ORACLE

# Corso APEX ODCEC Milano: Edizione 2024

Lezione 22 - 1 Luglio 2024

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# Chi Sono

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# JSON

# JSON

Il dato elementare JSON è una coppia chiave:valore

```
"Nome":"Mario"
```

# JSON

I dati sono coppie del tipo chiave:valore separati da virgole

```
"Nome":"Mario", "Cognome":"Rossi","Eta":30
```

# JSON

Le parentesi graffe racchiudono un oggetto (elenco di coppie chiave:valore)

```
{"Nome":"Mario", "Cognome":"Rossi","Eta":30}
```

# JSON

Le parentesi quadre racchiudono un array (lista di valori)

```
"Nomi":["Mario","Anna","Paola"]
```

# JSON

La Chiave è sempre una Stringa (con i doppi apici)

```
"Nomi":["Mario","Anna","Paola"]
```

# JSON

Il valore può essere:

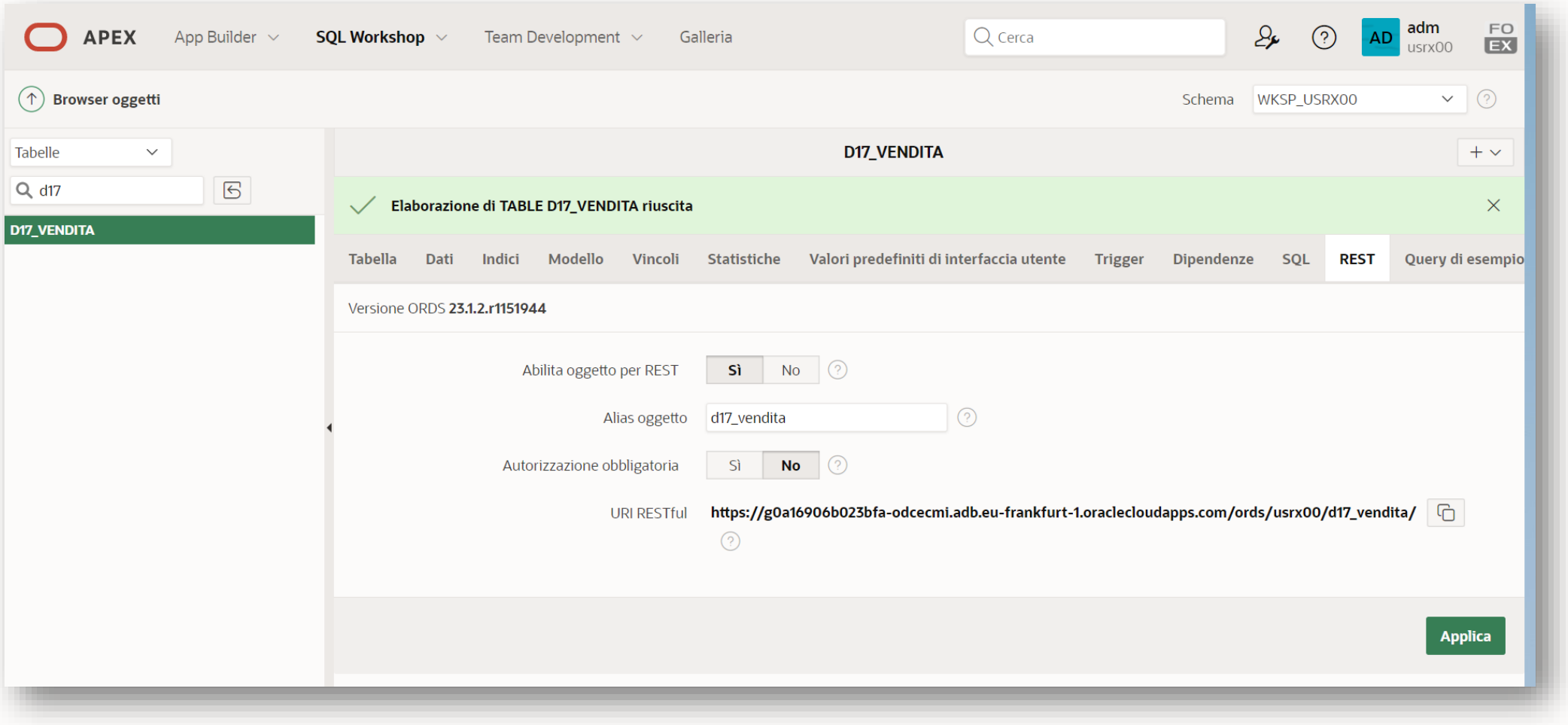
- una stringa
- un numero
- un oggetto
- un array
- un boolean (true/false)
- null

Array di Oggetti

```
{
    "name": "Mario",
    "surname": "Rossi",
    “telephone": null,
    "active": true,
    "favoriteNumber": 54,
    "birthday": {
                  "day": 1,
                  "month": 1,
                  "year": 2000
                },
    "languages": [ "it", "en" ],
    "addresses":[
                {"type":"Main",
                 "address":"Oxfors St.",
                 "city":"London"
                },
                {"type":"Alternative",
                "address":"Cambridge St.",
                "city":"London"
                }
                ]
}
```

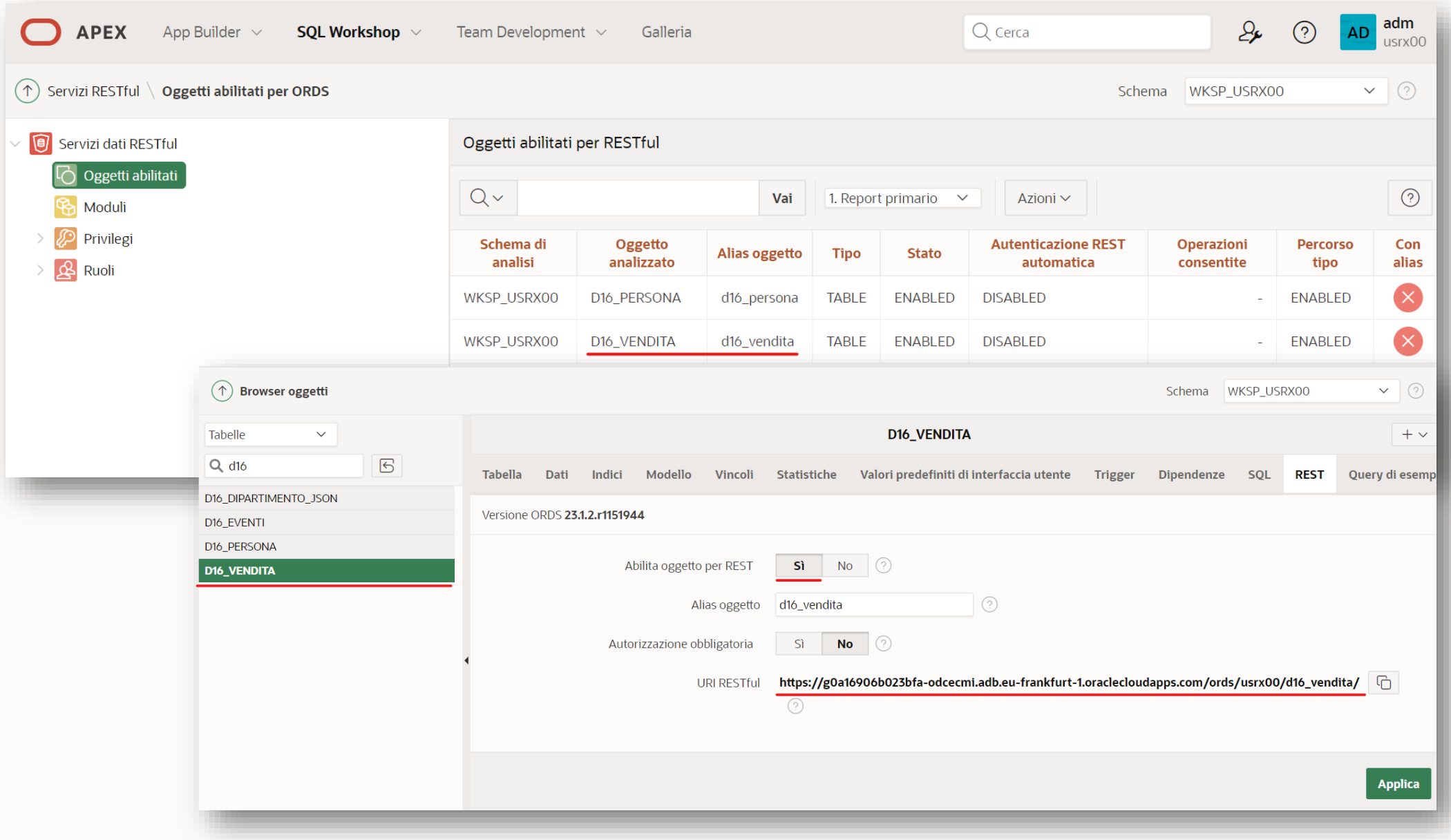
# REST

# REST




https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/d10_vendita/

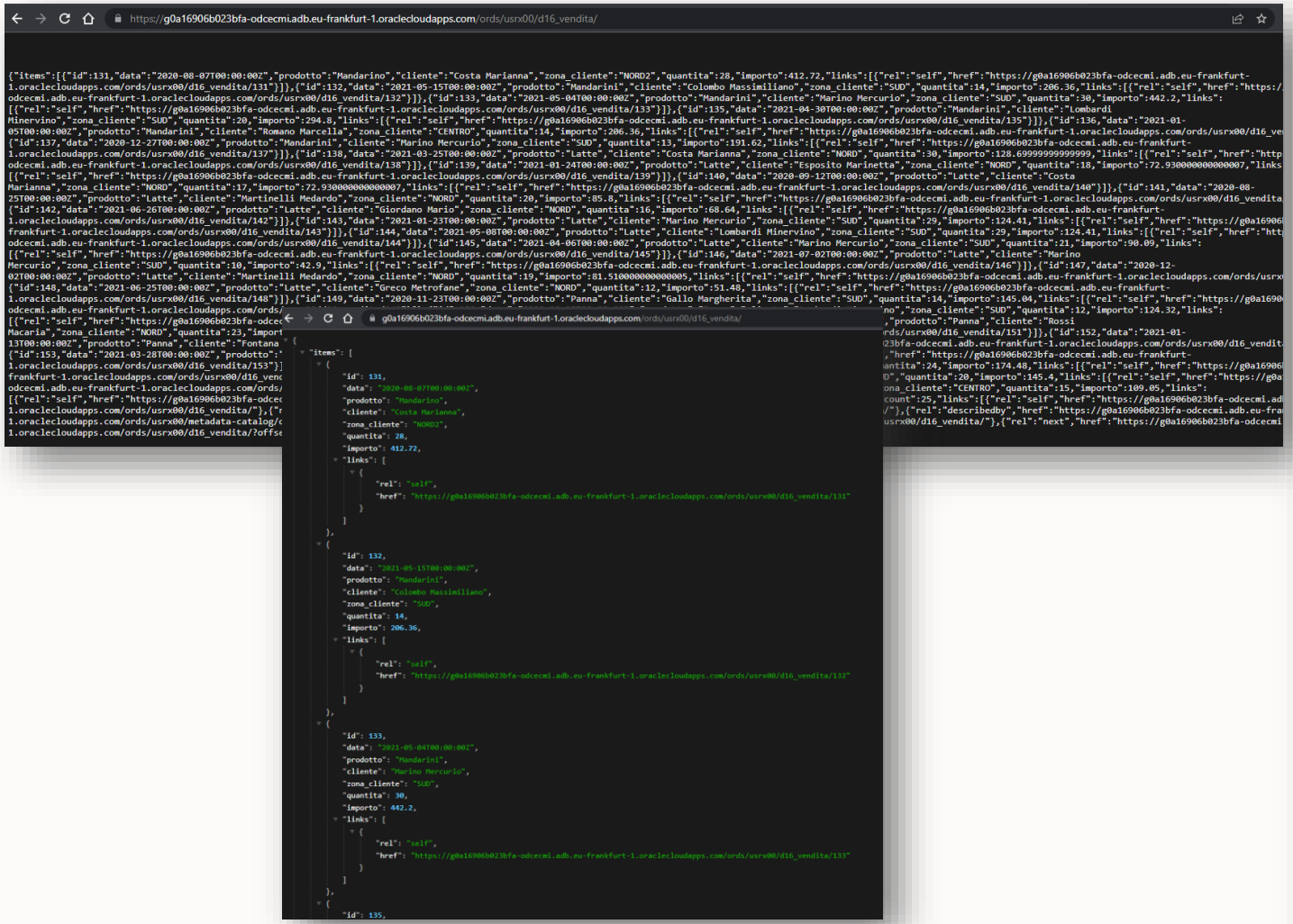
# REST

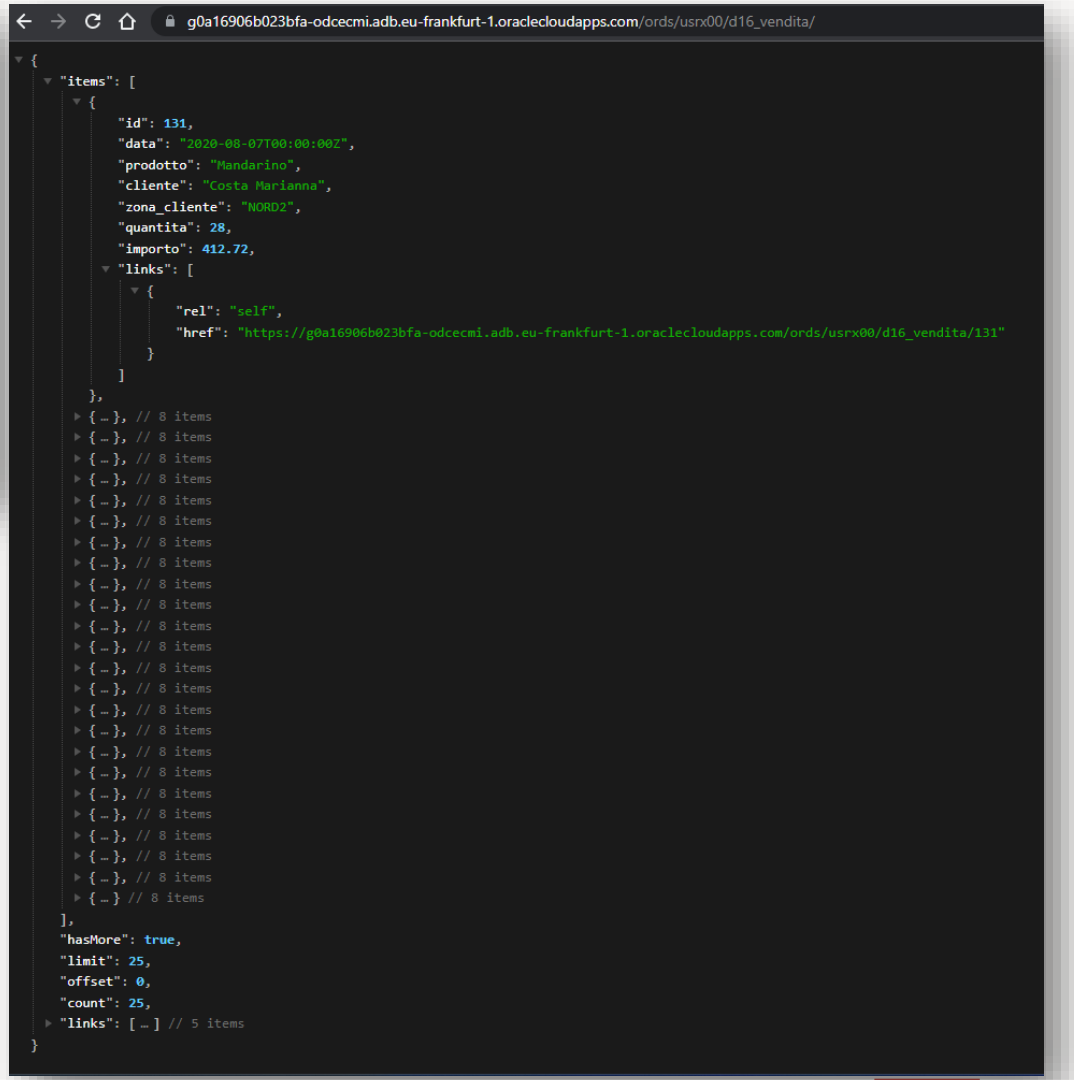



**https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/d10_vendita/**

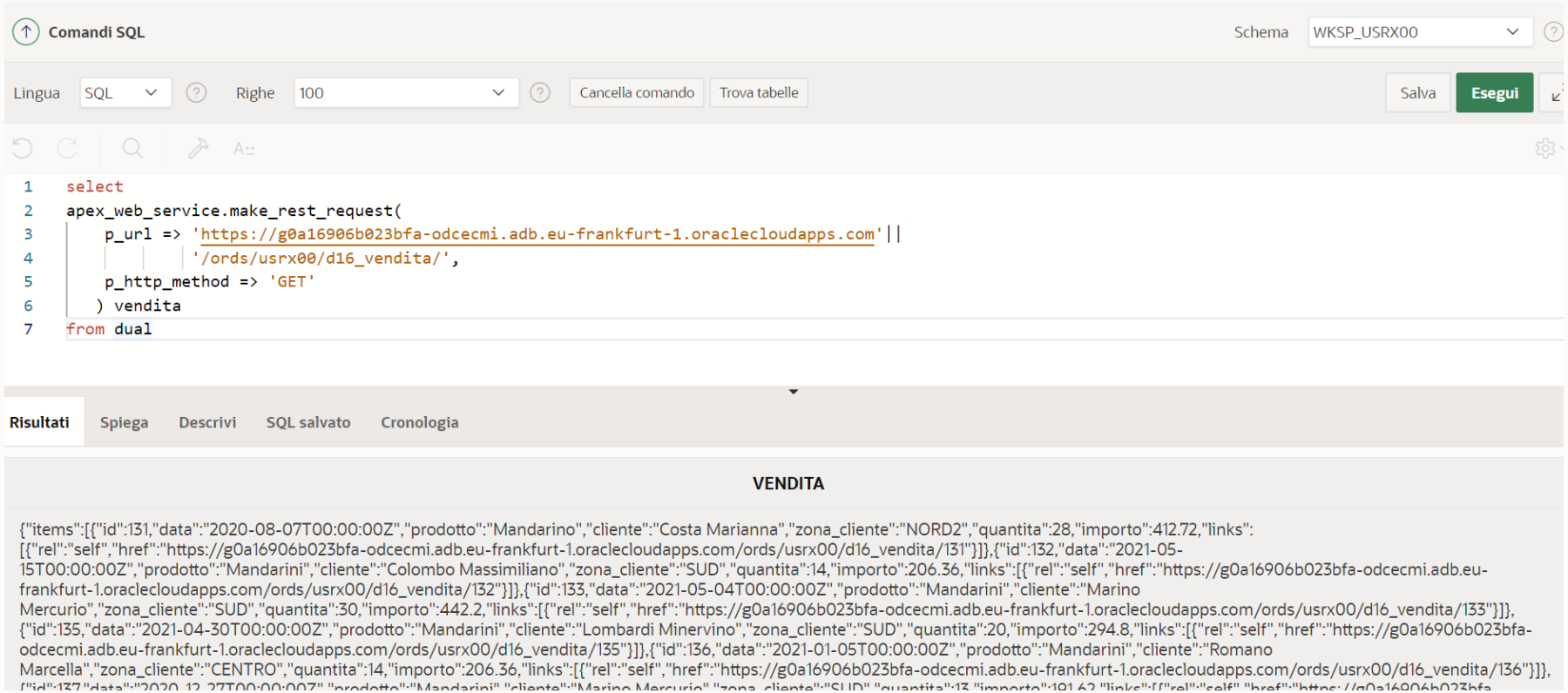
# REST

https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/d10_vendita/





# REST




```
select apex_web_service.make_rest_request(
    p_url => 'https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/'||
             '/d10_vendita/',
    p_http_method => 'GET'
   ) vendita
from dual
```

# REST

```
select *
  from json_table(
apex_web_service.make_rest_request(
  p_url => 'https://cnde8nae4maapcd-capancioni.adb.eu-zurich-
1.oraclecloudapps.com/ords/cn0/d10_vendita/',
  p_http_method => 'GET'
   ),
 '$.items[*]' columns(
                        id              number          path '$.id'
                       ,data            date            path '$.data'
                       ,prodotto        varchar2(100)   path '$.prodotto'
                       ,cliente         varchar2(100)   path '$.cliente'
                       ,zona_cliente    varchar2(100)   path '$.zona_cliente'
                       ,quantita        number          path '$.quantita'
                       ,importo         number          path '$.importo'
                       )
);
```

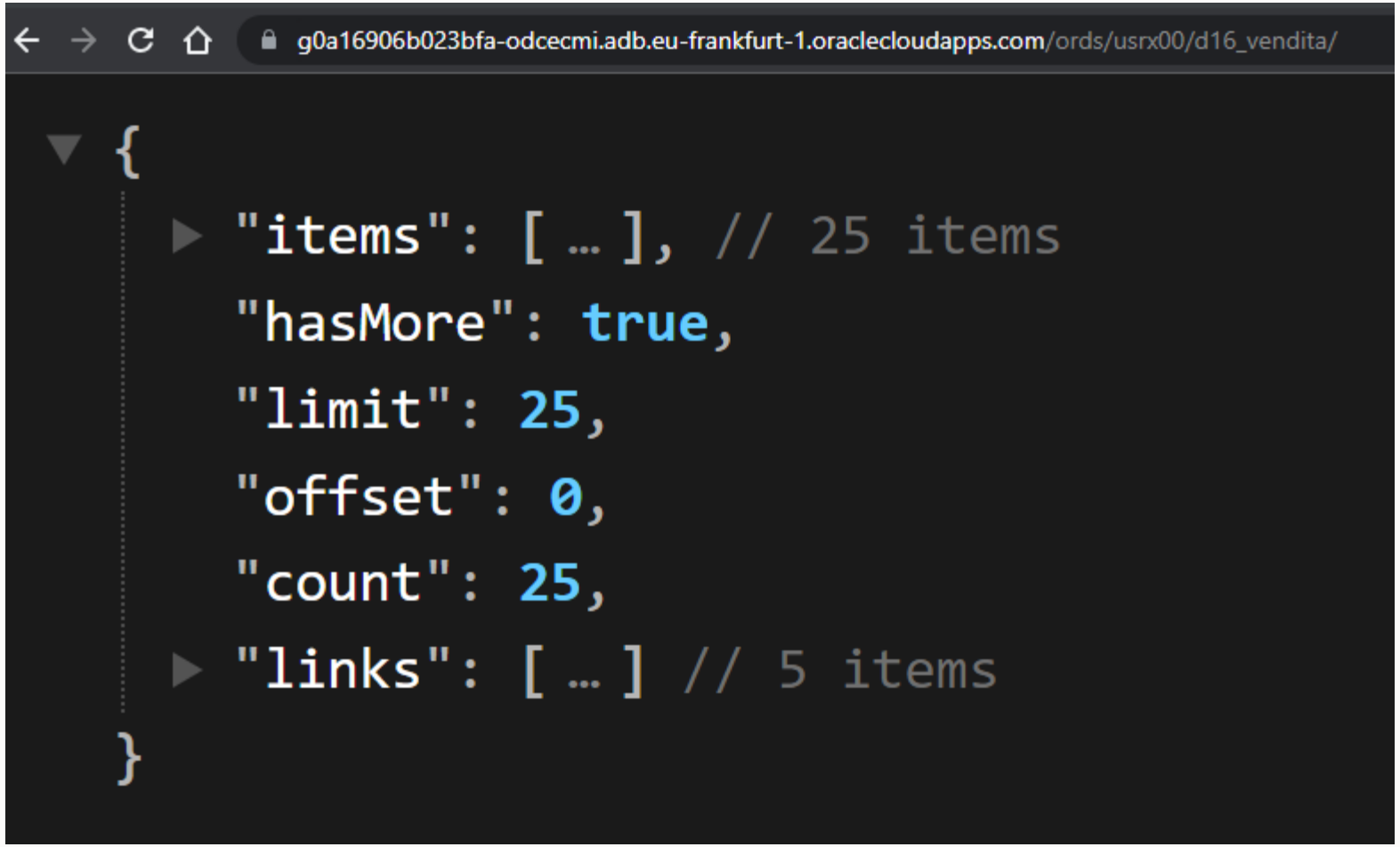
# REST

```
8
9  select *
10   from json_table(
11 apex_web_service.make_rest_request(
12     p_url => 'https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d16_vendita/',
13     p_http_method => 'GET'
14    ),
15    '$.items[*]' columns(
16                          id              number         path '$.id'
17                         ,data            date           path '$.data'
18                         ,prodotto        varchar2(100)  path '$.prodotto'
19                         ,cliente         varchar2(100)  path '$.cliente'
20                         ,zona_cliente    varchar2(100)  path '$.zona_cliente'
21                         ,quantita        number         path '$.quantita'
22                         ,importo         number         path '$.importo'
23                         )
24 );
```

isultati | Spiega | Descrivi | SQL salvato | Cronologia

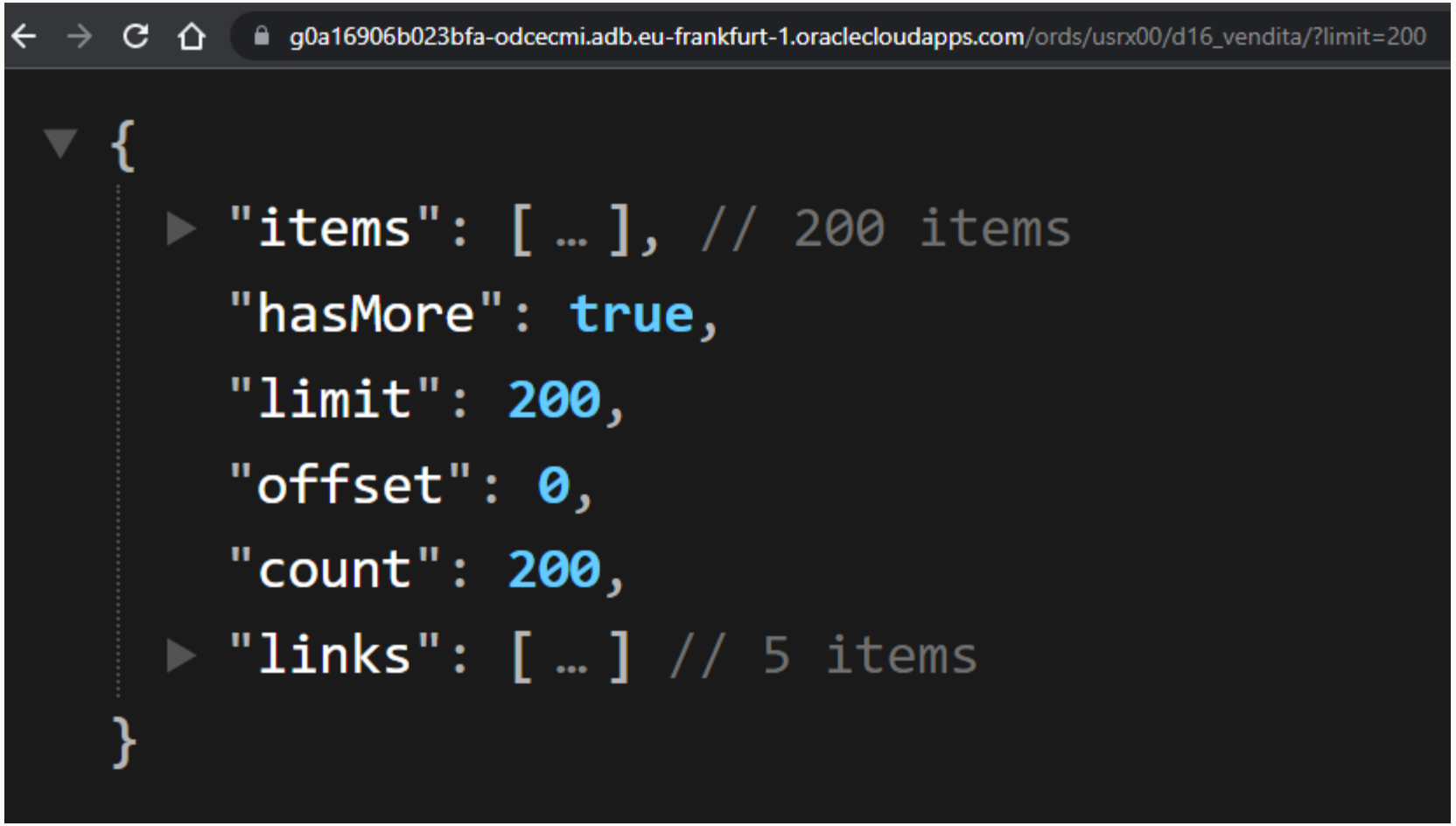
| ID | DATA | PRODOTTO | CLIENTE | ZONA_CLIENTE | QUANTITA | IMPORTO |
|---|---|---|---|---|---|---|
| 131 | 07/08/2020 | Mandarino | Costa Marianna | NORD2 | 28 | 412,72 |
| 132 | 15/05/2021 | Mandarini | Colombo Massimiliano | SUD | 14 | 206,36 |
| 133 | 04/05/2021 | Mandarini | Marino Mercurio | SUD | 30 | 442,2 |

# REST


g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d16_vendita/
{
"items": [ … ], // 25 items
"hasMore": true,
"limit": 25,
"offset": 0,
"count": 25,
"links": [ … ] // 5 items
}

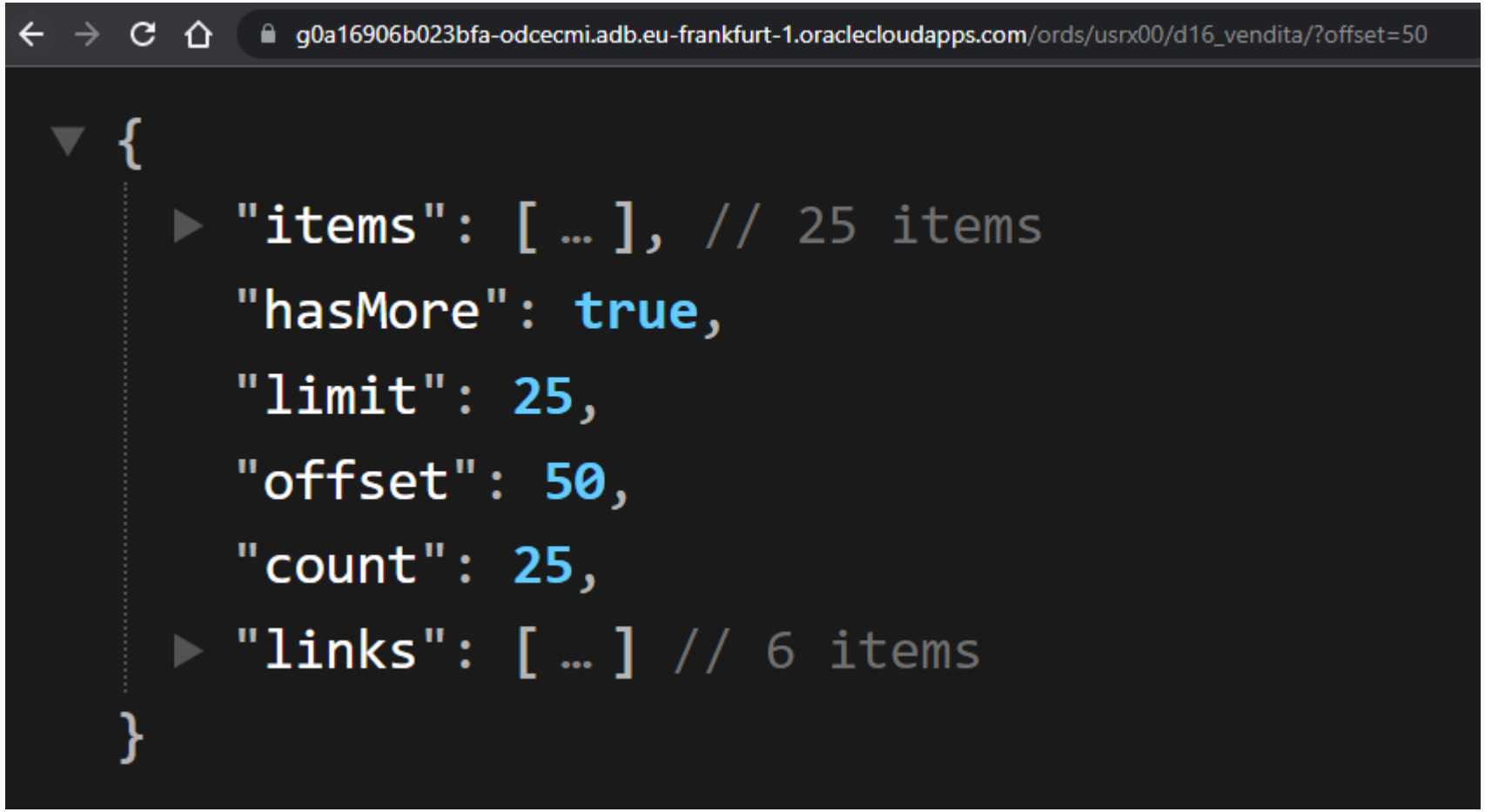
# REST

https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/
/d10_vendita/?limit=200



# REST

https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/
/d10_vendita/?offset=50



# REST

https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/
/d10_vendita/?q={"Prodotto":{"$instr":"cotto"}}

# REST

https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/
/d10_vendita/?q={"importo":{"$lte":100}}


```
{
  "items": [
    {
      "id": 139,
      "data": "2021-01-24T00:00:00Z",
      "prodotto": "Latte",
      "cliente": "Esposito Marinetta",
      "zona_cliente": "NORD",
      "quantita": 18,
      "importo": 72.93,
      "links": [
        {
          "rel": "self",
          "href": "https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-
          1.oraclecloudapps.com/ords/usrx00/d16_vendita/139"
        }
      ]
    },
    {
```

# REST

https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/
/d10_vendita/?q={"data":{"$lte":{"$date":"2021-03-08T23:59:59Z"}}}

# REST

https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/
/d10_vendita/?q={"importo": {"$and": [{"$gt": 100},{"$lt":300}]}}

# REST

https://cnde8nae4maapcd-capancioni.adb.eu-zurich-1.oraclecloudapps.com/ords/cn0/
/d10_vendita/?q={"importo": {"$and": [{"$gt": 100},{"$lt":300}]}}

```
"$eq"       : string | number | date
"$ne"       : string | number | date
"$lt"       : number | date
"$lte"      : number | date
"$gt"       : number | date
"$gte"      : number | date
"$instr"    : string
"$ninstr"   : string
"$like"     : string
"$null"     : null
"$notnull"  : null
"$between"  : betweenValue
```