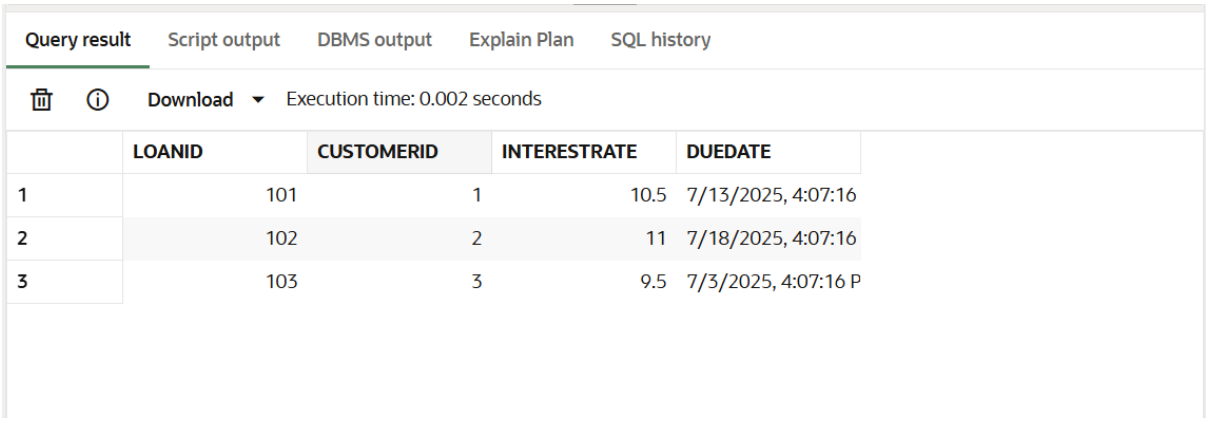
# PL/SQL EXERCISES

## Exercise 1: Control Structures

### Scenario 1:

Loan Table:

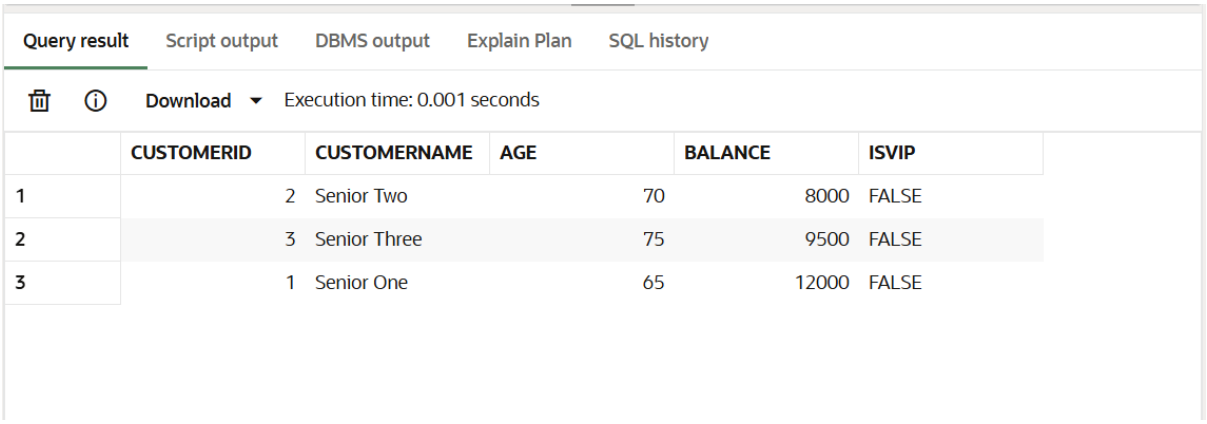


Query result | Script output | DBMS output | Explain Plan | SQL history

Download | Execution time: 0.002 seconds

| | LOANID | CUSTOMERID | INTERESTRATE | DUEDATE |
|---|---|---|---|---|
| 1 | 101 | 1 | 10.5 | 7/13/2025, 4:07:16 |
| 2 | 102 | 2 | 11 | 7/18/2025, 4:07:16 |
| 3 | 103 | 3 | 9.5 | 7/3/2025, 4:07:16 P |

Customer Table:



Query result | Script output | DBMS output | Explain Plan | SQL history

Download | Execution time: 0.001 seconds

| | CUSTOMERID | CUSTOMERNAME | AGE | BALANCE | ISVIP |
|---|---|---|---|---|---|
| 1 | 2 | Senior Two | 70 | 8000 | FALSE |
| 2 | 3 | Senior Three | 75 | 9500 | FALSE |
| 3 | 1 | Senior One | 65 | 12000 | FALSE |

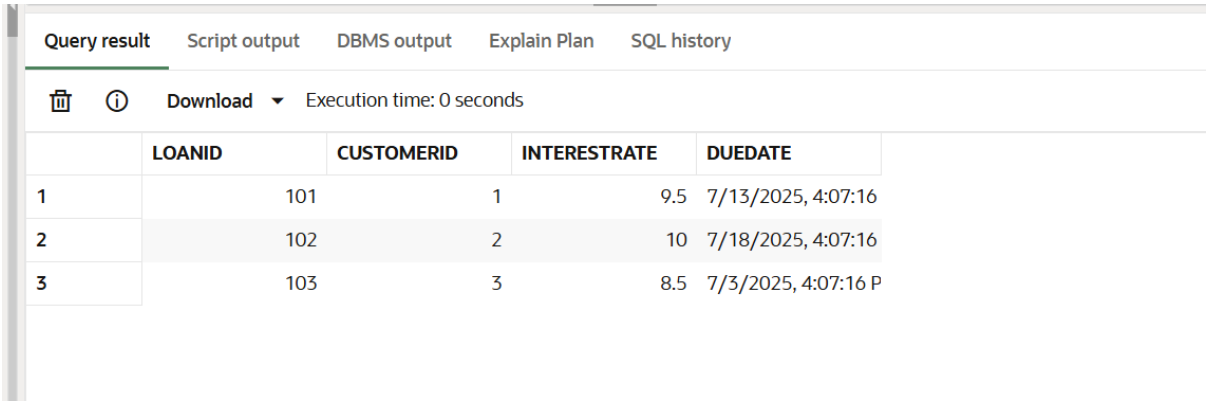
# PL/SQL EXERCISES

**PL/SQL CODE:**

```
BEGIN
  FOR i IN (SELECT CustomerID FROM Customers WHERE Age > 60) LOOP
    UPDATE Loans
    SET InterestRate = InterestRate - 1
    WHERE CustomerID = i.CustomerID;
  END LOOP;
  COMMIT;
END;
/
```

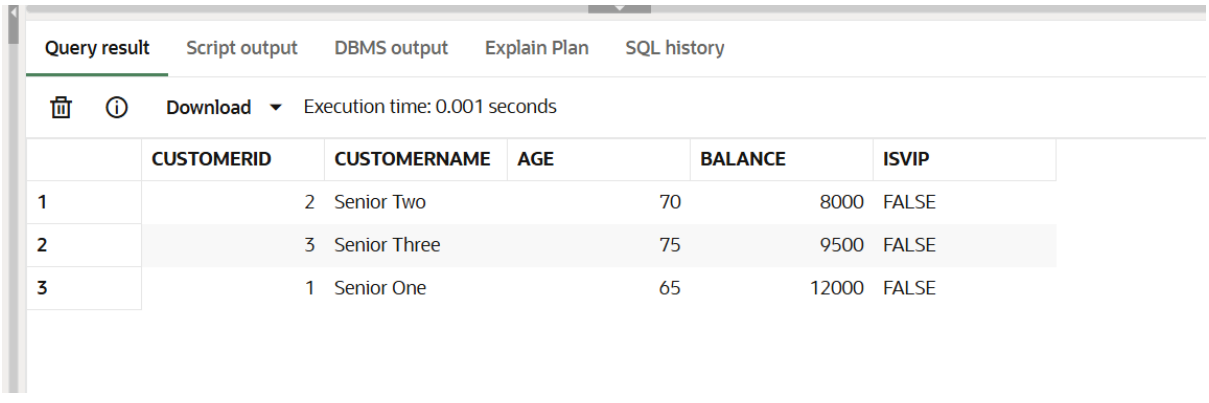
**Output:**

Loan Table




| | LOANID | CUSTOMERID | INTERESTRATE | DUEDATE |
|---|---|---|---|---|
| 1 | 101 | 1 | 9.5 | 7/13/2025, 4:07:16 |
| 2 | 102 | 2 | 10 | 7/18/2025, 4:07:16 |
| 3 | 103 | 3 | 8.5 | 7/3/2025, 4:07:16 P |

Customer Table

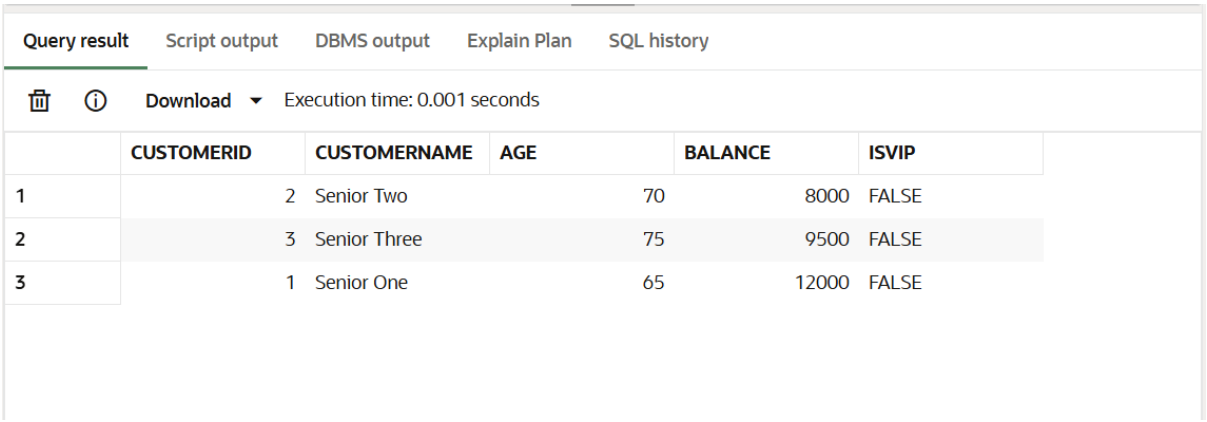



| | CUSTOMERID | CUSTOMERNAME | AGE | BALANCE | ISVIP |
|---|---|---|---|---|---|
| 1 | 2 | Senior Two | 70 | 8000 | FALSE |
| 2 | 3 | Senior Three | 75 | 9500 | FALSE |
| 3 | 1 | Senior One | 65 | 12000 | FALSE |

# PL/SQL EXERCISES

## Scenario 2:

Customer Table:



Query result | Script output | DBMS output | Explain Plan | SQL history

Download | Execution time: 0.001 seconds

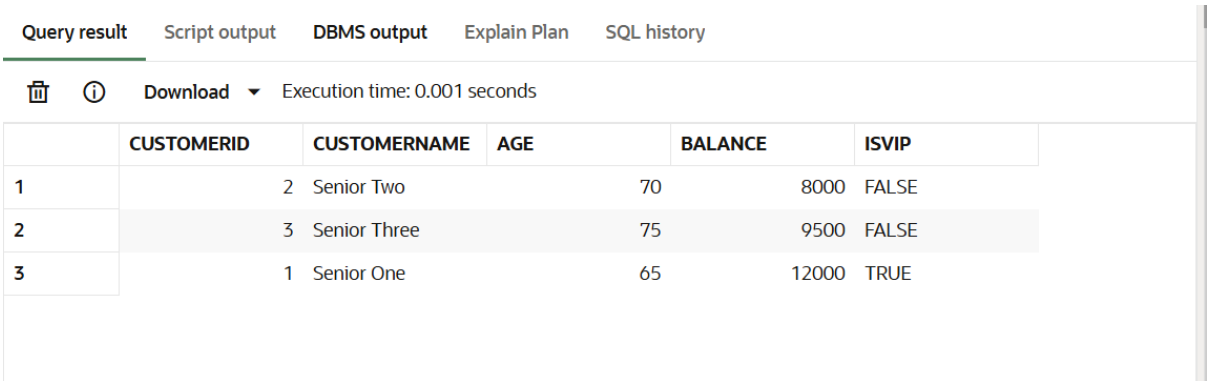
| | CUSTOMERID | CUSTOMERNAME | AGE | BALANCE | ISVIP |
|---|---|---|---|---|---|
| 1 | 2 | Senior Two | 70 | 8000 | FALSE |
| 2 | 3 | Senior Three | 75 | 9500 | FALSE |
| 3 | 1 | Senior One | 65 | 12000 | FALSE |

**PL/SQL CODE:**

```
BEGIN
  FOR i IN (SELECT CustomerID FROM Customers WHERE Balance > 10000) LOOP
    UPDATE Customers
    SET IsVIP = 'TRUE'
    WHERE CustomerID = i.CustomerID;
  END LOOP;
  COMMIT;
END;
/
```

**OUTPUT:**

Customer Table:



Query result | Script output | DBMS output | Explain Plan | SQL history

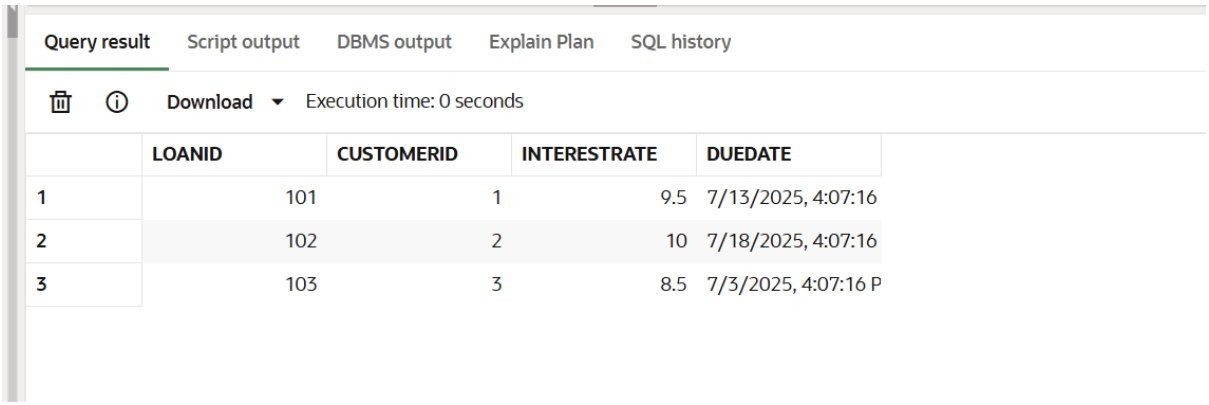
Download | Execution time: 0.001 seconds

| | CUSTOMERID | CUSTOMERNAME | AGE | BALANCE | ISVIP |
|---|---|---|---|---|---|
| 1 | 2 | Senior Two | 70 | 8000 | FALSE |
| 2 | 3 | Senior Three | 75 | 9500 | FALSE |
| 3 | 1 | Senior One | 65 | 12000 | TRUE |

# PL/SQL EXERCISES

## Scenario 3:

Loan Table:



Query result | Script output | DBMS output | Explain Plan | SQL history

Download | Execution time: 0 seconds

| | LOANID | CUSTOMERID | INTERESTRATE | DUEDATE |
|---|---|---|---|---|
| 1 | 101 | 1 | 9.5 | 7/13/2025, 4:07:16 |
| 2 | 102 | 2 | 10 | 7/18/2025, 4:07:16 |
| 3 | 103 | 3 | 8.5 | 7/3/2025, 4:07:16 P |

**PL/SQL CODE:**

```
BEGIN
  FOR loan_rec IN (
    SELECT l.LoanID, l.DueDate, c.CustomerName
    FROM Loans l
    JOIN Customers c ON l.CustomerID = c.CustomerID
    WHERE l.DueDate BETWEEN SYSDATE AND SYSDATE + 30
  ) LOOP
    DBMS_OUTPUT.PUT_LINE('Reminder: Dear ' || loan_rec.CustomerName ||
                         ', your loan (ID: ' || loan_rec.LoanID ||
                         ') is due on ' || TO_CHAR(loan_rec.DueDate, 'DD-MON-YYYY'));
  END LOOP;
END;
/
```

**OUTPUT:**

```
Reminder: Dear Senior One, your loan (ID: 101) is due on 13-JUL-2025
Reminder: Dear Senior Two, your loan (ID: 102) is due on 18-JUL-2025
Reminder: Dear Senior Three, your loan (ID: 103) is due on 03-JUL-2025


PL/SQL procedure successfully completed.

Elapsed: 00:00:00.017
```