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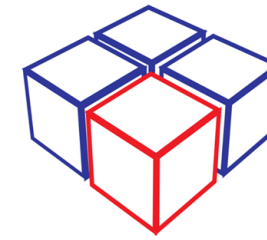
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Software Architectures

Oracle APEX
Developing Database Web Applications

18 Maggio 2023

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Chi Siamo

Ing. Roberto Capancioni

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– Board Member ITOUG

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Chi Siamo

- Dott.ssa Nicoletta Bindi
- in Tema dal 2001
- Analista sviluppatrice java e web
- Apex dal 2020

D17 REST

D17 REST

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17_vendita/

D17 REST

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17_vendita/

D17 REST

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17_vendita/

D17 REST


```
select apex_web_service.make_rest_request(
    p_url => 'https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com'||
             '/ords/usrx00/d17_vendita/',
    p_http_method => 'GET'
) vendita
from dual
```

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D17 REST

```sql
select *
  from json_table(
apex_web_service.make_rest_request(
  p_url => 'https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com'||
           '/ords/usrx00/d17_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'
                      )
);
```

D17 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  );
```

Risultati   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

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D17 REST

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com
/ords/usrx00/d17_vendita/?limit=200

D17 REST

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com
/ords/usrx00/d17_vendita/?offset=50

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D17 REST

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com
/ords/usrx00/d17_vendita/?q={"Prodotto":{"$instr":"cotto"}}


```
▼ {
    ▼ "items": [
        ▼ {
              "id": 1,
              "data": "2020-08-26T00:00:00Z",
              "prodotto": "Prosciutto cotto",
              "cliente": "Russo Maida",
              "zona_cliente": "SUD",
              "quantita": 24,
              "importo": 413.04,
            ▼ "links": [
                ▼ {
                      "rel": "self",
                      "href": "https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-
                      1.oraclecloudapps.com/ords/usrx00/d16_vendita/1"
                  }
              ]
          },
        ▼ {
```

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D17 REST

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com
/ords/usrx00/d17_vendita/?q={"importo":{"$lte":100}}

```json
{
    "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"
                }
            ]
        },
        {
```

D17 REST

`https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com`
`/ords/usrx00/d17_vendita/?q={"data":{"$lte":{"$date":"2021-03-08T23:59:59Z"}}}`

D17 REST

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com
/ords/usrx00/d17_vendita/?q={"importo": {"$and": [{"$gt": 100},{"$lt":300}]}}

D17 REST

```
https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com
/ords/usrx00/d17_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
```

D17 REST

Syntax

```
APEX_WEB_SERVICE.MAKE_REST_REQUEST (                    [Copy]
    p_url                    IN   VARCHAR2,
    p_http_method            IN   VARCHAR2,
    p_username               IN   VARCHAR2 DEFAULT NULL,
    p_password               IN   VARCHAR2 DEFAULT NULL,
    p_scheme                 IN   VARCHAR2 DEFAULT 'Basic',
    p_proxy_override         IN   VARCHAR2 DEFAULT NULL,
    p_transfer_timeout       IN   NUMBER   DEFAULT 180,
    p_body                   IN   CLOB     DEFAULT EMPTY_CLOB(),
    p_body_blob              IN   BLOB     DEFAULT EMPTY_BLOB(),
    p_parm_name              IN   apex_application_global.vc_arr2
                                  DEFAULT empty_vc_arr,
    p_parm_value             IN   apex_application_global.vc_arr2
                                  DEFAULT empty_vc_arr,
    p_wallet_path            IN   VARCHAR2 DEFAULT NULL,
    p_wallet_pwd             IN   VARCHAR2 DEFAULT NULL,
    p_https_host             IN   VARCHAR2 DEFAULT NULL,
    p_credential_static_id   IN   VARCHAR2 DEFAULT NULL,
    p_token_url              IN   VARCHAR2 DEFAULT NULL )
RETURN CLOB;
```

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D17 REST


```
ords.define_module(
        p_module_name => 'd17' ,
        p_base_path   => '/d17/',
        p_items_per_page => 25,
        p_status => 'PUBLISHED'
);
```

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17/

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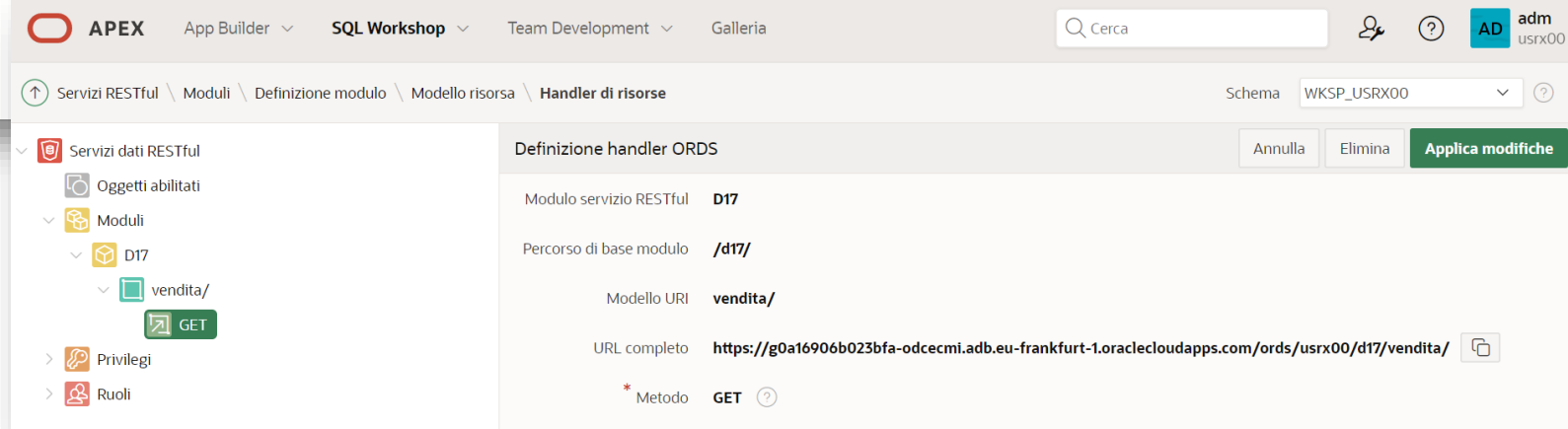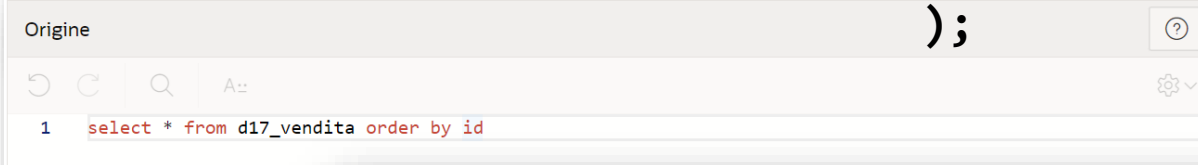# D17 REST

```
ords.define_template(
        p_module_name => 'd17' ,
        p_pattern =>  'vendita/'
);
```


https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17/**vendita/**

D17 REST

```
ords.define_handler(
        p_module_name => 'd17' ,
        p_pattern =>  'vendita/',
        p_method => 'GET',
        p_source_type => ords.source_type_collection_feed,
        p_source => 'select *
                        from d17_vendita
                     order by id',
        p_items_per_page => 25
);
```

Origine

```
1    select * from d17_vendita order by id
```

Definizione handler ORDS

Modulo servizio RESTful: **D17**
Percorso di base modulo: **/d17/**
Modello URI: **vendita/**
URL completo: **https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17/vendita/**
Metodo: **GET**

https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17/vendita/

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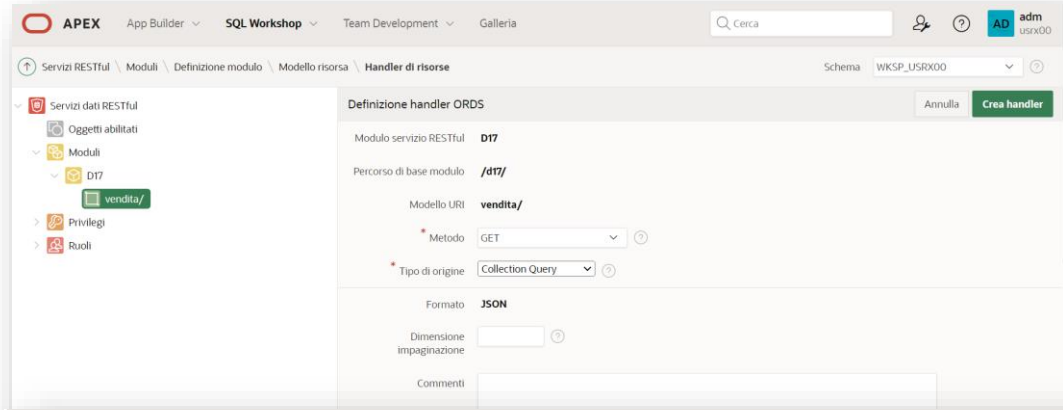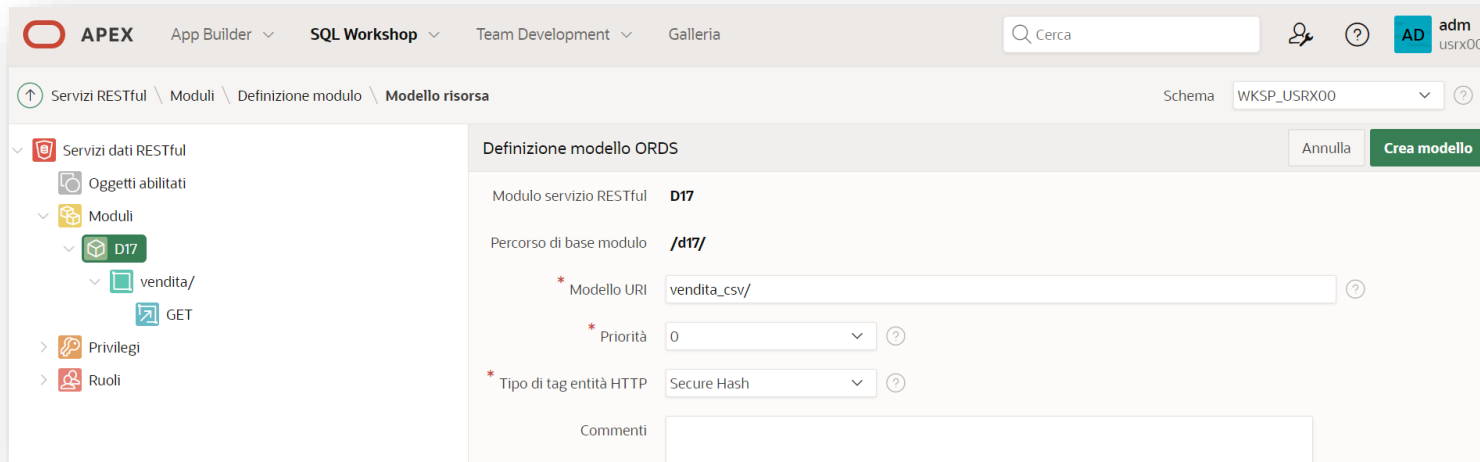Software Architectures

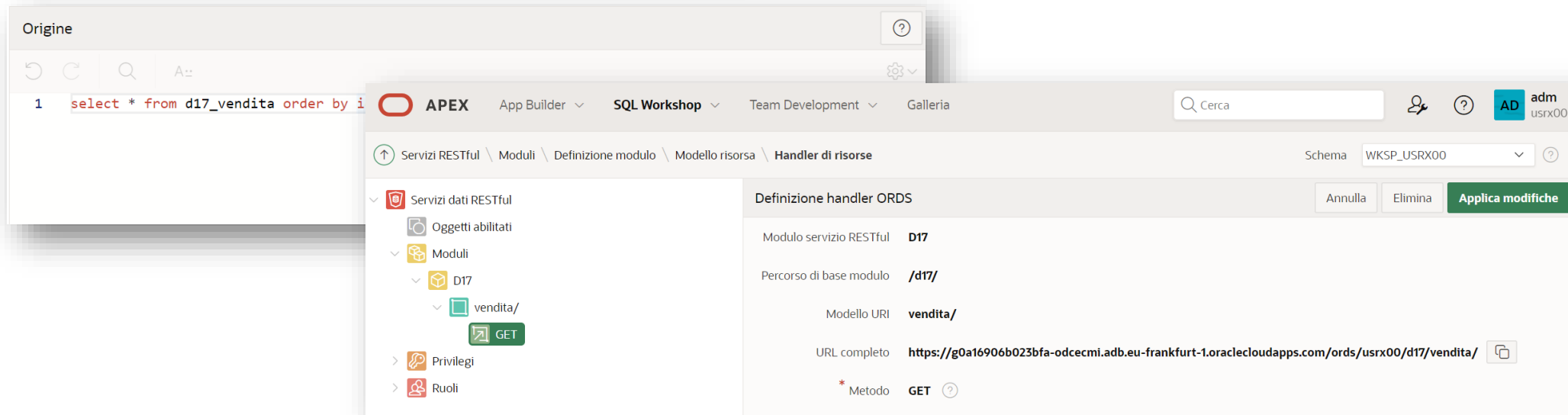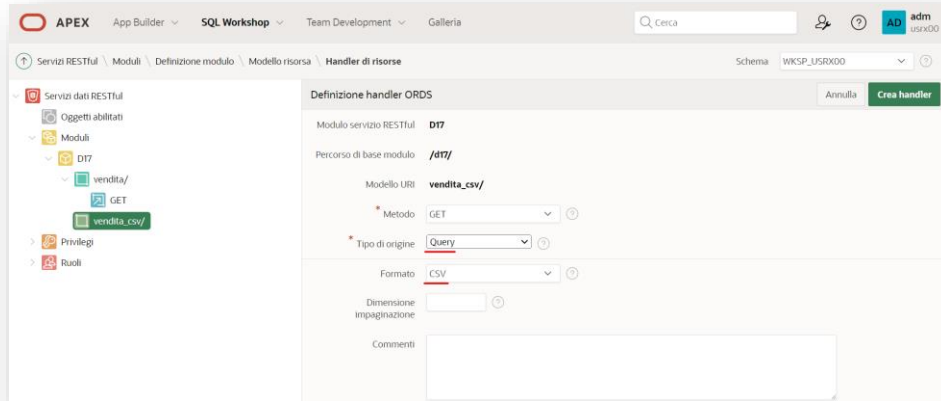capancioni.com

D17 REST

```
ords.define_template(
            p_module_name => 'd17' ,
            p_pattern =>  'vendita_csv/'
);
```


https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17/vendita_csv/

D17 REST


```
ords.define_handler(
        p_module_name => 'd17' ,
        p_pattern =>  'vendita/',
        p_method => 'GET',
        p_source_type => ords.source_type_csv_query,
        p_source => 'select *
                        from d17_vendita
                     order by id',
        p_items_per_page => 25
);
```


https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17/vendita_csv/

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D17 REST


```
select
apex_web_service.make_rest_request(
    p_url => 'https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17/vendita/',
    p_http_method => 'GET'
    ) vendita
from dual;
```
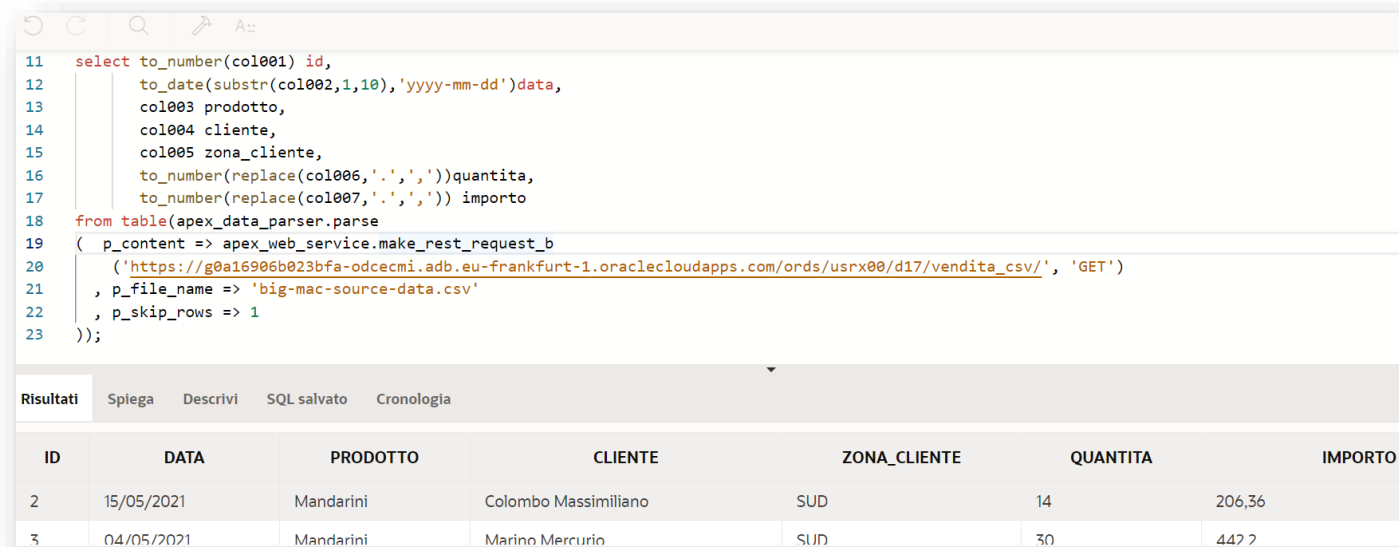
```
select
apex_web_service.make_rest_request(
    p_url => 'https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-1.oraclecloudapps.com/ords/usrx00/d17/vendita_csv/',
    p_http_method => 'GET'
    ) vendita
from dual;
```

D17 REST


```sql
select to_number(col001) id,
       to_date(substr(col002,1,10),'yyyy-mm-dd')data,
       col003 prodotto,
       col004 cliente,
       col005 zona_cliente,
       to_number(replace(col006,'.',','))quantita,
       to_number(replace(col007,'.',',')) importo
from table(apex_data_parser.parse(
        p_content => apex_web_service.make_rest_request_b(
            'https://g0a16906b023bfa-odcecmi.adb.eu-frankfurt-
1.oraclecloudapps.com/ords/usrx00/d17/vendita_csv/', 'GET')
        , p_file_name => 'vendita.csv'
        , p_skip_rows => 1
        )
    );
```