**1. Transaction Logs**

Below, you see a transaction table where the logs of transactions between accounts are stored. Write a query to return the change in net worth for each user, ordered by decreasing net change.

**Transactions:**

|  |  |  |  |
| --- | --- | --- | --- |
| Sender\_ID | Receiver\_ID | Amount | Transaction\_Date |
| 55 | 22 | 500 | 18.05.2021 |
| 11 | 33 | 350 | 19.05.2021 |
| 22 | 11 | 650 | 19.05.2021 |
| 22 | 33 | 900 | 20.05.2021 |
| 33 | 11 | 500 | 21.05.2021 |
| 33 | 22 | 750 | 21.05.2021 |
| 11 | 44 | 300 | 22.05.2021 |

**Desired Output:**

|  |  |
| --- | --- |
| Account\_ID | Net\_Change |
| 11 | 500 |
| 44 | 300 |
| 33 | 0 |
| 22 | -300 |
| 55 | -500 |

1. *Create above table (transactions) and insert values,*
2. Sum amounts for each sender (debits) and receiver (credits),
3. Full (outer) join debits and credits tables on account id, taking net change as difference between credits and debits, coercing nulls to zeros with coalesce()

CREATE TABLE Transactions1

(

Sender\_ID INT NOT NULL,

Receiver\_ID INT NOT NULL,

Amount INT NOT NULL,

Transaction\_Date DATE NOT NULL

)

SET DATEFORMAT dmy

INSERT INTO Transactions(Sender\_ID,Receiver\_ID,Amount,Transaction\_Date)

VALUES

(55, 22, 500, '18.05.2021'),

(11, 33, 350, '19.05.2021'),

(22, 11, 650, '19.05.2021'),

(22, 33, 900, '20.05.2021'),

(33, 11, 500, '21.05.2021'),

(33, 22, 750, '21.05.2021'),

(11, 44, 300, '22.05.2021')

SELECT Sender\_ID, SUM(Amount) AS TotalSentAmount

FROM Transactions

GROUP BY Sender\_ID

SELECT Receiver\_ID, SUM(Amount) AS TotalReceivedAmount

FROM Transactions

GROUP BY Receiver\_ID

SELECT

COALESCE(s.Sender\_ID, r.Receiver\_ID) AS Account\_ID,

COALESCE(r.TotalReceivedAmount, 0)-COALESCE(s.TotalSentAmount, 0) AS Net\_Change

FROM

(SELECT Sender\_ID, SUM(Amount) AS TotalSentAmount

FROM Transactions

GROUP BY Sender\_ID) AS s

FULL OUTER JOIN (SELECT Receiver\_ID, SUM(Amount) AS TotalReceivedAmount

FROM Transactions

GROUP BY Receiver\_ID) AS r

ON s.Sender\_ID=r.Receiver\_ID

ORDER BY

Net\_Change DESC