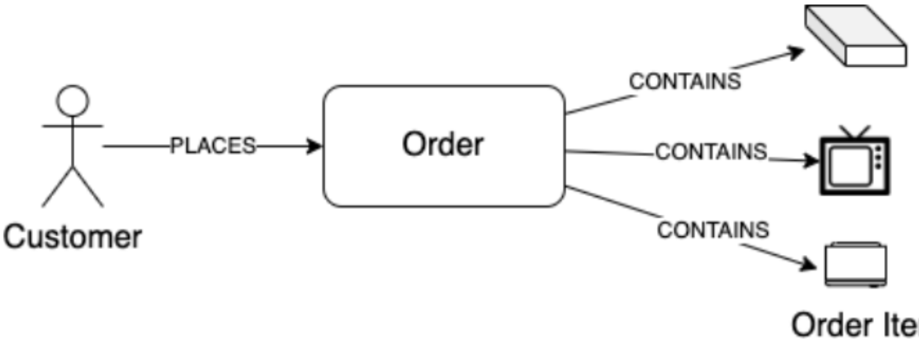
Creating a Data Model

Let us create the data model of a common use case of a customer placing an order in an e-commerce application:

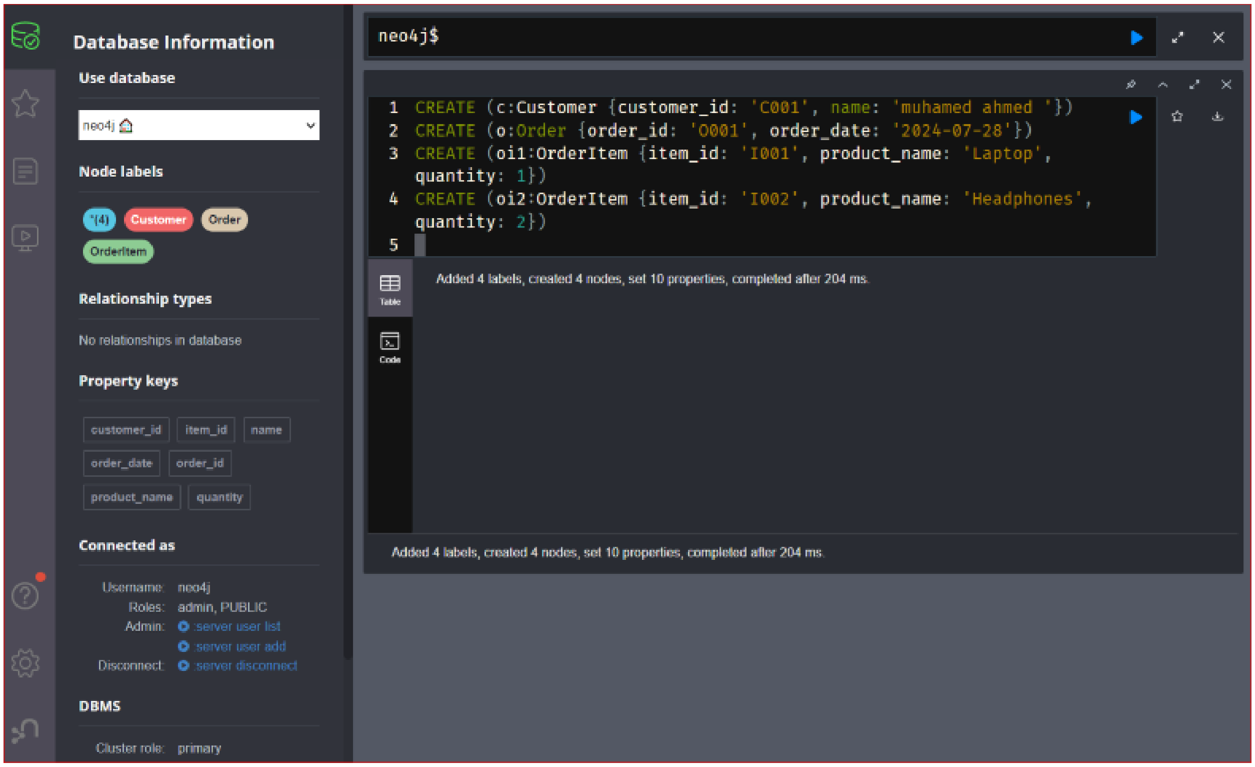


The customer can place one or more orders and each order is composed of one or more order items.

We can describe this model in terms of *entity relationships* as having three *entities*:

- Customer.

- Order.
- Order Item.



Database Information

Use database

neo4j

Node labels

*(4) Customer Order OrderItem

Relationship types

No relationships in database

Property keys

customer_id item_id name order_date order_id product_name quantity

Connected as

Username: neo4j
Roles: admin, PUBLIC
Admin: :server user list
:server user add
Disconnect: :server disconnect

DBMS

Cluster role: primary

```
neo4j$
```

```
CREATE (c:Customer {customer_id: 'C001', name: 'muhamed ahmed '})
CREATE (o:Order {order_id: 'O001', order_date: '2024-07-28'})
CREATE (oi1:OrderItem {item_id: 'I001', product_name: 'Laptop',
quantity: 1})
CREATE (oi2:OrderItem {item_id: 'I002', product_name: 'Headphones',
quantity: 2})

```

```
Added 4 labels, created 4 nodes, set 10 properties, completed after 204 ms.
```

```
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```
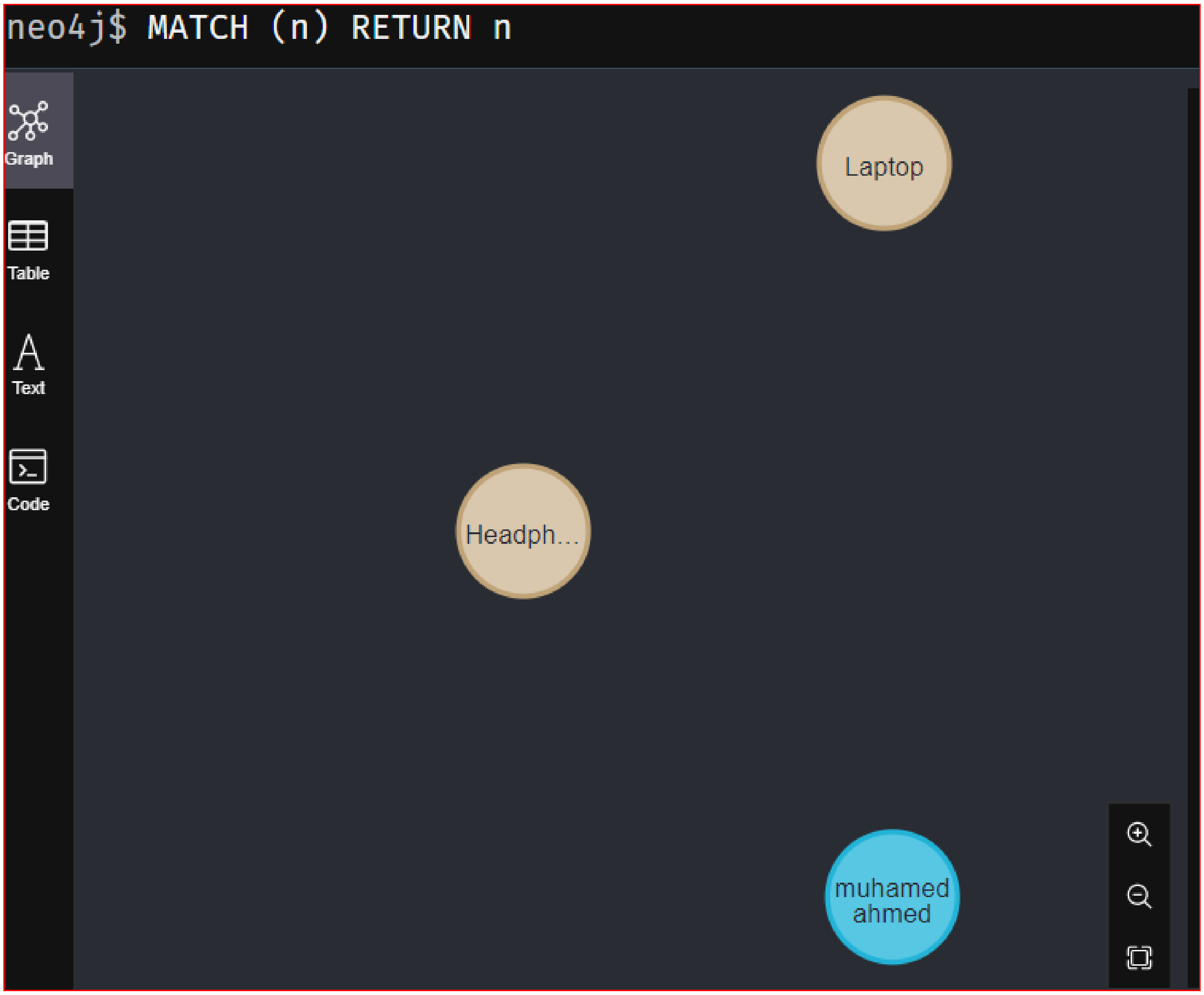



```
neo4j$ MATCH (n) RETURN n
```

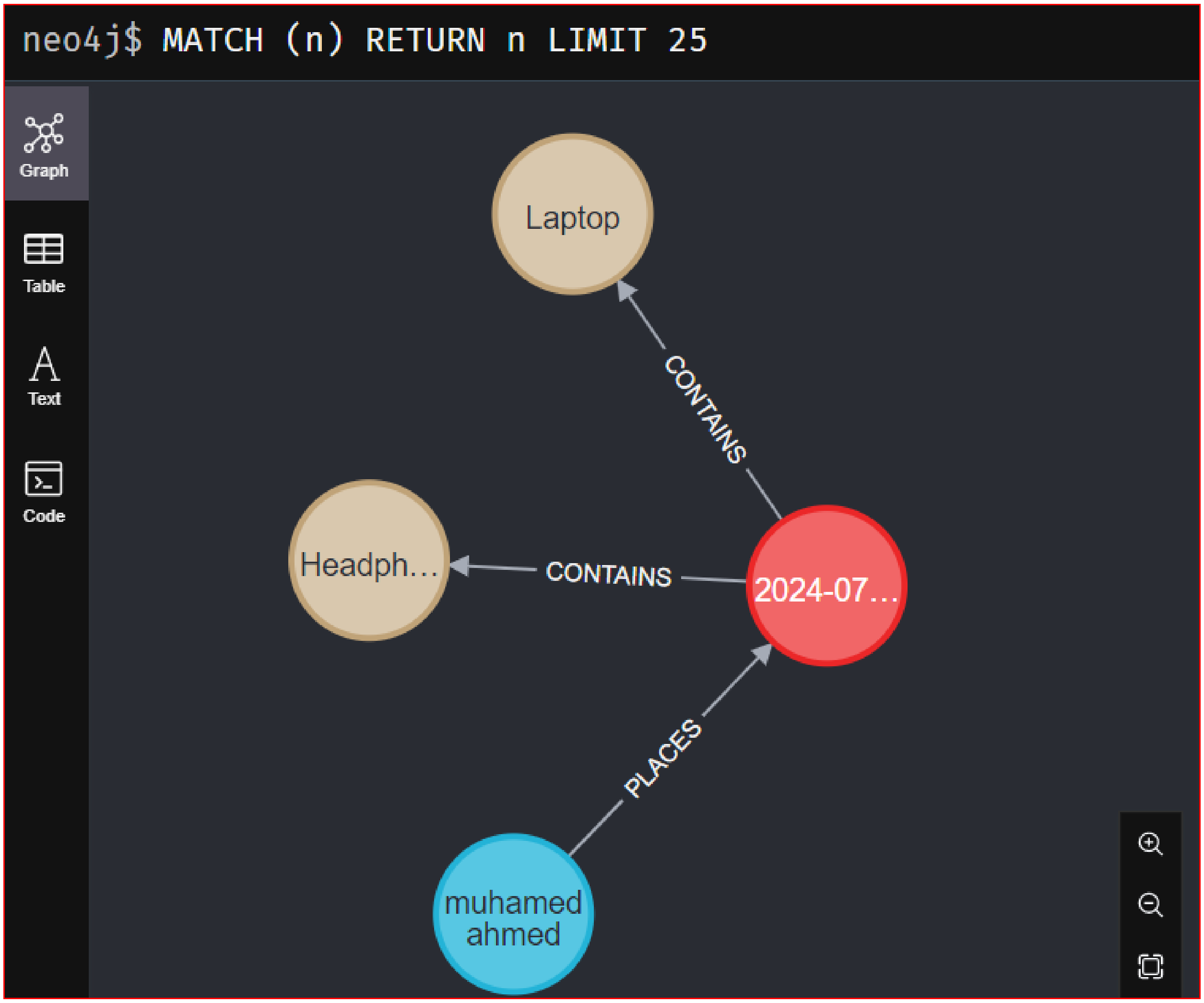
and two *associations*:

- *one-to-many* relationship between customer and order entities.

```
MATCH (c:Customer {customer_id: 'C001'}), (o:Order {order_id: 'O001'})
CREATE (c)-[:PLACES]->(o)
```

- *one-to-many* relationship between order and order item entities.

```
MATCH (o:Order {order_id: 'O001'}), (oi1:OrderItem {item_id: 'I001'}), (oi2:OrderItem
 {item_id: 'I002'})
CREATE (o)-[:CONTAINS]->(oi1)
CREATE (o)-[:CONTAINS]->(oi2)
```



```
neo4j$ MATCH (n) RETURN n LIMIT 25
```