

-- CLIENT RELATED QUERIES

-- Retrieve all clients with their account details (Simple Join)

SELECT

C.ClientID,
C.first_name,
C.last_name,
A.AccountNumber,
A.AccountType,
A.Balance,
A.Status

FROM

CLIENT C

JOIN

ACCOUNT A ON C.ClientID = A.ClientID;

| ClientID | first_name | last_name | AccountNumb... | AccountType | Balance | Status |
|----------|------------|------------|----------------|---------------|---------|---------|
| 1 | Rohan | Verma | ACC1001 | Savings | 15000.5 | Active |
| 1 | Rohan | Verma | ACC1002 | Current | 50000 | Active |
| 1 | Rohan | Verma | ACC1052 | Fixed Deposit | 800000 | Active |
| 2 | Priya | Reddy | ACC1003 | Savings | 25000.8 | Active |
| 2 | Priya | Reddy | ACC1053 | Savings | 76000.2 | Active |
| 3 | Vikram | Joshi | ACC1004 | Fixed Deposit | 100000 | Active |
| 3 | Vikram | Joshi | ACC1054 | Current | 99000 | Active |
| 4 | Ananya | Iyer | ACC1005 | Savings | 30000.2 | Active |
| 4 | Ananya | Iyer | ACC1055 | Savings | 72000.5 | Active |
| 5 | Rahul | Malhotra | ACC1006 | Current | 75000 | Active |
| 5 | Rahul | Malhotra | ACC1056 | Fixed Deposit | 900000 | Closed |
| 6 | Sneha | Chopra | ACC1007 | Savings | 45000.5 | Active |
| 6 | Sneha | Chopra | ACC1057 | Savings | 77000.8 | Active |
| 7 | Karan | Srivastava | ACC1008 | Fixed Deposit | 200000 | Active |
| 7 | Karan | Srivastava | ACC1058 | Current | 100000 | Active |
| 8 | Meera | Rao | ACC1009 | Savings | 60000.8 | Active |
| 8 | Meera | Rao | ACC1059 | Savings | 79000.2 | Active |
| 9 | Rajesh | Thakur | ACC1010 | Current | 90000 | Susp... |
| 9 | Rajesh | Thakur | ACC1060 | Fixed Deposit | 950000 | Active |
| 10 | Pooja | Bose | ACC1011 | Savings | 35000.2 | Active |
| 10 | Pooja | Bose | ACC1061 | Savings | 81000.5 | Active |
| 11 | Amit | Nair | ACC1012 | Fixed Deposit | 150000 | Active |
| 11 | Amit | Nair | ACC1062 | Current | 105000 | Active |
| 12 | Neha | Deshmukh | ACC1013 | Savings | 50000.5 | Active |
| 12 | Neha | Deshmukh | ACC1063 | Savings | 83000.8 | Active |
| 13 | Suresh | Menon | ACC1014 | Current | 80000 | Active |
| 13 | Suresh | Menon | ACC1064 | Fixed Deposit | 1000000 | Active |
| 14 | Anjali | Kapoor | ACC1015 | Savings | 40000.8 | Active |
| 14 | Anjali | Kapoor | ACC1065 | Savings | 85000.2 | Active |
| 15 | Vivek | Sinha | ACC1016 | Fixed Deposit | 300000 | Active |
| 15 | Vivek | Sinha | ACC1066 | Current | 110000 | Active |
| 16 | Kavita | Rangana... | ACC1017 | Savings | 55000.2 | Closed |
| 16 | Kavita | Rangana... | ACC1067 | Savings | 87000.5 | Active |
| 17 | Ravi | Iyengar | ACC1018 | Current | 70000 | Active |
| 17 | Ravi | Iyengar | ACC1068 | Fixed Deposit | 1050000 | Active |
| 18 | Shilpa | Bhatia | ACC1019 | Savings | 48000.5 | Active |
| 18 | Shilpa | Bhatia | ACC1069 | Savings | 89000.8 | Active |
| 19 | Nitin | Choudhary | ACC1020 | Fixed Deposit | 250000 | Active |
| 19 | Nitin | Choudhary | ACC1070 | Current | 115000 | Active |
| 20 | Divya | Srinivasan | ACC1021 | Savings | 32000.8 | Active |
| 21 | Arun | Dubey | ACC1022 | Current | 85000 | Active |
| 22 | Sunita | Mehra | ACC1023 | Savings | 60000.2 | Active |
| 23 | Rajiv | Bajaj | ACC1024 | Fixed Deposit | 400000 | Active |
| 24 | Anita | Seth | ACC1025 | Savings | 70000.5 | Susp... |
| 25 | Manoj | Gandhi | ACC1026 | Current | 95000 | Active |
| 26 | Preeti | Khanna | ACC1027 | Savings | 38000.8 | Active |
| 27 | Sanjay | Dutta | ACC1028 | Fixed Deposit | 500000 | Active |
| 28 | Ritu | Malik | ACC1029 | Savings | 42000.2 | Active |
| 29 | Vijay | Saxena | ACC1030 | Current | 65000 | Active |
| 30 | Kiran | Rastogi | ACC1031 | Savings | 53000.5 | Active |
| 31 | Anil | Chauhan | ACC1032 | Fixed Deposit | 350000 | Active |
| 32 | Poonam | Bansal | ACC1033 | Savings | 47000.8 | Active |
| 33 | Rakesh | Ananwal | ACC1034 | Current | 78000 | Active |

-- Count the number of accounts for each client (Aggregate with GROUP BY)

```
SELECT
    C.ClientID,
    C.first_name,
    C.last_name,
    COUNT(A.AccountNumber) AS NumberOfAccounts
FROM
    CLIENT C
LEFT JOIN
    ACCOUNT A ON C.ClientID = A.ClientID
GROUP BY
    C.ClientID, C.first_name, C.last_name;
```

| ClientID | first_name | last_name | NumberOfAccou... |
|----------|------------|------------|------------------|
| 1 | Rohan | Verma | 3 |
| 2 | Priya | Reddy | 2 |
| 3 | Vikram | Joshi | 2 |
| 4 | Ananya | Iyer | 2 |
| 5 | Rahul | Malhotra | 2 |
| 6 | Sneha | Chopra | 2 |
| 7 | Karan | Srivastava | 2 |
| 8 | Meera | Rao | 2 |
| 9 | Rajesh | Thakur | 2 |
| 10 | Pooja | Bose | 2 |
| 11 | Amit | Nair | 2 |
| 12 | Neha | Deshmukh | 2 |
| 13 | Suresh | Menon | 2 |
| 14 | Anjali | Kapoor | 2 |
| 15 | Vivek | Sinha | 2 |
| 16 | Kavita | Rangana... | 2 |
| 17 | Ravi | Iyengar | 2 |
| 18 | Shilpa | Bhatia | 2 |
| 19 | Nitin | Choudhary | 2 |
| 20 | Divya | Srinivasan | 1 |
| 21 | Arun | Dubey | 1 |
| 22 | Sunita | Mehra | 1 |
| 23 | Rajiv | Bajaj | 1 |
| 24 | Anita | Seth | 1 |
| 25 | Manoj | Gandhi | 1 |
| 26 | Preeti | Khanna | 1 |
| 27 | Sanjay | Dutta | 1 |
| 28 | Ritu | Malik | 1 |
| 29 | Vijay | Saxena | 1 |
| 30 | Kiran | Rastogi | 1 |
| 31 | Anil | Chauhan | 1 |
| 32 | Poonam | Bansal | 1 |
| 33 | Rakesh | Agarwal | 1 |
| 34 | Sarita | Gupta | 1 |
| 35 | Alok | Mishra | 1 |
| 36 | Mala | Tiwari | 1 |
| 37 | Ramesh | Shukla | 1 |
| 38 | Geeta | Yadav | 1 |
| 39 | Vinod | Pandey | 1 |
| 40 | Lata | Rathore | 1 |
| 41 | Harish | Soni | 1 |
| 42 | Asha | Meena | 1 |
| 43 | Dinesh | Rajput | 1 |
| 44 | Rekha | Solanki | 1 |
| 45 | Mohan | Gaur | 1 |
| 46 | Suman | Purohit | 1 |
| 47 | Rajendra | Bhardwaj | 2 |
| 48 | Usha | Kulkarni | 2 |
| 49 | Prakash | Naik | 0 |

-- Find clients who have not taken any loans (Subquery with NOT IN)

```
SELECT
  C.ClientID,
  C.first_name,
  C.last_name
FROM
  CLIENT C
WHERE
  C.ClientID NOT IN (
    SELECT
      LH.ClientID
    FROM
      LOAN_HOLDER LH );
```

| | ClientID | first_name | last_name |
|--|----------|------------|-------------|
| | 1 | Rohan | Verma |
| | 2 | Priya | Reddy |
| | 4 | Ananya | Iyer |
| | 6 | Sneha | Chopra |
| | 10 | Pooja | Bose |
| | 14 | Anjali | Kapoor |
| | 16 | Kavita | Ranganathan |
| | 20 | Divya | Srinivasan |
| | 21 | Arun | Dubey |
| | 25 | Manoj | Gandhi |
| | 26 | Preeti | Khanna |
| | 27 | Sanjay | Dutta |
| | 31 | Anil | Chauhan |
| | 32 | Poonam | Bansal |
| | 34 | Sarita | Gupta |
| | 35 | Alok | Mishra |
| | 38 | Geeta | Yadav |
| | 39 | Vinod | Pandey |
| | 40 | Lata | Rathore |
| | 43 | Dinesh | Rajput |
| | 44 | Rekha | Solanki |
| | 46 | Suman | Purohit |
| | 47 | Rajendra | Bhardwaj |
| | 48 | Usha | Kulkarni |
| | NULL | NULL | NULL |

-- Retrieve clients who have both a savings account and a loan (Complex Join with Subquery)

```
SELECT
  C.ClientID,
  C.first_name,
  C.last_name
FROM
  CLIENT C
WHERE
  C.ClientID IN (
    SELECT
      A.ClientID
    FROM
      ACCOUNT A
    WHERE
      A.AccountType = 'Savings'
  )
AND
  C.ClientID IN (
    SELECT
      LH.ClientID
    FROM
      LOAN_HOLDER LH
  );
```

| | ClientID | first_name | last_name |
|--|----------|------------|-----------|
| | 8 | Meera | Rao |
| | 12 | Neha | Deshmukh |
| | 18 | Shilpa | Bhatia |
| | 22 | Sunita | Mehra |
| | 24 | Anita | Seth |
| | 28 | Ritu | Malik |
| | 30 | Kiran | Rastogi |
| | 36 | Mala | Tiwari |
| | 42 | Asha | Meena |
| | NULL | NULL | NULL |

-- ACCOUNT RELATED QUERIES

--. Find the total number of active, closed, and suspended accounts (Aggregate with GROUP BY)

```
SELECT
    Status,
    COUNT(AccountNumber) AS NumberOfAccounts
FROM
    ACCOUNT
GROUP BY
    Status;
```

| | Status | NumberOfAccou... |
|--|-----------|------------------|
| | Active | 64 |
| | Suspended | 3 |
| | Closed | 3 |

-- Count the total number of accounts in the bank

```
SELECT
    COUNT(AccountNumber) AS TotalAccount
FROM
    ACCOUNT;
```

| Total... |
|----------|
| 70 |

-- list of all accounts

```
SELECT
    a.AccountNumber,
    a.AccountType,
    a.status,
    a.CreatedAt AS Date_of_Creation,
    CONCAT(s.first_name, ' ', s.last_name, '(ID: ', s.StaffID, ')') AS Created_by,
    CONCAT(c.first_name, ' ', c.last_name, '(ID: ', c.ClientID, ')') AS Owner
FROM
    ACCOUNT a
JOIN
    STAFF s ON a.CreatedBy = s.StaffID
JOIN
    CLIENT c ON a.ClientID = c.ClientID;
```

| | AccountNumb... | AccountType | status | Date_of_Creation | Created_by | Owner |
|--|----------------|---------------|--------|---------------------|----------------------------|---------------------------|
| | ACC1001 | Savings | Active | 2019-01-01 00:00:00 | Aditi Patel(ID: 2) | Rohan Verma(ID: 1) |
| | ACC1002 | Current | Active | 2019-02-15 00:00:00 | Bhavya Kumar(ID: 4) | Rohan Verma(ID: 1) |
| | ACC1052 | Fixed Deposit | Active | 2023-04-22 00:00:00 | Vidya Srinivasan(ID: 29) | Rohan Verma(ID: 1) |
| | ACC1003 | Savings | Active | 2019-03-10 00:00:00 | Divya Joshi(ID: 7) | Priya Reddy(ID: 2) |
| | ACC1053 | Savings | Active | 2023-05-05 00:00:00 | Aditi Patel(ID: 2) | Priya Reddy(ID: 2) |
| | ACC1004 | Fixed Deposit | Active | 2019-04-20 00:00:00 | Ishaan Reddy(ID: 9) | Vikram Joshi(ID: 3) |
| | ACC1054 | Current | Active | 2023-06-18 00:00:00 | Bhavya Kumar(ID: 4) | Vikram Joshi(ID: 3) |
| | ACC1005 | Savings | Active | 2019-05-05 00:00:00 | Kavita Thakur(ID: 12) | Ananya Iyer(ID: 4) |
| | ACC1055 | Savings | Active | 2023-07-22 00:00:00 | Divya Joshi(ID: 7) | Ananya Iyer(ID: 4) |
| | ACC1006 | Current | Active | 2019-06-18 00:00:00 | Manish Srivastava(ID: 14) | Rahul Malhotra(ID: 5) |
| | ACC1056 | Fixed Deposit | Closed | 2023-08-30 00:00:00 | Ishaan Reddy(ID: 9) | Rahul Malhotra(ID: 5) |
| | ACC1007 | Savings | Active | 2019-07-22 00:00:00 | Naveen Mishra(ID: 16) | Sneha Chopra(ID: 6) |
| | ACC1057 | Savings | Active | 2023-09-12 00:00:00 | Kavita Thakur(ID: 12) | Sneha Chopra(ID: 6) |
| | ACC1008 | Fixed Deposit | Active | 2019-08-30 00:00:00 | Prashant Sinha(ID: 19) | Karan Srivastava(ID: ...) |
| | ACC1058 | Current | Active | 2023-10-25 00:00:00 | Manish Srivastava(ID: 14) | Karan Srivastava(ID: ...) |
| | ACC1009 | Savings | Active | 2019-09-12 00:00:00 | Riya Choudhary(ID: 21) | Meera Rao(ID: 8) |
| | ACC1059 | Savings | Active | 2023-11-08 00:00:00 | Naveen Mishra(ID: 16) | Meera Rao(ID: 8) |
| | ACC1010 | Current | Sus... | 2019-10-25 00:00:00 | Sanya Nair(ID: 23) | Rajesh Thakur(ID: 9) |
| | ACC1060 | Fixed Deposit | Active | 2023-12-20 00:00:00 | Prashant Sinha(ID: 19) | Rajesh Thakur(ID: 9) |
| | ACC1011 | Savings | Active | 2019-11-08 00:00:00 | Sneha Ranganathan(ID: ...) | Pooja Bose(ID: 10) |
| | ACC1061 | Savings | Active | 2024-01-15 00:00:00 | Riya Choudhary(ID: 21) | Pooja Bose(ID: 10) |
| | ACC1012 | Fixed Deposit | Active | 2019-12-20 00:00:00 | Tanvi Menon(ID: 27) | Amit Nair(ID: 11) |
| | ACC1062 | Current | Active | 2024-02-28 00:00:00 | Sanya Nair(ID: 23) | Amit Nair(ID: 11) |
| | ACC1013 | Savings | Active | 2020-01-15 00:00:00 | Vidya Srinivasan(ID: 29) | Neha Deshmukh(ID: ...) |
| | ACC1063 | Savings | Active | 2024-03-10 00:00:00 | Sneha Ranganathan(ID: ...) | Neha Deshmukh(ID: ...) |
| | ACC1014 | Current | Active | 2020-02-28 00:00:00 | Aditi Patel(ID: 2) | Suresh Menon(ID: 13) |
| | ACC1064 | Fixed Deposit | Active | 2024-04-22 00:00:00 | Tanvi Menon(ID: 27) | Suresh Menon(ID: 13) |
| | ACC1015 | Savings | Active | 2020-03-10 00:00:00 | Bhavya Kumar(ID: 4) | Anjali Kapoor(ID: 14) |
| | ACC1065 | Savings | Active | 2024-05-05 00:00:00 | Vidya Srinivasan(ID: 29) | Anjali Kapoor(ID: 14) |
| | ACC1016 | Fixed Deposit | Active | 2020-04-22 00:00:00 | Divya Joshi(ID: 7) | Vivek Sinha(ID: 15) |
| | ACC1066 | Current | Active | 2024-06-18 00:00:00 | Aditi Patel(ID: 2) | Vivek Sinha(ID: 15) |
| | ACC1017 | Savings | Closed | 2020-05-05 00:00:00 | Ishaan Reddy(ID: 9) | Kavita Ranganathan... |
| | ACC1067 | Savings | Active | 2024-07-22 00:00:00 | Bhavya Kumar(ID: 4) | Kavita Ranganathan... |
| | ACC1018 | Current | Active | 2020-06-18 00:00:00 | Kavita Thakur(ID: 12) | Ravi Iyengar(ID: 17) |
| | ACC1068 | Fixed Deposit | Active | 2024-08-30 00:00:00 | Divya Joshi(ID: 7) | Ravi Iyengar(ID: 17) |
| | ACC1019 | Savings | Active | 2020-07-22 00:00:00 | Manish Srivastava(ID: 14) | Shilpa Bhatia(ID: 18) |
| | ACC1069 | Savings | Active | 2024-09-12 00:00:00 | Ishaan Reddy(ID: 9) | Shilpa Bhatia(ID: 18) |
| | ACC1020 | Fixed Deposit | Active | 2020-08-30 00:00:00 | Naveen Mishra(ID: 16) | Nitin Choudhary(ID: ...) |
| | ACC1070 | Current | Active | 2024-10-25 00:00:00 | Kavita Thakur(ID: 12) | Nitin Choudhary(ID: ...) |
| | ACC1021 | Savings | Active | 2020-09-12 00:00:00 | Prashant Sinha(ID: 19) | Divya Srinivasan(ID: ...) |
| | ACC1022 | Current | Active | 2020-10-25 00:00:00 | Riya Choudhary(ID: 21) | Arun Dubey(ID: 21) |
| | ACC1023 | Savings | Active | 2020-11-08 00:00:00 | Sanya Nair(ID: 23) | Sunita Mehra(ID: 22) |
| | ACC1024 | Fixed Deposit | Active | 2020-12-20 00:00:00 | Sneha Ranganathan(ID: ...) | Rajiv Bajaj(ID: 23) |
| | ACC1025 | Savings | Sus... | 2021-01-15 00:00:00 | Tanvi Menon(ID: 27) | Anita Seth(ID: 24) |
| | ACC1026 | Current | Active | 2021-02-28 00:00:00 | Vidya Srinivasan(ID: 29) | Manoj Gandhi(ID: 25) |
| | ACC1027 | Savings | Active | 2021-03-10 00:00:00 | Aditi Patel(ID: 2) | Preeti Khanna(ID: 26) |
| | ACC1028 | Fixed Deposit | Active | 2021-04-22 00:00:00 | Bhavya Kumar(ID: 4) | Sanjay Dutta(ID: 27) |
| | ACC1029 | Savings | Active | 2021-05-05 00:00:00 | Divya Joshi(ID: 7) | Ritu Malik(ID: 28) |
| | ACC1030 | Current | Active | 2021-06-18 00:00:00 | Ishaan Reddy(ID: 9) | Vijay Saxena(ID: 29) |
| | ACC1031 | Savings | Active | 2021-07-22 00:00:00 | Kavita Thakur(ID: 12) | Kiran Rastogi(ID: 30) |
| | ACC1032 | Fixed Deposit | Active | 2021-08-30 00:00:00 | Manish Srivastava(ID: 14) | Anil Chauhan(ID: 31) |
| | ACC1033 | Savings | Active | 2021-09-12 00:00:00 | Naveen Mishra(ID: 16) | Poonam Bansal(ID: ...) |

-- TRANSACTIONS RELATED QUERIES

-- Retrieve all transactions for a specific account (Filtered Join)

```
SELECT
    T.TransactionID,
    T.TransactionType,
    T.Amount,
    T.DateTime,
    T.SourceAccount,
    T.DestinationAccount
FROM
    TRANSACTION T
JOIN
    ACCOUNT A ON T.SourceAccount = A.AccountNumber
WHERE
    A.AccountNumber = 'ACC1001'; -- Replace with actual account number
```

| | TransactionID | TransactionType | Amount | DateTime | SourceAccount | DestinationAcco... |
|--|---------------|-----------------|--------|---------------------|---------------|--------------------|
| | TXN1001 | Deposit | 5000 | 2023-10-01 09:00:00 | ACC1001 | NULL |
| | TXN1002 | Withdrawal | 2000 | 2023-10-01 10:15:00 | ACC1001 | NULL |
| | TXN1003 | Transfer | 3000 | 2023-10-01 11:30:00 | ACC1001 | ACC1002 |

-- Find the total number of transactions per account (Aggregate with GROUP BY and JOIN)

```
SELECT
    A.AccountNumber,
    COUNT(T.TransactionID) AS NumberOfTransactions
FROM
    ACCOUNT A
LEFT JOIN
    TRANSACTION T ON A.AccountNumber = T.SourceAccount
GROUP BY
    A.AccountNumber;
```


| | AccountNumb... | NumberOfTransactio... |
|--|----------------|-----------------------|
| | ACC1001 | 3 |
| | ACC1002 | 3 |
| | ACC1052 | 0 |
| | ACC1003 | 3 |
| | ACC1053 | 0 |
| | ACC1004 | 3 |
| | ACC1054 | 0 |
| | ACC1005 | 3 |
| | ACC1055 | 0 |
| | ACC1006 | 3 |
| | ACC1056 | 0 |
| | ACC1007 | 3 |
| | ACC1057 | 0 |
| | ACC1008 | 3 |
| | ACC1058 | 0 |
| | ACC1009 | 3 |
| | ACC1059 | 0 |
| | ACC1010 | 3 |
| | ACC1060 | 0 |
| | ACC1011 | 3 |
| | ACC1061 | 0 |
| | ACC1012 | 3 |
| | ACC1062 | 0 |
| | ACC1013 | 3 |
| | ACC1063 | 0 |
| | ACC1014 | 3 |
| | ACC1064 | 0 |
| | ACC1015 | 3 |
| | ACC1065 | 0 |
| | ACC1016 | 3 |
| | ACC1066 | 0 |
| | ACC1017 | 3 |
| | ACC1067 | 0 |
| | ACC1018 | 3 |
| | ACC1068 | 0 |
| | ACC1019 | 3 |
| | ACC1069 | 0 |
| | ACC1020 | 3 |
| | ACC1070 | 0 |
| | ACC1021 | 3 |
| | ACC1022 | 3 |
| | ACC1023 | 3 |
| | ACC1024 | 3 |
| | ACC1025 | 3 |
| | ACC1026 | 3 |
| | ACC1027 | 2 |
| | ACC1028 | 0 |
| | ACC1029 | 0 |
| | ACC1030 | 0 |
| | ACC1031 | 0 |
| | ACC1032 | 0 |
| | ACC1033 | 0 |
| | ACC1034 | 0 |

-- past transactions by a client

```
SELECT
    T.TransactionID,
    T.TransactionType,
    T.Amount,
    T.DateTime,
    T.SourceAccount,
    T.DestinationAccount
FROM
    TRANSACTION T
JOIN
    ACCOUNT A ON (T.SourceAccount = A.AccountNumber OR T.DestinationAccount =
A.AccountNumber)
WHERE
    A.ClientID = 1
ORDER BY
    T.DateTime DESC;
```

| TransactionID | TransactionType | Amount | DateTime | SourceAccount | DestinationAcco... |
|---------------|-----------------|--------|---------------------|---------------|--------------------|
| TXN1006 | Transfer | 7000 | 2023-10-01 15:15:00 | ACC1002 | ACC1003 |
| TXN1005 | Withdrawal | 5000 | 2023-10-01 14:00:00 | ACC1002 | NULL |
| TXN1004 | Deposit | 10000 | 2023-10-01 12:45:00 | ACC1002 | NULL |
| TXN1003 | Transfer | 3000 | 2023-10-01 11:30:00 | ACC1001 | ACC1002 |
| TXN1003 | Transfer | 3000 | 2023-10-01 11:30:00 | ACC1001 | ACC1002 |
| TXN1002 | Withdrawal | 2000 | 2023-10-01 10:15:00 | ACC1001 | NULL |
| TXN1001 | Deposit | 5000 | 2023-10-01 09:00:00 | ACC1001 | NULL |

-- LOAN RELATED QUERIES

-- Find clients who have taken loans and their loan details (Join with multiple tables)

```
SELECT
    C.ClientID,
    C.first_name,
    C.last_name,
    L.LoanNumber,
    L.Amount,
    L.LoanType,
    L.LoanStatus
FROM
    CLIENT C
JOIN
    LOAN_HOLDER LH ON C.ClientID = LH.ClientID
JOIN
    LOAN L ON LH.LoanNumber = L.LoanNumber;
```

| | ClientID | first_name | last_name | LoanNumber | Amount | LoanType | LoanStatus |
|--|----------|------------|------------|------------|---------|------------------|------------|
| | 3 | Vikram | Joshi | LN021 | 2900000 | Agriculture Loan | Cleared |
| | 5 | Rahul | Malhotra | LN006 | 7500000 | Business Loan | Active |
| | 7 | Karan | Srivastava | LN003 | 1800000 | Education Loan | Active |
| | 8 | Meera | Rao | LN012 | 450000 | Gold Loan | Active |
| | 9 | Rajesh | Thakur | LN023 | 1300000 | Car Loan | Active |
| | 11 | Amit | Nair | LN025 | 1050000 | Personal Loan | Active |
| | 12 | Neha | Deshmukh | LN001 | 4500000 | Home Loan | Active |
| | 13 | Suresh | Menon | LN014 | 2700000 | Agriculture Loan | Active |
| | 15 | Vivek | Sinha | LN007 | 2500000 | Agriculture Loan | Cleared |
| | 17 | Ravi | Iyengar | LN020 | 8200000 | Business Loan | Active |
| | 18 | Shilpa | Bhatia | LN004 | 900000 | Personal Loan | Active |
| | 19 | Nitin | Choudhary | LN009 | 1400000 | Car Loan | Active |
| | 22 | Sunita | Mehra | LN019 | 400000 | Gold Loan | Cleared |
| | 23 | Rajiv | Bajaj | LN002 | 1200000 | Car Loan | Cleared |
| | 24 | Anita | Seth | LN016 | 1100000 | Car Loan | Cleared |
| | 28 | Ritu | Malik | LN024 | 1900000 | Education Loan | Cleared |
| | 29 | Vijay | Saxena | LN013 | 9400000 | Business Loan | Cleared |
| | 30 | Kiran | Rastogi | LN005 | 300000 | Gold Loan | Cleared |
| | 33 | Rakesh | Agarwal | LN010 | 600000 | Education Loan | Cleared |
| | 36 | Mala | Tiwari | LN018 | 960000 | Personal Loan | Cleared |
| | 37 | Ramesh | Shukla | LN015 | 5100000 | Home Loan | Active |
| | 41 | Harish | Soni | LN017 | 1750000 | Education Loan | Active |
| | 42 | Asha | Meena | LN008 | 4800000 | Home Loan | Cleared |
| | 45 | Mohan | Gaur | LN022 | 4700000 | Home Loan | Active |
| | 49 | Prakash | Naik | LN011 | 850000 | Personal Loan | Active |

-- Find the average loan amount for each loan type (Aggregate with GROUP BY)

```

SELECT
    LoanType,
    AVG(Amount) AS AverageLoanAmount
FROM
    LOAN
GROUP BY
    LoanType;

```

| | LoanType | AverageLoanAmount |
|--|------------------|-------------------|
| | Agriculture Loan | 2700000 |
| | Business Loan | 8366666.666666667 |
| | Car Loan | 1250000 |
| | Education Loan | 1512500 |
| | Gold Loan | 383333.3333333333 |
| | Home Loan | 4775000 |
| | Personal Loan | 940000 |

-- Retrieve the total amount of payments made for each loan (Aggregate with GROUP BY and JOIN)

SELECT

L.LoanNumber,

SUM(LP.PaidAmount) AS TotalPaidAmount

FROM

LOAN L

JOIN

LOANPAYMENT LP ON L.LoanNumber = LP.LoanNumber

GROUP BY

L.LoanNumber;

| | LoanNumber | TotalPaidAmount |
|--|------------|-----------------|
| | LN001 | 4500000 |
| | LN002 | 1200000 |
| | LN003 | 900000 |
| | LN004 | 600000 |
| | LN005 | 300000 |
| | LN006 | 5000000 |
| | LN007 | 2500000 |
| | LN008 | 4800000 |
| | LN009 | 700000 |
| | LN010 | 600000 |
| | LN011 | 500000 |
| | LN012 | 250000 |
| | LN013 | 9400000 |
| | LN014 | 1000000 |
| | LN015 | 3100000 |
| | LN016 | 1100000 |
| | LN017 | 1500000 |
| | LN018 | 960000 |
| | LN019 | 400000 |
| | LN020 | 6200000 |
| | LN021 | 2900000 |
| | LN022 | 2700000 |
| | LN023 | 900000 |
| | LN024 | 1700000 |
| | LN025 | 1050000 |

-- loans taken by a client

```
SELECT
    L.LoanNumber, L.Amount, L.LoanType, L.LoanStatus
FROM
    LOAN L
INNER JOIN
    LOAN_HOLDER LH ON L.LoanNumber = LH.LoanNumber
WHERE
    LH.ClientID = 12;
```

| | LoanNumber | Amount | LoanType | LoanStatus |
|--|------------|---------|-----------|------------|
| | LN001 | 4500000 | Home Loan | Active |

-- STAFF RELATED QUERIES

-- Retrieve the total amount of loans approved by each staff member (Aggregate with GROUP BY and JOIN)

```
SELECT
    S.StaffID,
    S.first_name,
    S.last_name,
    SUM(L.Amount) AS TotalLoansApproved
FROM
    STAFF S
JOIN
    LOAN_HOLDER LH ON S.StaffID = LH.StaffID
JOIN
    LOAN L ON LH.LoanNumber = L.LoanNumber
GROUP BY
    S.StaffID, S.first_name, S.last_name;
```

| | StaffID | first_name | last_name | TotalLoansApprov... |
|--|---------|------------|------------|---------------------|
| | 1 | Aarav | Sharma | 450000 |
| | 2 | Aditi | Patel | 2850000 |
| | 3 | Arjun | Singh | 2500000 |
| | 4 | Bhavya | Kumar | 1400000 |
| | 5 | Chetan | Gupta | 4900000 |
| | 6 | Deepika | Mehta | 3200000 |
| | 7 | Divya | Joshi | 1100000 |
| | 8 | Gaurav | Malhotra | 4800000 |
| | 9 | Ishaan | Reddy | 850000 |
| | 10 | Jaya | Verma | 1200000 |
| | 11 | Karan | Chopra | 2700000 |
| | 12 | Kavita | Thakur | 900000 |
| | 13 | Lakshmi | Rao | 1750000 |
| | 14 | Manish | Srivastava | 600000 |
| | 15 | Meera | Yadav | 1300000 |
| | 16 | Naveen | Mishra | 5100000 |
| | 18 | Pooja | Shah | 8200000 |
| | 19 | Prashant | Sinha | 1900000 |
| | 20 | Rahul | Bose | 7500000 |
| | 21 | Riya | Choudhary | 960000 |
| | 22 | Rohan | Kapoor | 9400000 |
| | 23 | Sanya | Nair | 4700000 |

-- Retrieve the staff member who has approved the most loans (Subquery with ORDER BY and LIMIT)

```
SELECT
    S.StaffID,
```

```

    S.first_name,
    S.last_name,
    COUNT(LH.LoanNumber) AS NumberOfLoansApproved
FROM
    STAFF S
JOIN
    LOAN_HOLDER LH ON S.StaffID = LH.StaffID
GROUP BY
    S.StaffID, S.first_name, S.last_name
ORDER BY
    NumberOfLoansApproved DESC
LIMIT 1;

```

| StaffID | first_name | last_name | NumberOfLoansApprov... |
|---------|------------|-----------|------------------------|
| 2 | Aditi | Patel | 2 |

```

-- list of all accounts created by a staff member
SELECT
    A.AccountNumber,
    A.AccountType,
    A.Balance,
    A.ClientID,
    A.CreatedAt,
    CONCAT(S.first_name, ' ', S.last_name, '(ID: ', s.StaffID, ')') AS Staff_Name_and_ID
FROM
    ACCOUNT A
JOIN
    STAFF S ON A.CreatedBy = S.StaffID
WHERE
    A.CreatedBy = 2; -- Replace 5 with the desired Staff ID

```

| AccountNumb... | AccountType | Balance | ClientID | CreatedAt | Staff_Name_and_... |
|----------------|---------------|---------|----------|---------------------|--------------------|
| ACC1001 | Savings | 15000.5 | 1 | 2019-01-01 00:00:00 | Aditi Patel(ID: 2) |
| ACC1014 | Current | 80000 | 13 | 2020-02-28 00:00:00 | Aditi Patel(ID: 2) |
| ACC1027 | Savings | 38000.8 | 26 | 2021-03-10 00:00:00 | Aditi Patel(ID: 2) |
| ACC1040 | Fixed Deposit | 550000 | 39 | 2022-04-22 00:00:00 | Aditi Patel(ID: 2) |
| ACC1053 | Savings | 76000.2 | 2 | 2023-05-05 00:00:00 | Aditi Patel(ID: 2) |
| ACC1066 | Current | 110000 | 15 | 2024-06-18 00:00:00 | Aditi Patel(ID: 2) |

-- list of all staff members with their position

```
SELECT
  StaffID,
  CONCAT(first_name, ' ', last_name) AS Name,
  Email,
  Role
FROM STAFF;
```

| | StaffID | Name | Email | Role |
|--|---------|-------------------|--------------------------------|---------|
| | 1 | Aarav Sharma | aarav.sharma@example.com | Manager |
| | 2 | Aditi Patel | aditi.patel@example.com | Clerk |
| | 3 | Arjun Singh | arjun.singh@example.com | Teller |
| | 4 | Bhavya Kumar | bhavya.kumar@example.com | Clerk |
| | 5 | Chetan Gupta | chetan.gupta@example.com | Teller |
| | 6 | Deepika Mehta | deepika.mehta@example.com | Manager |
| | 7 | Divya Joshi | divya.joshi@example.com | Clerk |
| | 8 | Gaurav Malhotra | gaurav.malhotra@example.com | Teller |
| | 9 | Ishaan Reddy | ishaan.reddy@example.com | Clerk |
| | 10 | Jaya Verma | jaya.verma@example.com | Teller |
| | 11 | Karan Chopra | karan.chopra@example.com | Manager |
| | 12 | Kavita Thakur | kavita.thakur@example.com | Clerk |
| | 13 | Lakshmi Rao | lakshmi.rao@example.com | Teller |
| | 14 | Manish Srivast... | manish.srivastava@example.c... | Clerk |
| | 15 | Meera Yadav | meera.yadav@example.com | Teller |
| | 16 | Naveen Mishra | naveen.mishra@example.com | Clerk |
| | 17 | Neha Desai | neha.desai@example.com | Teller |
| | 18 | Pooja Shah | pooja.shah@example.com | Manager |
| | 19 | Prashant Sinha | prashant.sinha@example.com | Clerk |
| | 20 | Rahul Bose | rahul.bose@example.com | Teller |
| | 21 | Riya Choudhary | riya.choudhary@example.com | Clerk |
| | 22 | Rohan Kapoor | rohan.kapoor@example.com | Teller |
| | 23 | Sanya Nair | sanya.nair@example.com | Clerk |
| | 24 | Shivam Dubey | shivam.dubey@example.com | Manager |
| | 25 | Sneha Rangan... | sneha.ranganathan@example... | Clerk |
| | 26 | Suresh Iyengar | suresh.iyengar@example.com | Teller |
| | 27 | Tanvi Menon | tanvi.menon@example.com | Clerk |
| | 28 | Varun Bhatia | varun.bhatia@example.com | Teller |
| | 29 | Vidya Srinivasan | vidya.srinivasan@example.com | Clerk |
| | 30 | Yash Raj | yash.raj@example.com | Manager |