

Exercise 1: Control Structures

Output:

Scenario 2:

Customer Balance >10,000:

The screenshot shows the MySQL Workbench interface with a stored procedure named `PromoteVIPCustomers()` being executed. The procedure updates the `IsVIP` flag to `TRUE` for customers with a balance greater than 10,000. The `Result Grid` shows the output of the procedure, which is a table with columns `CustomerID`, `Name`, and `Balance`. The output shows two rows: Suresh Kumar with a balance of 18,000.00 and Rahul Mehta with a balance of 10,550.00. The `Output` pane shows the execution log, indicating that the procedure was executed successfully and returned 2 rows.

```
DELIMITER $$
CREATE PROCEDURE PromoteVIPCustomers()
BEGIN
    UPDATE Customers AS c
    JOIN Customers AS t ON t.CustomerID = c.CustomerID
    SET c.IsVIP = TRUE
    WHERE t.Balance > 10000; -- t.CustomerID in the JOIN satisfies Safe Update
END$$
```

CustomerID	Name	Balance
3	Suresh Kumar	18000.00
5	Rahul Mehta	10550.00

Customers 1 x

#	Time	Action	Message	Duration / Fetch
31	17:48:35	SELECT c.CustomerID, c.Name, c.DOB, TIMESTAMPDIFF(YEAR, c.DOB, CU...	3 row(s) returned	0.000 sec / 0.000 sec
32	17:52:16	SELECT CustomerID, Name, Balance FROM Customers WHERE Balance > 10000 LIMIT ...	2 row(s) returned	0.000 sec / 0.000 sec

VIP flag status for every customer:

The screenshot shows the MySQL Workbench interface with the same stored procedure `PromoteVIPCustomers()` being executed. The `Result Grid` shows the output of the procedure, which is a table with columns `CustomerID`, `Name`, `Balance`, and `IsVIP`. The output shows six rows, including the two rows from the previous screenshot, plus four more rows with `IsVIP` set to 0. The `Output` pane shows the execution log, indicating that the procedure was executed successfully and returned 6 rows.

```
DELIMITER $$
CREATE PROCEDURE PromoteVIPCustomers()
BEGIN
    UPDATE Customers AS c
    JOIN Customers AS t ON t.CustomerID = c.CustomerID
    SET c.IsVIP = TRUE
    WHERE t.Balance > 10000; -- t.CustomerID in the JOIN satisfies Safe Update
END$$
```

CustomerID	Name	Balance	IsVIP
3	Suresh Kumar	18000.00	1
5	Rahul Mehta	10550.00	1
4	Lakshmi Iyer	4200.00	0
2	Jane Smith	1500.00	0
1	John Doe	1000.00	0
6	Meera Rao	950.00	0

Customers 2 x

#	Time	Action	Message	Duration / Fetch
32	17:52:16	SELECT CustomerID, Name, Balance FROM Customers WHERE Balance > 10000 LIMIT ...	2 row(s) returned	0.000 sec / 0.000 sec
33	17:54:31	SELECT CustomerID, Name, Balance, IsVIP FROM Customers ORDER BY Balance DESC ...	6 row(s) returned	0.000 sec / 0.000 sec