# Relazione Applicazione REST Luca Cervello 856222

## Luca Cervello

## June 14, 2019

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## 1 Devops e Deploy

Ho creato una pipeline di deploy per questo progetto. Usando :

- github per avere una repository remota del progetto.
- **travisci** per avere un ambiente in cui i test vengono eseguiti in isolamento.
- heroku per fare la build del progetto e esporre il mio servizio.

Ho collegato questi 3 servizi in modo ad avere un workflow completamente automatico. Quindi ogni volta che il codice viene pushato su **github** viene testato su **travisci** e se i test hanno avuto un esito positivo il progetto viene deployato su **heroku**.

## 2 Identificazione entitá

- $\bullet$  prodotto
- venditore
- utente
- ordine

## 3 Design endpoints

Su tutti gli endopoints GET delle varie entitá ho deciso di restituire solo gli id perché così l'interfaccia mi sembra più pulita e penso che sia la soluzione più elastica e piu slegata dal frontend. ovviamente in base alle esigenze del frontend avremmo potuto restituire sia un sottoinsieme delle informazioni riguardanti le varie entità o addirittura tutte le informazioni riguardante l'entità. Ho deciso di utilizzare come id delle entità degli UUID (universally unique identidfier) al posto di utilizzare degli id generati dal database per aumentare la testabilità del sistema e per le proprieta' degli UUID. In tutte le post/put ho deciso di ritornare sempre gli uuid, così poi se c'è bisogno il forntend può chiamare la get e ricevere le informazioni complete se ne ha bisogno Solo per le preferenze, sottoentità dell'utente, ho deciso di ritornare sempre l'entità per GET, POST, PUT. Essendo le preferenze strettamente collegate al concetto di utente ho deciso di trattarle differentemente.

## 4 Endpoints

#### 4.1 Prodotti

#### 4.1.1 GET /products

Restituisce gli id dei products. É possibile fare una ricerca per nome passando il parametro q e il nome da cercare o le prime lettere del nome

```
$ curl -v -X GET --header 'Accept: application/json' 'http://searchbuy.herokuapp.com/products'
Note: Unnecessary use of -X or --request, GET is already inferred.
* Try_NODELAY set
* Connected to searchbuy.herokuapp.com (52.18.45.95) port 80 (#0)

GET /products HTTP/1.1
> Host: searchbuy.herokuapp.com
> User-Agent: curl/7.59.0
> Accept: application/json
> User-Agent: curl/7.59.0
> Accept: application/json
> Server: undertow
< Connection: keep-alive
< Set-Cookie: JSESSIONID=4AQKBmIaET9FMGbzMGHZMhd0AHnw0iPgNwtzQEzp; path=/; HttpOnly
< Server: undertow
< X-Xss-Protection: 1; mode=block
< X-Frame-Options: SAMEORIGIN
< Date: Sun, 10 Feb 2019 11:12:00 GMT
< X-Content-Type-Options: nosniff
< Content-Type: application/json; charset=utf-8
< Content-Length: 79
< Via: 1.1 vegur
< * Connection #0 to host searchbuy.herokuapp.com left intact
["24dd8f69-194b-4702-bb8f-c995e977cebb","cf9d2b04-c5b0-4812-b8c2-9c012c1ddfd4"]</pre>
```

#### 4.1.2 POST /products

Aggiunge un prodotto

#### 4.1.3 GET /products/:id

Restituisce tutte le informazioni riguardate un prodotto

```
S curl -v -X GET --header 'Accept: application/json' 'http://ssarchbuy.herokuapp.com/products/dbif908e-2lec-4726-bbc1-e7fc67838ed9'

Motes Unnecessary use of -X or --request, GET is already inferred.

* Trying 5-76.75.251...

* TCR.NOBLAY Set

* CR.NOBLAY Set

* CONNECTION - Perchapp.com (54.76.75.251) port 80 (20)

* GET /- products/dbif908e-2lec-4726-bbc1-e7fc67838ed9 HTTP/1.1

* NOST: ssarchbuy.herokuapp.com

* User-Agent: curl/7.59.0

* Accept: application/json

* Accept: application/json

* Accept: application/json

* Connection: Isep-alive

* Connection: Isep-alive

* CR. Set Ver: undertow

* X-XSS-Protection: 1; modesblock

* X-Frame-Options: SAMCRGIN

* Option: July Set July Se
```

#### 4.1.4 PUT /products/:id

Modifica le informazioni riguardanti in prodotto

```
$ curl -v -X PUT --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
    "name": 'PC',
    "type": 'working",
    "description": "bellissimo",
    "price": 100000,
    "shipping_type": "priority",
    "revision": 1,
    "merchant": "8a3bddad-e68c-4e4b-926b-5c3f4f491193"
}'    'http://searchbuy.herokuapp.com/products/db1f908e-21ec-4726-b6c1-e7fc67838ed9'
*    Trying 54.246.240.18...
* TCP_NOBELAY set
* Connected to searchbuy.herokuapp.com (54.246.240.18) port 80 (#0)
P DUT /products/db1f908e-21ec-4726-b6c1-e7fc67838ed9 HTTP/1.1
* Host: searchbuy.herokuapp.com
* User-Agent: curl/7.59.0
* Content-Type: application/json
* Accept: application/json
* Accept: application/json
* Content-Length: 200
* 
* upload completely sent off: 200 out of 200 bytes
* HTTP/1.1 200 OK
* Connection: keep-alive
* Set-Cookie: JSESSIONID=NLCOEHB0XQoL3uTaW000K8P62TTIN1R4GS0U9oft; path=/; HttpOnly
* Server: undertow
* X-Xss-Protection: 1; mode=block
* X-Frame-Options: SAMEORIGIN
* Date: Sun, 10 Feb 2019 11:16:59 GMT
* X-Content-Type-options: nosniff
* Content-Length: 38
* Via: 1.1 vegur

* Connection #0 to host searchbuy.herokuapp.com left intact
* db1f908e-21ec-4726-b6c1-e7fc67838ed9**
* Connection #0 to host searchbuy.herokuapp.com left intact
* db1f908e-21ec-4726-b6c1-e7fc67838ed9**
* Connection #0 to host searchbuy.herokuapp.com left intact
* db1f908e-21ec-4726-b6c1-e7fc67838ed9**
* Connection #0 to host searchbuy.herokuapp.com left
```

#### 4.1.5 DELETE /products/:id

Elimina un prodotto

```
S curl -v -X DELETE --header 'Accept: application/octet-stream' 'http://searchbuy.herokuapp.com/products/dba528f0-1c4e-407c-860b-e7649e1a5cf5'

* Trying 52.208.186.52...
**TOP_NODELAY set

**TOP_NODELAY
```

#### 4.2 Venditori

#### 4.2.1 GET /merchants

Restituisce gli id dei venditori  $\acute{E}$  possibile fare una ricerca per nome passando il parametro q e il nome da cercare o le prime lettere del nome

```
$ curl -v --header 'Accept: application/json' 'http://searchbuy.herokuapp.com/merchants'

* Trying 54.246.240.18...

* TCP_NODELAY set

* Connected to searchbuy.herokuapp.com (54.246.240.18) port 80 (#0)

> GET /merchants HTTP/1.1

> Host: searchbuy.herokuapp.com

> User-Agent: curl/7.59.0

> Accept: application/json

> (ACCEPT: Application/json)

> (ACCEPT: APPLICATION (ACCEPT: ACCEPT: ACCEPT: APPLICATION (ACCEPT: ACCEPT: ACCEP
```

#### 4.2.2 POST /merchants

Aggiunge un venditore

```
$ curl -v -X POST --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
    "name": "Aldo",
    "type": "food",
    "telephone": "12314556",
    "social_number": "ALDF3213133"
}' 'http://searchbuy.herokuapp.com/merchants'
Note: Unnecessary use of -X or --request, POST is already inferred.

* Trying 52.16.107.201...

** TCP_NOBLAY set

* Connected to searchbuy.herokuapp.com (52.16.107.201) port 80 (#0)

P POST /merchants HTTP/1.1

* Host: searchbuy.herokuapp.com

User-Agent: curl/7.59.0

Content-Type: application/json

Accept: application/json

Content-Length: 107

* upload completely sent off: 107 out of 107 bytes

<! HTTP/1.1 200 OK

Connection: keep-alive

Set-Cookie: JSESSIONID=0xPZL3bLRV5dTnYtsbdePOfdi0AloZBTfWDs8Ba_; path=/; HttpOnly

Server: undertow

X-Xss-Protection: 1; mode=block

X-Trame-Options: SAMEORIGIN

Date: Sun, 10 Feb 2019 10:38:41 GMT

X-Connection: *POptions: nosniff

Content-Type: application/json; charset=utf-8

Content-Length: 38

Via: 1.1 vegur

Connection #0 to host searchbuy.herokuapp.com left intact

"84299c91-eaba-4735-bcc9-1863b3f0ae6b"</pre>
```

#### 4.2.3 GET /merchants/:id

Restituisce tutte le informazioni riguardate un venditore

```
S curl -v -X GET --header 'Accept: application/json' 'http://searchbuy.herokuapp.com/merchants/8a3bddad-e68c-4e4b-926b-5c3f4f491193'

Note: Unnecessary use of -X or --request, GET is already inferred.

* Trying 52.16.107.201...

* Torying 52.16.107.201...

* Torying 52.16.107.201...

* Connected to searchbuy.herokuapp.com (52.16.107.201) port 80 (#0)

OET /merchants/8a3bddad-e68c-4e6b-926b-5c3f4f491193 HTTP/1.1

> Host: searchbuy.herokuapp.com

OET /merchants/8a3bddad-e68c-4e6b-926b-5c3f4f491193 HTTP/1.1

> Host: searchbuy.herokuapp.com

OET /merchants/8a3bddad-e68c-4e6b-926b-5c3f4f491193 HTTP/1.1

> HOST: searchbuy.herokuapp.com

OET /merchants/8a3bddad-e68c-4e6b-926b-5c3f4f491193 HTTP/1.1

> HTTP/1.1 200 0K

< Connection: keep-alive

< Set-cookie: JSESSIONID=5mVHPkcgP0d7JX0nOE6VPg8MA_LjXMN-ABYOX6Af; path=/; HttpOnly

< Set-cookie: JSESSIONID=5mVHPkcgP0d7JX0nOE6VPg8MA_LjXMN-ABYOX6Af; path=//; HttpOnly

< Set-cookie: JSESSIONI
```

#### 4.2.4 PUT /merchants/:id

Modifica le informazioni riguardanti in venditore

```
$ curl -v -X PUT --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
    "name": "Giacomo",
    "type": "tech",
    "telephone": "22345677890",
    "social_number": "GCM123456"
}' 'http://searchbuy.herokuapp.com/merchants/8a3bddad-e68c-4e4b-926b-5c3f4f491193'
* Trying $2.17.22.87...
*TCP_NOBELAY set
* Connected to searchbuy.herokuapp.com (52.17.22.87) port 80 (#0)

PUT /merchants/8a3bddad-e68c-4e4b-926b-5c3f4f491193 HTTP/1.1

> Host: searchbuy.herokuapp.com

    User-Agent: curl/7.59.0

    Content-Type: application/json

> Accept: application/json

> Content-Length: 111

> * upload completely sent off: 111 out of 111 bytes

+ HTTP/1.1 200 OK

< Connection: keep-alive

< Set-Cookie: JSESSIONID=ZPedfO-spSGEkRCdX3zExaOhiqCtXZellsz2GOdW; path=/; HttpOnly

< Server: undertow

< X-Xss-Protection: 1; mode=block

X-Frame-Options: SAMEORIGIN

    Date: Sun, 10 Feb 2019 10:43:41 GMT

< X-Content-Type: application/json; charset=utf-8

    Content-Type: application/json; charset=utf-8

    Content-Type: application/json; charset=utf-8

    Content-Type: application/json; charset=utf-8

    Content-Type: application/json; charset=utf-8

    Connection #0 to host searchbuy.herokuapp.com left intact

*8a3bddad-e68c-4e4b-926b-5c3f4f491193**
</pre>
```

#### 4.2.5 DELETE /merchants/:id

Elimina un venditore

```
$ curl -v -X DELETE 'http://searchbuy.herokuapp.com/merchants/5ca6ccf6-3aed-4cbd-ad74-014915929379'

* Trying 52.17.22.87...

* TCP_NODELAY set

* Connected to searchbuy.herokuapp.com (52.17.22.87) port 80 (#0)

> DELETE /merchants/5ca6ccf6-3aed-4cbd-ad74-014915929379 HTTP/1.1

+ Host: searchbuy.herokuapp.com

> User-Agent: curl/7.59.0

> Accept: */*

> 

* HTTP/1.1 200 OK

* Connection: keep-alive

Set-Cookie: JSESSIONID=qx19yRxrUidr1SEkByxTuHTcMLy4KpA7QSwJ0V7P; path=/; HttpOnly

Server: undertow

X -Xss-Protection: 1; mode=block

X -Frame-Options: SAMEORIGIN

Date: Sun, 10 Feb 2019 10:40:45 GMT

X -Content-Type-Options: nosniff

Content-Type: application/octet-stream

C Content-Length: 0

Via: 1.1 vegur

* Connection #0 to host searchbuy.herokuapp.com left intact
```

#### 4.2.6 GET /merchants/:id/products

Restituisce gli id di tutti i prodotti del venditore

#### 4.3 Utenti

#### 4.3.1 GET /users

Restituisce gli id dei utenti É possibile fare una ricerca per nome passando il parametro  ${\tt q}$  e il nome da cercare o le prime lettere del nome

#### 4.3.2 POST /users

Aggiunge un utente

#### 4.3.3 GET /users/:id

Restituisce tutte le informazioni riguardate un utente

#### 4.3.4 PUT /users/:id

Modifica le informazioni riguardanti in utente

```
$ curl -v -X PUT --header 'Content-Type: application/json' --header 'Accept: application/json'
    "first_name": "Luca",
    "last_name": "Cervello",
    "email": "L.c%40a.com',
    "pass": "sasasas"
}' 'http://searchbuy.herokuapp.com/users/22f0c082-d578-4733-8770-93c546fe3025'
* Trying 34.247.132.237...
* TCP_NODELAY set
* Connected to searchbuy.herokuapp.com (34.247.132.237) port 80 (#0)
> PUT /users/22f0c082-d578-4733-8770-93c546fe3025 HTTP/1.1
> Host: searchbuy.herokuapp.com
> User-Agent: curl/7.59.0
> Content-Type: application/json
> Accept: application/json
> Content-Length: 108
    Connection #0 to host searchbuy.herokuapp.com left intact
22f0c082−d578−4733−8770−93c546fe3025"∰
```

#### 4.3.5 DELETE /users/:id

Elimina un utente

```
$ curl -v -X DELETE 'http://searchbuy.herokuapp.com/users/a29f1d87-db7f-49c3-8964-052f859fe971'

* Trying 34.253.59.97...

* TCP_NODELAY set

* Connected to searchbuy.herokuapp.com (34.253.59.97) port 80 (#0)

DELETE /users/a29f1d87-db7f-49c3-8964-052f859fe971 HTTP/1.1

> Host: searchbuy.herokuapp.com

User-Agent: curl/7.59.0

> Accept: */*

> HTTP/1.1 200 OK

< Connection: keep-alive

< Set-Cookie: JSESSIONID=Nw9wVzZnaeiZ-qZEDuXyyAQeeZx1pojWxJE7z2e0; path=/; HttpOnly

< Server: undertow

< X-Xss-Protection: 1; mode=block

< X-Frame-Options: SAMEORIGIN

Date: Sun, 10 Feb 2019 11:24:27 GMT

< X-Content-Type-Options: nosniff

< Content-Type: application/octet-stream

< Content-Length: 0

< Via: 1.1 vegur

< Connection #0 to host searchbuy.herokuapp.com left intact</pre>
```

#### $4.3.6~{ m GET}$ /users/:id/preferences

Restituisce tutte le informazioni riguardanti le preferenze

```
$ curl -v -X GET --header 'Accept application/json' 'http://searchbuy.herokuapp.com/users/22f0c082-d578-4733-8770-93c546fe3025/preferences'

Note: Unnecessary use of -X or --request, GET is already inferred.

* Trying 54-70.75.251...

* TCP_NODELAY set

* Connected to searchbuy.herokuapp.com (54.76.75.251) port 80 (#0)

> GET /users/22f0c082-d578-4733-8770-93c546fe3025/preferences HTTP/1.1

> Host: searchbuy.herokuapp.com

> User-Agent: curl/7.59.0

> Accept: application/json

> HTTP/1.1 200 OK

< Connection: keep-alive

< Set-Cookie: JSESSIONID-SNaJmdW7n_de03DG8-TCfmvsUQqELAHi9Wd-4021; path=/; HttpOnly

< Server: undertow

< Connection: J: mode=block

< X-Finen-Options: SAMCORION

< Date: Sun, 10 Feb 2019 13:19:59 GWT

< X-Content-Type-Options: nosniff

< Content-Type-Options: nosniff

< Content-Type: application/json; charset=utf-8

< Content-Type: application/json; charset=utf-8

< Content-Type: application/json; charset=utf-8

< Content-Type: application/json; charset=utf-8

< Content-Tope: applica
```

#### 4.3.7 POST /users/:id/preferences

Aggiunge le preferenze per l'utente

#### 4.3.8 PUT /users/:id/preferences

Modifica le preferenze per l'utente

## $4.3.9 \quad DELETE \ / \verb"users/:id/preferences"$

Elimina le preferenze per l'utente

#### 4.3.10 GET /users/:id/orders

Restituisce tutti gli id degli ordini dell'utente

```
$ curl -v -X GET --header 'Accept: application/json' 'http://searchbuy.herokuapp.com/users/17lbc909-8d5b-4d2b-adee-bf63bcab980b/orders'
Note: Unnecessary use of -X or --request, GET is already inferred.
* Trying 54.246.240.18...
* Trying 54.246.240.18...
* Trying 54.246.240.18...
* Connected to searchbuy.herokuapp.com (54.246.240.18) port 80 (#0)
* Connected to searchbuy.herokuapp.com (54.246.240.18) port 80 (#0)
* OET /users/17lbc909-8d5b-4d2b-adee-bf63bcab980b/orders HTTP/1.1
* Host: searchbuy.herokuapp.com
* User-Agent: curl/7.39.0
* Accept: application/json
* ATTP/1.1 200 OK
* Connection: keep-alive
* Set-Cookie: JSESJONID=BR8HYMYZA3bmQXI7K7CGAAh2TjQhD9-__AngDMs1; path=/; HttpOnly
* Setver: undertow
* X-Xss-Protection: 1; mode=block
* X-Frame-options: SAMEORIGIN
* Obten: Type-Options: nosniff
* Content-Type-Options: nosniff
* Content-Type-Op
```

#### 4.4 Ordini

#### 4.4.1 GET /orders

Restituisce tutti gli id degli ordini

#### 4.4.2 POST /orders

Aggiunge un ordine

```
$ curl -v -X POST --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
    "order_date': "2019-02-10",
    "merchant_id": "8a3bddad-e68c-4e4b-926b-5c3f4f491193",
    "product_id': "6f9d2b04-c5b0-4812-b8c2-9c012c1ddfdfd",
    "user_idd': "17b2909-8d5b-4d2b-adee-bf63bcab980b"
}' 'http://searchbuy.herokuapp.com/orders'
Note: Unnecessary use of -X or --request, POST is already inferred.
* Trying 52.48.160.128...
* TCP_NODELAY set
* Connected to searchbuy.herokuapp.com (52.48.160.128) port 80 (#0)
POST /Orders HTTP/1.1
> Host: searchbuy.herokuapp.com
> User-Agent: curl/7.59.0
> Content-Type: application/json
> Content-Type: application/json
> Content-Length: 250

* upload completely sent off: 250 out of 250 bytes
+HTTP/1.1 200 OK
< Connection: keep-alive
< Set-Cookie: JSESSIONDE-3yAHEIM_nJ8FM9tfNrxqQVsbnC-8cQEkq9yi2Vq7; path=/; HttpOnly
< Server: undertow
< X-Xss-Protection: 1; mode=block
< X-Frame-Options: SAMEORIGIN
> Date: Sun, 10 Feb 2019 13:44:20 GMT
< X-Content-Type: application/json; charset=utf-8
< Content-Length: 38
< Via: 1.1 vegur

* Connection #0 to host searchbuy.herokuapp.com left intact
"f5f82861-8078-4a60-ac7f-77a8dcb99807"</pre>
```

#### 4.4.3 GET /orders/:id

Restituisce tutte le informazioni riguardate un ordine

#### 4.4.4 PUT /orders/:id

Modifica le informazioni riguardanti in ordine

```
curl -v -X PUT --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
    "order_date": "2019-02-10",
    "estimated_delivery_date": "2019-02-15",
    "merchant_id": "8a3bddade-68c-4e4b-926b-5c3f4f491193",
    "product_id": "cf9d2b04-c5b0-4812-b8c2-9c012c1ddfd4",
    "user_id": "17lbc909-8d5b-4d2b-adee-bf63bcab980b"
}'    'http://searchbuy.herokuapp.com/orders/e7975b74-7d0b-4fa4-bf61-52c413100e3e'

* Trying 52.18.45.95...

* TCP_NODELAY set
* Connected to searchbuy.herokuapp.com (52.18.45.95) port 80 (#0)

> PUT /orders/e7975b74-7d0b-4fa4-bf61-52c413100e3e HTTP/1.1

> Host: searchbuy.herokuapp.com

> User-Agent: curl/7.59.0

> Content-Type: application/json

> Accept: application/json

> Content-Length: 250
>

* upload completely sent off: 250 out of 250 bytes

+HTTP/1.1 200 0K

< Connection: keep-alive
< Set-Cookie: JSESSIONID=7N7ol-Ix0JTHcM_KFGKDJz5Z9AKEi4lJVoZwsHCX; path=/; HttpOnly
< Server: undertow

< X-Xss-Protection: 1; mode=block

X-Frame-Options: SAMEORIGIN

    Date: Sun, 10 Feb 2019 13:54:55 GMT

< X-Content-Type: application/json; charset=utf-8

    Content-Length: 38

< Via: 1.1 vegur

</pre>

    Connection #0 to host searchbuy.herokuapp.com left intact
    "e7975b74-7d0b-4fa4-bf61-52c413100e3e"
```

#### 4.4.5 DELETE /orders/:id

#### Elimina un ordine