

WEEK-01

MySQL

Table Customer:

The screenshot shows a MySQL Workbench interface with the following SQL queries in the editor:

```
44 (4, '2026-02-05', 250000.00, 'Debit', 'Success'),
45 (5, '2026-01-10', 10000.00, 'Debit', 'Success'));
46
47 * INSERT INTO credit_history (customer_id, credit_score, loan_amount, emi_amount, payment_status) VALUES
48 (1, 720, 500000.00, 25000.00, 'Paid'),
49 (2, 680, 300000.00, 20000.00, 'Paid'),
50 (3, 550, 700000.00, 40000.00, 'Missed'),
51 (4, 750, 1000000.00, 50000.00, 'Paid'),
52 (5, 690, 400000.00, 22000.00, 'Paid');
53
54 * select * from customers
55 * select * from transactions
```

The Result Grid displays the following data for the 'customers' table:

customer_id	name	age	income	account_type	city
1	Amit Sharma	35	800000.00	Savings	Delhi
2	Riya Singh	28	550000.00	Current	Mumbai
3	Karan Kumar	42	1200000.00	Savings	Bengaluru
4	Sneha Gupta	30	750000.00	Savings	Chennai
5	Vikram Patel	38	900000.00	Current	Hyderabad
6	Neha Verma	27	600000.00	Savings	Pune

Table Transactions:

The screenshot shows a MySQL Workbench interface with the following SQL queries in the editor:

```
47 * INSERT INTO credit_history (customer_id, credit_score, loan_amount, emi_amount, payment_status) \
48 (1, 720, 500000.00, 25000.00, 'Paid'),
49 (2, 680, 300000.00, 20000.00, 'Paid'),
50 (3, 550, 700000.00, 40000.00, 'Missed'),
51 (4, 750, 1000000.00, 50000.00, 'Paid'),
52 (5, 690, 400000.00, 22000.00, 'Paid');
53
54 * select * from customers
55 * select * from transactions
56 select * from credit_history
57
58 INSERT INTO customers (name, age, income, account_type, city)
```

The Result Grid displays the following data for the 'transactions' table:

transaction_id	customer_id	transaction_date	amount	transaction_type	status
1	1	2026-02-01	12000.50	Debit	Success
2	2	2026-01-20	50000.00	Credit	Success
3	3	2026-02-03	15000.00	Debit	Failed
4	4	2026-02-05	250000.00	Debit	Success
5	5	2026-01-10	10000.00	Debit	Success
6	6	2026-02-06	18000.00	Debit	Success

Table Credit_history:

The screenshot shows a MySQL Workbench interface with the following SQL queries in the editor:

```
53
54 * select * from customers
55 * select * from transactions
56 select * from credit_history
57
58 INSERT INTO customers (name, age, income, account_type, city)
59 VALUES ('Neha Verma', 27, 600000.00, 'Savings', 'Pune');
60
61 * INSERT INTO transactions (customer_id, transaction_date, amount, transaction_type, status)
62 VALUES (6, '2026-02-06', 18000.00, 'Debit', 'Success');
63
64 * INSERT INTO credit_history (customer_id, credit_score, loan_amount, emi_amount, payment_status)
```

The Result Grid displays the following data for the 'credit_history' table:

credit_id	customer_id	credit_score	loan_amount	emi_amount	payment_status
1	1	720	500000.00	25000.00	Paid
2	2	680	300000.00	20000.00	Paid
3	3	550	700000.00	40000.00	Missed
4	4	750	1000000.00	50000.00	Paid
5	5	690	400000.00	22000.00	Paid
6	6	710	450000.00	23000.00	Paid

CRUD operations:

C-Create

Week1

Limit to 1000 rows

```
56 select * from credit_history
57
58 INSERT INTO customers (name, age, income, account_type, city)
59 VALUES ('Neha Verma', 27, 600000.00, 'Savings', 'Pune');
60
61 INSERT INTO transactions (customer_id, transaction_date, amount, transaction_type, status)
62 VALUES (6, '2026-02-06', 18000.00, 'Debit', 'Success');
63
64 INSERT INTO credit_history (customer_id, credit_score, loan_amount, emi_amount, payment_status)
65 VALUES (6, 710, 450000.00, 23000.00, 'Paid');
66
67 SELECT * FROM customers;
```

Result Grid

	customer_id	name	age	income	account_type	city
1		Amit Sharma	35	800000.00	Savings	Delhi
2		Riya Singh	28	550000.00	Current	Mumbai
3		Karan Kumar	42	1200000.00	Savings	Bengaluru
4		Sneha Gupta	30	750000.00	Savings	Chennai
5		Vikram Patel	38	900000.00	Current	Hyderabad
6		Neha Verma	27	600000.00	Savings	Pune
*		NULL	NULL	NULL	NULL	NULL

R-Retrieve

Week1

Limit to 1000 rows

```
65 VALUES (6, 710, 450000.00, 23000.00, 'Paid');
66
67 SELECT * FROM customers;
68
69 SELECT c.name, t.transaction_date, t.amount, t.transaction_type, t.status
70 FROM customers c
71 JOIN transactions t ON c.customer_id = t.customer_id
72 WHERE c.name = 'Amit Sharma';
73
74 UPDATE customers
75 SET income = 850000.00
76 WHERE name = 'Amit Sharma';
```

Result Grid

	name	transaction_date	amount	transaction_type	status
▶	Amit Sharma	2026-02-01	12000.50	Debit	Success

U-Update

Week1

Limit to 1000 rows

```
74 UPDATE customers
75 SET income = 850000.00
76 WHERE customer_id = 1;
77 select * from customers
78
79 DELETE FROM transactions
80 WHERE customer id = 5;
```

Result Grid

	customer_id	name	age	income	account_type	city
▶	1	Amit Sharma	35	850000.00	Savings	Delhi
	2	Riya Singh	28	550000.00	Current	Mumbai
	3	Karan Kumar	42	1200000.00	Savings	Bengaluru
	4	Sneha Gupta	30	750000.00	Savings	Chennai
	5	Vikram Patel	38	900000.00	Current	Hyderabad
	6	Neha Verma	27	600000.00	Savings	Pune
*		NULL	NULL	NULL	NULL	NULL

D-Delete

The screenshot shows a SQL IDE interface. The SQL editor contains the following code:

```
76 WHERE customer_id = 1;  
77 • select * from customers  
78  
79 DELETE FROM transactions  
80 WHERE customer_id = 5;  
81 • select * from transactions  
82
```

Below the editor is the 'Result Grid' showing a table with 6 columns: transaction_id, customer_id, transaction_date, amount, transaction_type, and status. The table contains 6 rows of data.

transaction_id	customer_id	transaction_date	amount	transaction_type	status
1	1	2026-02-01	12000.50	Debit	Success
2	2	2026-01-20	50000.00	Credit	Success
3	3	2026-02-03	15000.00	Debit	Failed
4	4	2026-02-05	250000.00	Debit	Success
6	6	2026-02-06	18000.00	Debit	Success
*	NULL	NULL	NULL	NULL	NULL

MongoDB

Password:pr@gathi_10

Table Customer

```
Atlas atlas-b61vpj-shard-0 [primary] banking_finance> db.customers.find()  
[  
  {  
    _id: 1,  
    name: 'Amit Sharma',  
    age: 35,  
    income: 800000,  
    account_type: 'Savings',  
    city: 'Delhi'  
  },  
  {  
    _id: 2,  
    name: 'Riya Singh',  
    age: 28,  
    income: 550000,  
    account_type: 'Current',  
    city: 'Mumbai'  
  },  
  {  
    _id: 3,  
    name: 'Karan Kumar',  
    age: 42,  
    income: 1200000,  
    account_type: 'Savings',  
    city: 'Bengaluru'  
  },  
  {  
    _id: 4,  
    name: 'Sneha Gupta',  
    age: 30,  
    income: 750000,  
    account_type: 'Savings',  
  }  
]
```

Table Transactions:

```
Atlas atlas-b61vpj-shard-0 [primary] banking_finance> db.transactions.find()
[
  {
    _id: ObjectId("6980b5520d91d3df61776b6a"),
    customer_id: 1,
    transaction_date: ISODate("2026-02-01T00:00:00.000Z"),
    amount: 12000.5,
    transaction_type: 'Debit',
    status: 'Success'
  },
  {
    _id: ObjectId("6980b5520d91d3df61776b6b"),
    customer_id: 2,
    transaction_date: ISODate("2026-01-20T00:00:00.000Z"),
    amount: 50000,
    transaction_type: 'Credit',
    status: 'Success'
  },
  {
    _id: ObjectId("6980b5520d91d3df61776b6c"),
    customer_id: 3,
    transaction_date: ISODate("2026-02-03T00:00:00.000Z"),
    amount: 15000,
    transaction_type: 'Debit',
    status: 'Failed'
  },
  {
    _id: ObjectId("6980b5520d91d3df61776b6d"),
    customer_id: 4,
    transaction_date: ISODate("2026-02-05T00:00:00.000Z"),
    amount: 250000,
    transaction_type: 'Debit',
    status: 'Success'
  }
]
```

Table Credit_history

```
Atlas atlas-b61vpj-shard-0 [primary] banking_finance> db.credit_history.find()
[
  {
    _id: ObjectId("6980b55f0d91d3df61776b70"),
    customer_id: 1,
    credit_score: 720,
    loan_amount: 500000,
    emi_amount: 25000,
    payment_status: 'Paid'
  },
  {
    _id: ObjectId("6980b55f0d91d3df61776b71"),
    customer_id: 2,
    credit_score: 680,
    loan_amount: 300000,
    emi_amount: 20000,
    payment_status: 'Paid'
  },
  {
    _id: ObjectId("6980b55f0d91d3df61776b72"),
    customer_id: 3,
    credit_score: 550,
    loan_amount: 700000,
    emi_amount: 40000,
    payment_status: 'Missed'
  },
  {
    _id: ObjectId("6980b55f0d91d3df61776b73"),
    customer_id: 4,
    credit_score: 750,
    loan_amount: 1000000,
    emi_amount: 50000,
  }
]
```

CRUD operations

C-Create

```
Atlas atlas-b61vpj-shard-0 [primary] test> use banking_finance
switched to db banking_finance
Atlas atlas-b61vpj-shard-0 [primary] banking_finance> db.customers.insertMany([
...   { _id: 1, name: "Amit Sharma", age: 35, income: 800000, account_type: "Savings", city: "Delhi" },
...   { _id: 2, name: "Riya Singh", age: 28, income: 550000, account_type: "Current", city: "Mumbai" },
...   { _id: 3, name: "Karan Kumar", age: 42, income: 1200000, account_type: "Savings", city: "Bengaluru" },
...   { _id: 4, name: "Sneha Gupta", age: 30, income: 750000, account_type: "Savings", city: "Chennai" },
...   { _id: 5, name: "Vikram Patel", age: 38, income: 900000, account_type: "Current", city: "Hyderabad" },
...   { _id: 6, name: "Neha Verma", age: 27, income: 600000, account_type: "Savings", city: "Pune" }
... ])
{
  acknowledged: true,
  insertedIds: { '0': 1, '1': 2, '2': 3, '3': 4, '4': 5, '5': 6 }
}
Atlas atlas-b61vpj-shard-0 [primary] banking_finance> db.transactions.insertMany([
...   { customer_id: 1, transaction_date: new Date("2026-02-01"), amount: 12000.50, transaction_type: "Debit", status: "Success" },
...   { customer_id: 2, transaction_date: new Date("2026-01-20"), amount: 50000.00, transaction_type: "Credit", status: "Success" },
...   { customer_id: 3, transaction_date: new Date("2026-02-03"), amount: 15000.00, transaction_type: "Debit", status: "Failed" },
...   { customer_id: 4, transaction_date: new Date("2026-02-05"), amount: 250000.00, transaction_type: "Debit", status: "Success" },
...   { customer_id: 5, transaction_date: new Date("2026-01-10"), amount: 10000.00, transaction_type: "Debit", status: "Success" },
...   { customer_id: 6, transaction_date: new Date("2026-02-06"), amount: 18000.00, transaction_type: "Debit", status: "Success" }
... ])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("6980b5520d91d3df61776b6a"),
    '1': ObjectId("6980b5520d91d3df61776b6b"),
    '2': ObjectId("6980b5520d91d3df61776b6c"),
    '3': ObjectId("6980b5520d91d3df61776b6d"),
    '4': ObjectId("6980b5520d91d3df61776b6e"),
    '5': ObjectId("6980b5520d91d3df61776b6f")
  }
}
```

R-Retrieve

```
]
Atlas atlas-b61vpj-shard-0 [primary] banking_finance> db.transactions.find({ customer_id: 1 })
[
  {
    _id: ObjectId("6980b5520d91d3df61776b6a"),
    customer_id: 1,
    transaction_date: ISODate("2026-02-01T00:00:00.000Z"),
    amount: 12000.5,
    transaction_type: 'Debit',
    status: 'Success'
  }
]
```

U-Update

```
Atlas atlas-b61vpj-shard-0 [primary] banking_finance> db.customers.updateOne(
...   { _id: 1 },
...   { $set: { income: 850000 } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

D-Delete

```
]
Atlas atlas-b61vpj-shard-0 [primary] banking_finance> db.customers.deleteOne({ _id: 5 })
{ acknowledged: true, deletedCount: 1 }
```