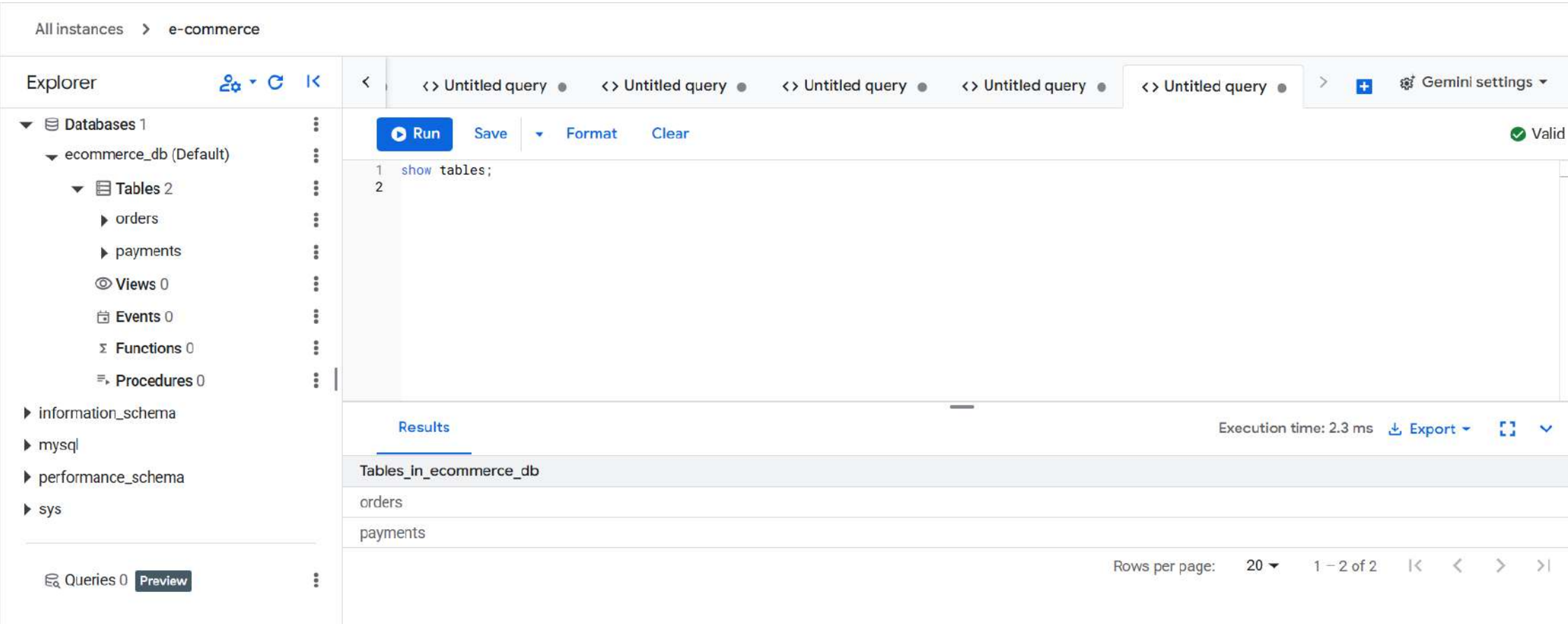
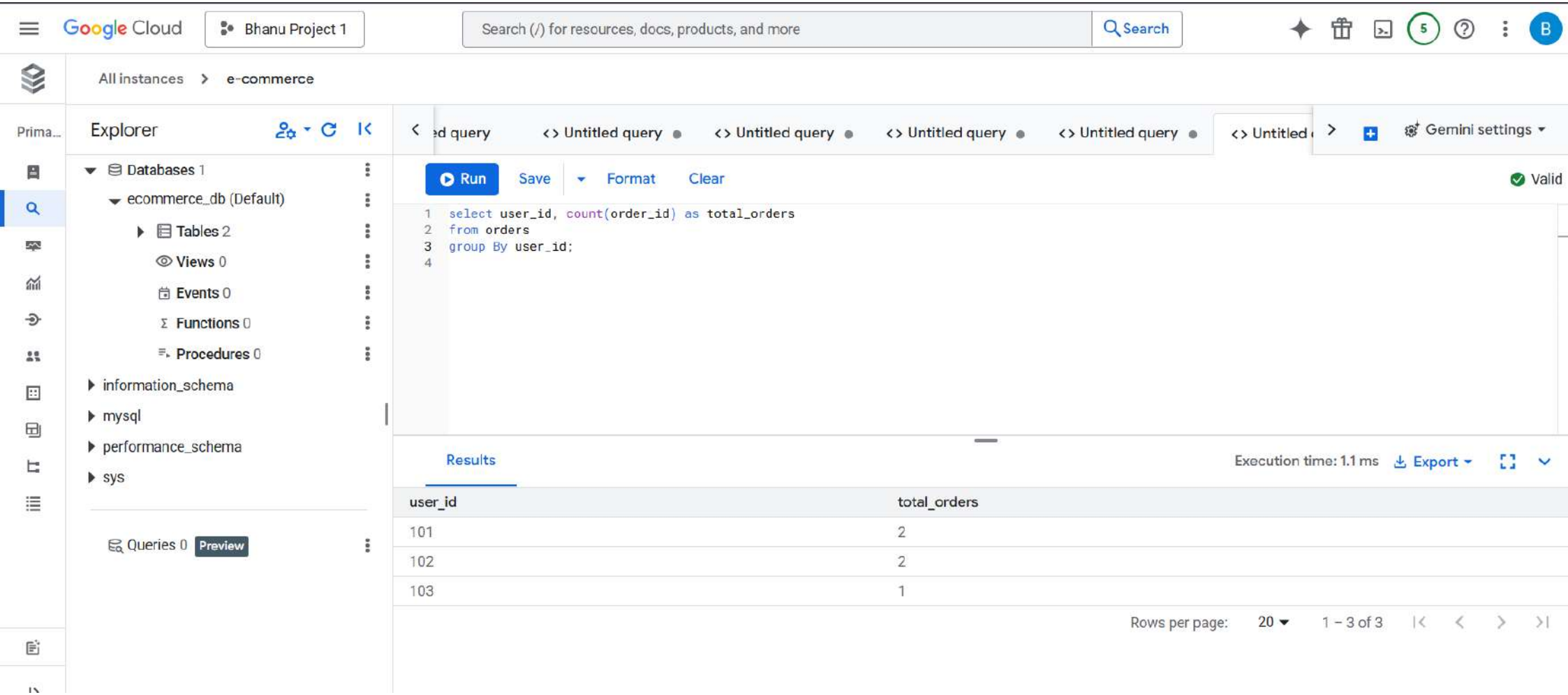
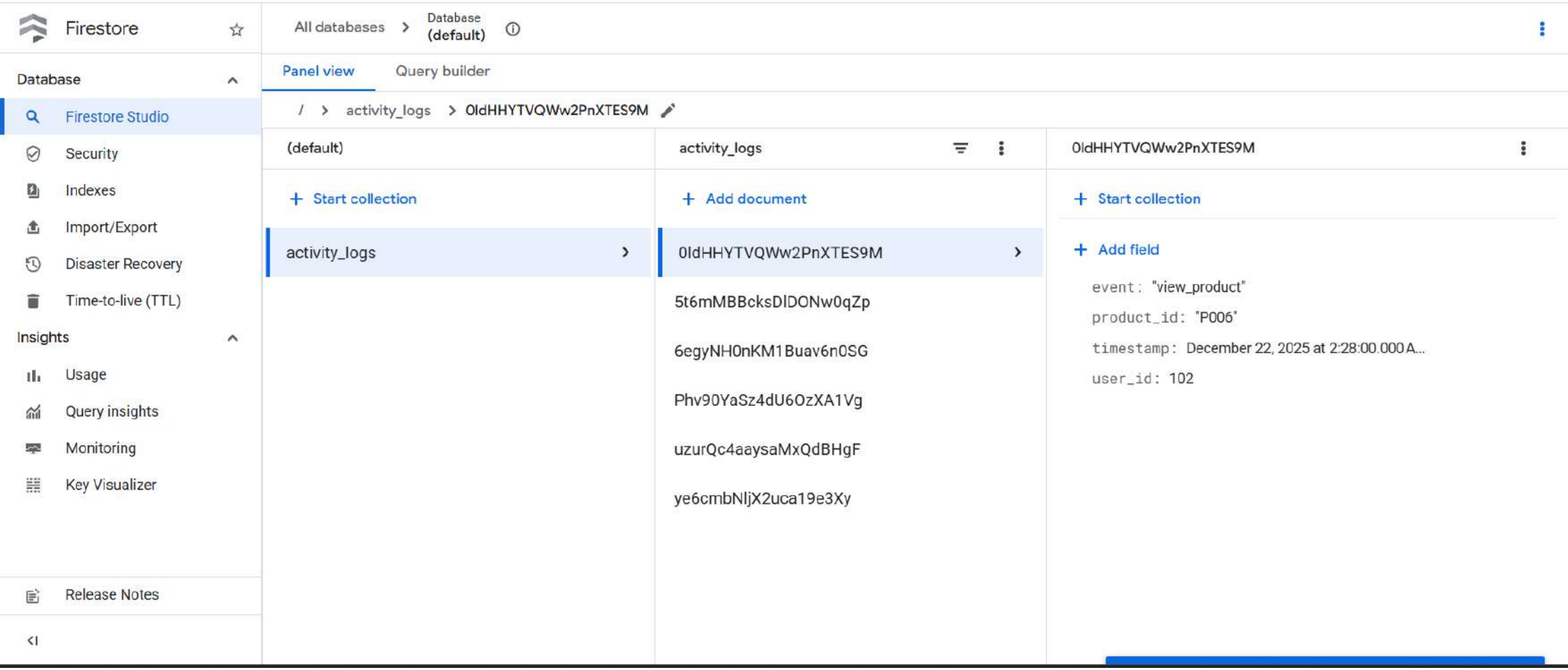
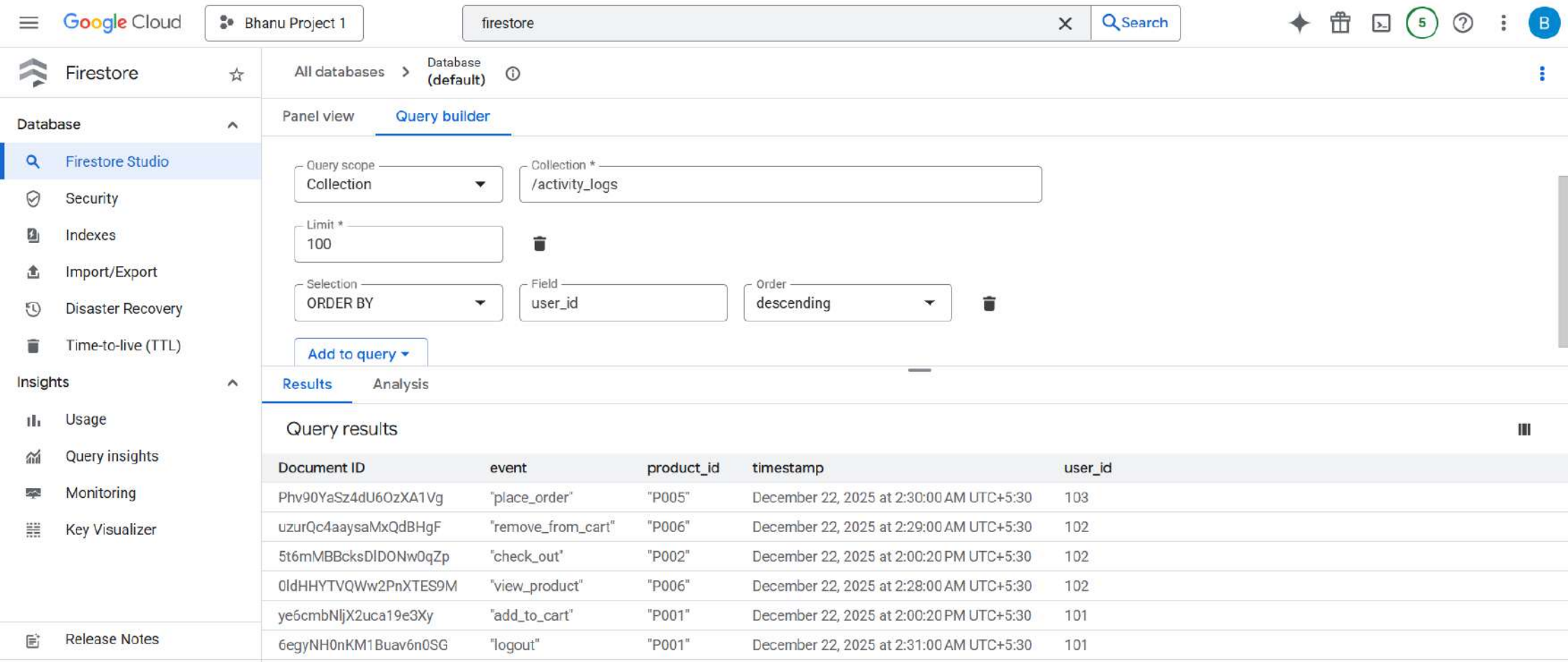

All instances > e-commerce
Explorer
Databases 1
ecommerce_db (Default)
Tables 2
orders
payments
Views 0
Events 0
Functions 0
Procedures 0
information_schema
mysql
performance_schema
sys
Queries 0 Preview
Untitled query
Untitled query
Untitled query
Untitled query
Untitled query
Gemini settings
Run
Save
Format
Clear
Valid
1 show tables;
2
Results
Execution time: 2.3 ms
Export
Tables_in_ecommerce_db
orders
payments
Rows per page: 20
1 – 2 of 2


Google Cloud
Bhanu Project 1
Search (/) for resources, docs, products, and more
Search
All instances
e-commerce
Explorer
Untitled query
Untitled query
Untitled query
Untitled query
Gemini settings
Databases 1
ecommerce_db (Default)
Tables 2
Views 0
Events 0
Functions 0
Procedures 0
information_schema
mysql
performance_schema
sys
Queries 0
Preview
Run
Save
Format
Clear
Valid
select user_id, count(order_id) as total_orders
from orders
group By user_id;
Results
Execution time: 1.1 ms
Export
user_id
total_orders
101
2
102
2
103
1
Rows per page:
20
1 – 3 of 3


Firestore
All databases
Database
(default)
Database
Firestore Studio
Security
Indexes
Import/Export
Disaster Recovery
Time-to-live (TTL)
Insights
Usage
Query insights
Monitoring
Key Visualizer
Release Notes
Panel view
Query builder
/
activity_logs
0IdHHYTVQWw2PnXTES9M
(default)
activity_logs
0IdHHYTVQWw2PnXTES9M
Start collection
Add document
Start collection
Add field
activity_logs
0IdHHYTVQWw2PnXTES9M
5t6mMBBcksDlDONw0qZp
6egyNH0nKM1Buav6n0SG
Phv90YaSz4dU6OzXA1Vg
uzurQc4aaysaMxQdBHgF
ye6cmbNljX2uca19e3Xy
event: "view_product"
product_id: "P006"
timestamp: December 22, 2025 at 2:28:00.000 A...
user_id: 102


Google Cloud
Bhanu Project 1
firestore
Search
Firestore
All databases
Database
(default)
Database
Firestore Studio
Security
Indexes
Import/Export
Disaster Recovery
Time-to-live (TTL)
Insights
Usage
Query insights
Monitoring
Key Visualizer
Release Notes
Panel view
Query builder
Query scope
Collection
Collection *
/activity_logs
Limit *
100
Selection
ORDER BY
Field
user_id
Order
descending
Add to query
Results
Analysis
Query results
Document ID
event
product_id
timestamp
user_id
Phv90YaSz4dU6OzXA1Vg
"place_order"
"P005"
December 22, 2025 at 2:30:00 AM UTC+5:30
103
uzurQc4aaysaMxQdBHgF
"remove_from_cart"
"P006"
December 22, 2025 at 2:29:00 AM UTC+5:30
102
5t6mMBBcksDlDONw0qZp
"check_out"
"P002"
December 22, 2025 at 2:00:20 PM UTC+5:30
102
0ldHHYTVQWw2PnXTES9M
"view_product"
"P006"
December 22, 2025 at 2:28:00 AM UTC+5:30
102
ye6cmbNljX2uca19e3Xy
"add_to_cart"
"P001"
December 22, 2025 at 2:00:20 PM UTC+5:30
101
6egyNH0nKM1Buav6n0SG
"logout"
"P001"
December 22, 2025 at 2:31:00 AM UTC+5:30
101

Why SQL is chosen for transactions:

1. When a customer places an order or makes payment, the data must be correct.
2. We cannot afford mistakes like double payment or missing order.
3. SQL databases give ACID guarantees, meaning the transaction fully completes or it rolls back.
4. Order and payment tables are related, so relational database fits well.
5. The structure of these tables does not change much, so fixed schema works.
6. SQL supports foreign keys, joins, constraints that protect integrity.
7. If two users order at the same time, SQL can handle concurrency safely.
8. Transaction history needs accuracy for audits, refunds, billing.
9. SQL writes are slower but reliable for financial operations.
10. That reliability makes SQL the preferred choice for money-related operations.

Why NoSQL is chosen for logs:

1. User activities generate huge amounts of data every second.
2. Logging every click to SQL would be slow and expensive.
3. NoSQL can handle high-speed continuous writes easily.
4. Logs do not need relationships or transactions.
5. Logs are mostly append-only, rarely updated.
6. Structure of logs can change anytime, NoSQL allows flexible schema.
7. Scaling NoSQL horizontally is easier and cheaper.
8. Storing large logs long-term costs less than SQL.
9. For analytics we mainly query latest N events, NoSQL supports indexed timestamps well.
10. NoSQL fits better for high volume, flexible, real-time logging workloads.