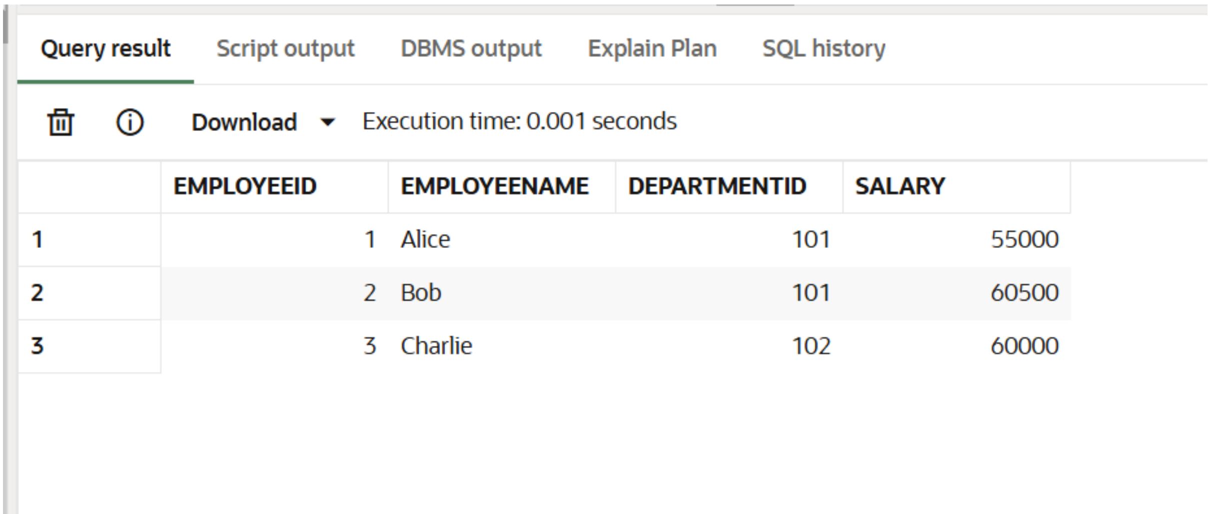
	EMPLOYEEID	EMPLOYEENAME	DEPARTMENTID	SALARY
1	1	Alice	101	50000
2	2	Bob	101	55000
3	3	Charlie	102	60000

PL/SQL CODE:

```
CREATE OR REPLACE PROCEDURE UpdateEmployeeBonus(
  p_DepartmentID IN NUMBER,
  p_BonusPercent IN NUMBER
) AS
BEGIN
  UPDATE Employees
  SET Salary = Salary + (Salary * p_BonusPercent / 100)
  WHERE DepartmentID = p_DepartmentID;
  COMMIT;
END;
/
EXEC UpdateEmployeeBonus(101, 10)
```

OUTPUT:

Employee Table:



	EMPLOYEEID	EMPLOYEENAME	DEPARTMENTID	SALARY
1	1	Alice	101	55000
2	2	Bob	101	60500
3	3	Charlie	102	60000

Scenario 3:

PL/SQL CODE:

```
CREATE OR REPLACE PROCEDURE TransferFunds(
  p_FromAccountID IN NUMBER,
  p_ToAccountID IN NUMBER,
  p_Amount IN NUMBER
) AS
  v_FromBalance NUMBER;
BEGIN
  -- Get balance of source account
  SELECT Balance INTO v_FromBalance
  FROM Accounts
  WHERE AccountID = p_FromAccountID;
  IF v_FromBalance < p_Amount THEN
```

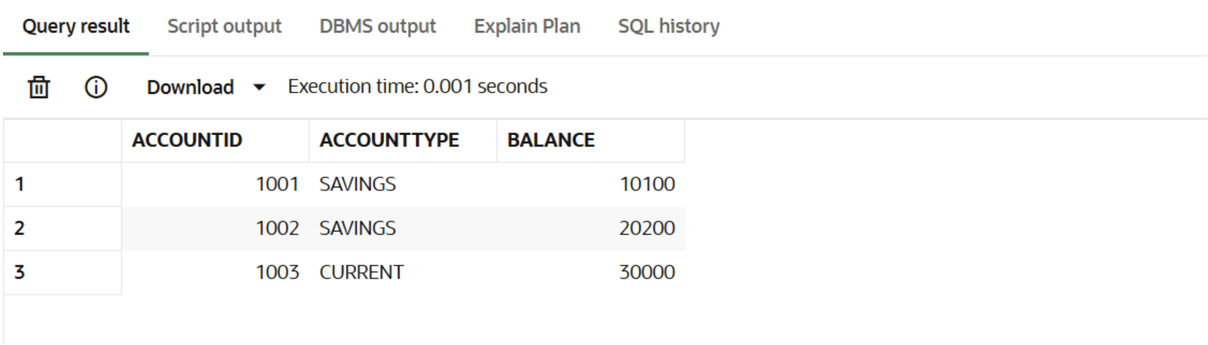
```
 RAISE_APPLICATION_ERROR(-20001, 'Insufficient balance in source account');
  END IF;

  UPDATE Accounts
  SET Balance = Balance - p_Amount
  WHERE AccountID = p_FromAccountID;

  UPDATE Accounts
  SET Balance = Balance + p_Amount
  WHERE AccountID = p_ToAccountID;

  COMMIT;
END;
/
EXEC TransferFunds(1001, 1002, 500);
/
```

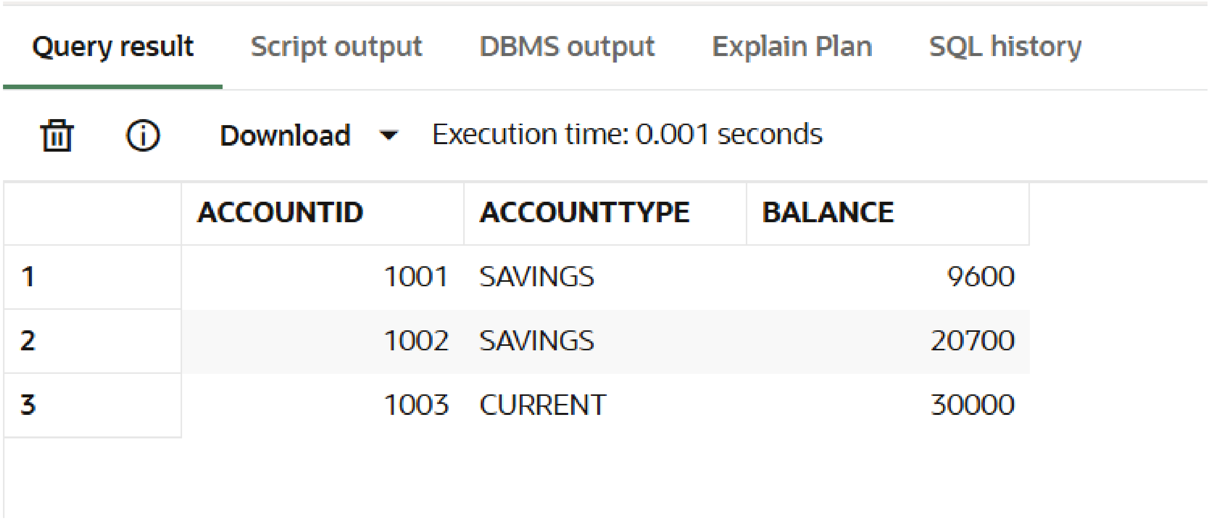
Accounts Table:



Execution time: 0.001 seconds

	ACCOUNTID	ACCOUNTTYPE	BALANCE
1	1001	SAVINGS	10100
2	1002	SAVINGS	20200
3	1003	CURRENT	30000

OUTPUT:



Execution time: 0.001 seconds

	ACCOUNTID	ACCOUNTTYPE	BALANCE
1	1001	SAVINGS	9600
2	1002	SAVINGS	20700
3	1003	CURRENT	30000