



```

C:\Users\crust>docker exec -it redis-final redis-cli
127.0.0.1:6379> INCR visitas
(integer) 1
127.0.0.1:6379> INCR visitas
(integer) 2
127.0.0.1:6379> GET visitas
"2"
127.0.0.1:6379> LPUSH cola_espera "cliente1"
(integer) 1
127.0.0.1:6379> LPUSH cola_espera "cliente2"
(integer) 2
127.0.0.1:6379> LRANGE cola_espera 0 -1
1) "cliente2"
2) "cliente1"
127.0.0.1:6379> HSET sesion:123 usuario "sebas" rol "admin" estado "activo"
(integer) 3
127.0.0.1:6379> HGETALL sesion:123
1) "usuario"
2) "sebas"
3) "rol"
4) "admin"
5) "estado"
6) "activo"
127.0.0.1:6379> SADD conectados user1
(integer) 1
127.0.0.1:6379> SADD conectados user2
(integer) 1
127.0.0.1:6379> SADD conectados user1
(integer) 0

```

```

127.0.0.1:6379> INCR visitas
(integer) 2
127.0.0.1:6379> GET visitas
"2"
127.0.0.1:6379> LPUSH cola_espera "cliente1"
(integer) 1
127.0.0.1:6379> LPUSH cola_espera "cliente2"
(integer) 2
127.0.0.1:6379> LRANGE cola_espera 0 -1
1) "cliente2"
2) "cliente1"
127.0.0.1:6379> HSET sesion:123 usuario "sebas" rol "admin" estado "activo"
(integer) 3
127.0.0.1:6379> HGETALL sesion:123
1) "usuario"
2) "sebas"
3) "rol"
4) "admin"
5) "estado"
6) "activo"
127.0.0.1:6379> SADD conectados user1
(integer) 1
127.0.0.1:6379> SADD conectados user2
(integer) 1
127.0.0.1:6379> SADD conectados user1
(integer) 0
127.0.0.1:6379> SMEMBERS conectados
1) "user1"
2) "user2"
127.0.0.1:6379> |

```

The screenshot shows the MongoDB Compass application interface. On the left, there's a sidebar titled 'Connections' with a list of connections: 'localhost:27017' (selected), 'admin', 'config', 'local', 'proyecto_final', and 'productos'. The main area displays the 'productos' collection under the 'proyecto_final' database. It shows three documents:

- Document 1:** _id: ObjectId('693a0eac6a3523779ad30bd8'), collection: "notas_medicinas", documents: Array (1)
- Document 2:** _id: ObjectId('693a0eac6a3523779ad30bd9'), collection: "inventario_medicamentos", documents: Array (2)
- Document 3:** _id: ObjectId('693a0eac6a3523779ad30bd1'), collection: "pacientes_perfil", documents: Array (2)

At the bottom of the main area, there are buttons for 'EXPORT DATA', 'UPDATE', and 'DELETE'. A toolbar at the top right includes 'Open MongoDB shell', 'Find', 'Options', and navigation controls.

```

1  [
2    {
3      "_id": "693a0eac6a3823779ed380bd",
4      "collection": "notas_medicas",
5      "documents": [
6        {
7          "id_cita_solo": 1,
8          "notas": "Paciente estable, sin signos de alarma.",
9          "tipo": "consulta",
10         "fecha": "2025-01-10"
11       }
12     ],
13   },
14   {
15     "_id": "693a0eac6a3823779ed380bd9",
16     "collection": "inventario_medicamentos",
17     "documents": [
18       {
19         "nombre": "Ibuprofeno",
20         "categoria": "Analgesico",
21         "cantidad": 150,
22         "proveedores": [
23           {
24             "nombre": "Farmacia1",
25             "telefono": "3211111222"
26           }
27         ],
28       },
29       {
30         "nombre": "Suero Ixinalgico",
31         "categoria": "Hidratacion",
32         "cantidad": 50,
33         "proveedores": [
34           {
35             "nombre": "Clinibax",
36             "telefono": "3284444555"
37           }
38         ],
39       }
40     ],
41   }
42 ]

```

Create collections in Postman
Use collections to save your requests and share them with others.
Create a Collection

```

1  [
2    {
3      "id": "693a0eac6a3823779ed380bd",
4      "collection": "pacientes_perfil",
5      "documents": [
6        {
7          "id_paciente_solo": 1,
8          "direccion": "Cra 10 # 20-65",
9          "alergias": [
10            "Penicilina"
11          ],
12          "historiales": [
13            {
14              "fecha": "2025-01-10",
15              "descripcion": "Consulta por dolor torácico"
16            }
17          ],
18          "id_paciente_solo": 2,
19          "direccion": "Calle 8 # 38-22",
20          "alergias": [],
21          "historiales": []
22        }
23      ],
24    }
25 ]

```

Create collections in Postman
Use collections to save your requests and share them with others.
Create a Collection

<input type="checkbox"/>	●	mongodb	d9fd4beec1af	mongo:6	27018:27017 ↴	0.33%	4 hours	<input type="button" value=""/>	<input type="button" value=""/>	<input type="button" value=""/>
<input type="checkbox"/>	●	redis-final	061fa104a00a	redis	6379:6379 ↴	0.1%	3 hours	<input type="button" value=""/>	<input type="button" value=""/>	<input type="button" value=""/>

```

PS C:\Users\crist\OneDrive\Escritorio\Bases> cd .\apiMongo\
PS C:\Users\crist\OneDrive\Escritorio\Bases\apiMongo> node server
Servidor en puerto 5000
MongoDB conectado

```

```
Who's been to this? + WhatsApp + ADSO203084-2025-4 - Pro - Recientes - Google Drive - MODELO RELACIONAL - Documento - EVIDENCIAS - Documentos de - localhost:5000/api/productos +  
Aplicaciones Codecademy Traductor Los mejores cursos... YouTube Aprendizaje SENA Gmail  
+ Fuentes al texto  
+ "id": "691aefecda532379ed9b0a",  
"collection": "notas_medicas",  
"documents": [  
{"id": "691aefecda532379ed9b0a",  
"paciente": "Paciente estable, sin signos de alarma.",  
"tratamiento": "Terapia de apoyo.",  
"fecha": "2025-01-18"}  
],  
{"id": "691aefecda532379ed9b0a",  
"collection": "inventario_medicamentos",  
"documents": [  
{"id": "691aefecda532379ed9b0a",  
"nombre": "Diprofeno",  
"categoria": "Analgesicos",  
"stock": 100,  
"proveedores": [  
{"id": "691aefecda532379ed9b0a",  
"nombre": "Farmacia Central",  
"telefono": "912345678"},  
{"id": "691aefecda532379ed9b0a",  
"nombre": "Farmacia Popular",  
"telefono": "911111222"}  
],  
"paciente": "Paciente estable, sin signos de alarma.",  
"categoria": "Medicamento",  
"stock": 100,  
"proveedores": [  
{"id": "691aefecda532379ed9b0a",  
"nombre": "Farmacia Central",  
"telefono": "912345678"},  
{"id": "691aefecda532379ed9b0a",  
"nombre": "Farmacia Popular",  
"telefono": "911111222"}  
]  
},  
{"id": "691aefecda532379ed9b0a",  
"collection": "pacientes_pac_f11",  
"documents": [  
{"id": "691aefecda532379ed9b0a",  
"id_paciente": 1,  
"edad": 25, "altura": 1.75, "peso": 75,  
"alergias": [],  
"historial": [  
{"fecha": "2025-01-18",  
"descripcion": "Consulta por dolor torácico"}  
],  
"id_paciente_val": 1,  
"dirección": "Calle 8 # 38-22",  
"telefono": "912345678",  
"notas": []}  
],  
{"id": "691aefecda532379ed9b0a",  
"collection": "pacientes_pac_f22",  
"documents": [  
{"id": "691aefecda532379ed9b0a",  
"id_paciente": 1,  
"edad": 25, "altura": 1.75, "peso": 75,  
"alergias": [],  
"historial": [  
{"fecha": "2025-01-18",  
"descripcion": "Consulta por dolor torácico"}  
],  
"id_paciente_val": 1,  
"dirección": "Calle 8 # 38-22",  
"telefono": "912345678",  
"notas": []}  
],  
{"id": "691aefecda532379ed9b0a",  
"collection": "pacientes_pac_f33",  
"documents": [  
{"id": "691aefecda532379ed9b0a",  
"id_paciente": 1,  
"edad": 25, "altura": 1.75, "peso": 75,  
"alergias": [],  
"historial": [  
{"fecha": "2025-01-18",  
"descripcion": "Consulta por dolor torácico"}  
],  
"id_paciente_val": 1,  
"dirección": "Calle 8 # 38-22",  
"telefono": "912345678",  
"notas": []}  
],  
{"id": "691aefecda532379ed9b0a",  
"collection": "pacientes_pac_f44",  
"documents": [  
{"id": "691aefecda532379ed9b0a",  
"id_paciente": 1,  
"edad": 25, "altura": 1.75, "peso": 75,  
"alergias": [],  
"historial": [  
{"fecha": "2025-01-18",  
"descripcion": "Consulta por dolor torácico"}  
],  
"id_paciente_val": 1,  
"dirección": "Calle 8 # 38-22",  
"telefono": "912345678",  
"notas": []}  
],  
{"id": "691aefecda532379ed9b0a",  
"collection": "pacientes_pac_f55",  
"documents": [  
{"id": "691aefecda532379ed9b0a",  
"id_paciente": 1,  
"edad": 25, "altura": 1.75, "peso": 75,  
"alergias": [],  
"historial": [  
{"fecha": "2025-01-18",  
"descripcion": "Consulta por dolor torácico"}  
],  
"id_paciente_val": 1,  
"dirección": "Calle 8 # 38-22",  
"telefono": "912345678",  
"notas": []}  
]
```

```
localhost:5000/api/productos/693a0eac6a3523779ad30bd8
[{"id": "693a0eac6a3523779ad30bd8", "collection": "notas_medicas", "notas": [{"id": "693a0eac6a3523779ad30bd8", "paciente": "Paciente estable, sin signos de alarma.", "fecha": "2025-01-18"}]}
```

```

68 v SELECT p.nombre, p.apellido, c.fecha, m.nombre AS medico
69   FROM cita c
70     INNER JOIN paciente p ON c.id_paciente = p.id_paciente
71     INNER JOIN medico m ON c.id_medico = m.id_medico;
72
73
74

```

Data Output Messages Notifications

Showing rows: 1 to 2 Page No: 1 of 1

	nombre character varying (50)	apellido character varying (50)	fecha date	medico character varying (50)
1	Juan	Perez	2025-10-01	Dr Gomez
2	Ana	Lopez	2025-10-02	Dr Ruiz

Total rows: 2 | Query complete 00:00:00.087 | CRLF | Ln 68, Col 1

```

73
74
75 v SELECT p.nombre, f.total
76   FROM paciente p
77     LEFT JOIN factura f ON p.id_paciente = f.id_paciente;
78
79
80 v SELECT id_paciente, COUNT(*) AS total_citas
81   FROM cita
82     GROUP BY id_paciente
83     HAVING COUNT(*) > 1;
84

```

Data Output Messages Notifications

Showing rows: 1 to 2 Page No: 1 of 1

	nombre character varying (50)	total numeric (10,2)
1	Juan	150000.00
2	Ana	[null]

Total rows: 2 | Query complete 00:00:00.080 | CRLF | Ln 75, Col 1

Query Query History Scratch Pad

```

83 HAVING COUNT(*) > 1;
84
85
86 v SELECT nombre, apellido
87   FROM paciente
88 WHERE id_paciente IN (
89   SELECT id_paciente FROM factura
90 );
91
92
93
94 v WITH Totales AS (

```

Data Output Messages Notifications

Show rows: 1 to 1 Page No: 1 of 1 SQL

	nombre character varying (50)	apellido character varying (50)
1	Juan	Perez

Total rows: 1 Query complete 00:00:00.136 CRLF Ln 86. Col 1

```

93
94 v WITH Totales AS (
95   SELECT id_paciente, SUM(total) AS gasto_total
96     FROM factura
97    GROUP BY id_paciente
98 )
99 SELECT * FROM Totales WHERE gasto_total > 100000;
```

Data Output Messages Notifications

Show rows: 1 to 1 Page No: 1 of 1 SQL

	id_paciente integer	gasto_total numeric
1	1	150000.00

Total rows: 1 Query complete 00:00:00.127 CRLF Ln 99, Col 50