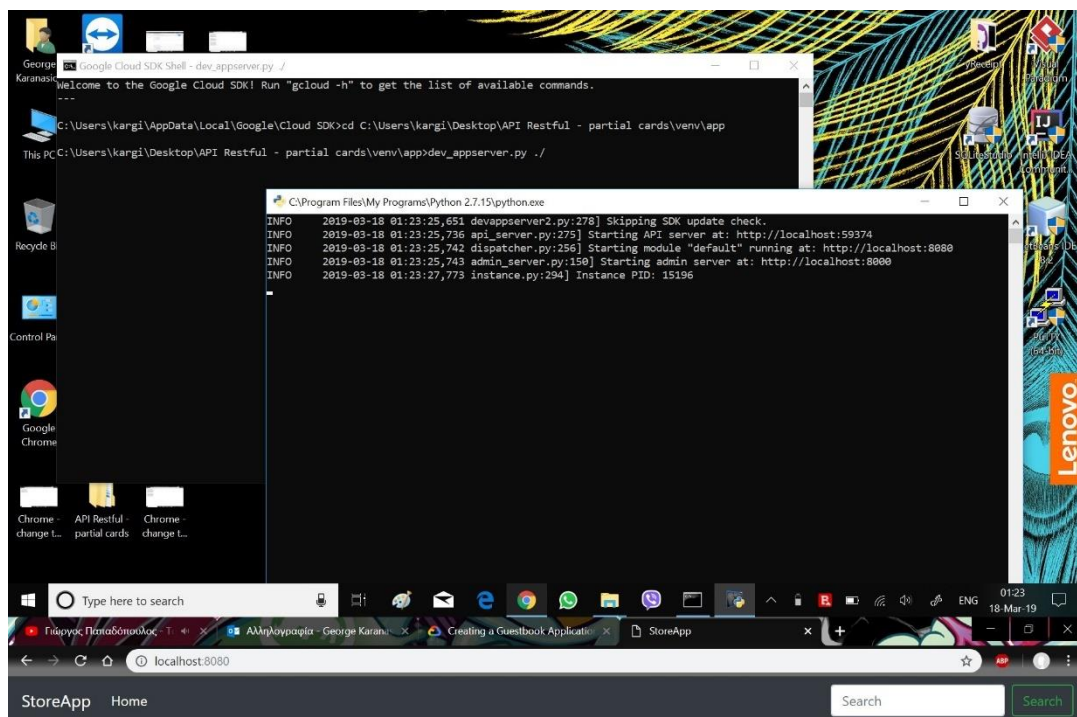


# Usage examples

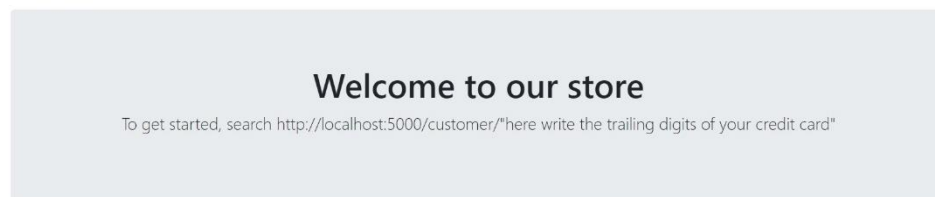
## 1. Test if the application runs

Steps:

- 1) Open Google Cloud SDK Shell and go to the app's current directory (in this case, C:\Users\kargi\Desktop\API Restful - partial cards\venv\app)
- 2) Run the server
- 3) Connect on the browser to <http://localhost:8080/>
- 4) Should appear the home.html page (**succeed**)



Under construction



## 2. Test GET handler examples

The application already includes a database as a list of objects (in our case customers) which keeps the record of the customers and their partial card details.

cards\venv\app — Atom

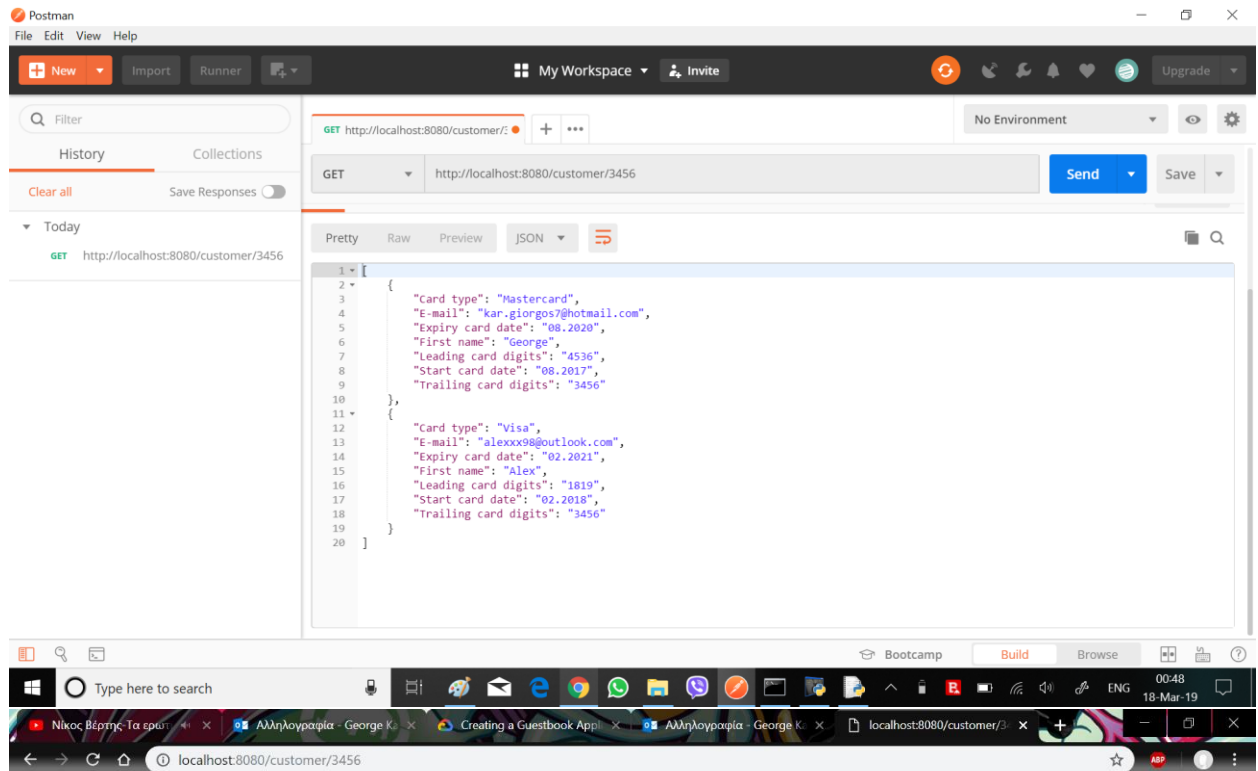
```
app.py
1 from flask import Flask, jsonify, make_response, render_template
2 from flask_restful import Api, Resource, reqparse
3
4 app = Flask(__name__)
5 api = Api(app)
6
7 customers = [
8     {
9         "First name": "George",
10        "E-mail": "kar.giorgos7@hotmail.com",
11        "Trailing card digits": "3456",
12        "Leading card digits": "4536",
13        "Card type": "Mastercard",
14        "Start card date": "08.2017",
15        "Expiry card date": "08.2020"
16    },
17    {
18        "First name": "Nick",
19        "E-mail": "nick888@hotmail.com",
20        "Trailing card digits": "1336",
21        "Leading card digits": "0446",
22        "Card type": "Mastercard",
23        "Start card date": "08.2017",
24        "Expiry card date": "08.2020"
25    },
26    {
27        "First name": "Max",
28        "E-mail": "max887@hotmail.com",
29        "Trailing card digits": "2416",
30        "Leading card digits": "5536",
31        "Card type": "Mastercard",
32        "Start card date": "08.2018",
33        "Expiry card date": "08.2021"
34    },
35    {
36        "First name": "Alex",
37        "E-mail": "alex98@outlook.com",
38        "Trailing card digits": "3456",
39        "Leading card digits": "1819",
40        "Card type": "Visa",
41        "Start card date": "02.2018",
42        "Expiry card date": "02.2021"
43    },
44    {
45        "First name": "Maria",
46        "E-mail": "mariak1998@gmail.com",
47        "Trailing card digits": "1336",
48        "Leading card digits": "2719",
49        "Card type": "Visa",
50        "Start card date": "01.2019",
51        "Expiry card date": "01.2022"
52    },
53    {
54        "First name": "Olga",
55        "E-mail": "olga2000@outlook.com",
56        "Trailing card digits": "2416",
57        "Leading card digits": "5029",
58        "Card type": "Visa",
59        "Start card date": "03.2019",
60        "Expiry card date": "03.2022"
61    }
62 ]
63
64 @app.route('/')
65 def index():
66     return render_template('home.html')
67
68 class Customer(Resource):
69     def get(self, trailingCardDigits):
70         cust = [customer for customer in customers if customer['Trailing card digits'] == trailingCardDigits]
71         for customer in cust:
72             if (customer['Trailing card digits'] == trailingCardDigits):
73                 return make_response(jsonify(customer), 200)
74         return "Customer not found", 404
```

GET handler returns matching customers in JSON given partial details of a credit card. Also, should be mentioned that a partial credit card **always** contains **trailing digits** and may sometimes contain leading digits, a card type, start date, expiry date, or any combination thereof. So, based on the above we will use the GET method by searching the trailing digits of the customers because they always existing in the card.

## Example 1

Steps (ZOOM FOR BETTER VIEW):

- 1) On Postman GET -> <http://localhost:8080/customer/3456>
- 2) Expecting to see the records of George and Alex because both have the same trailing digits, like in chrome (**succeed**)

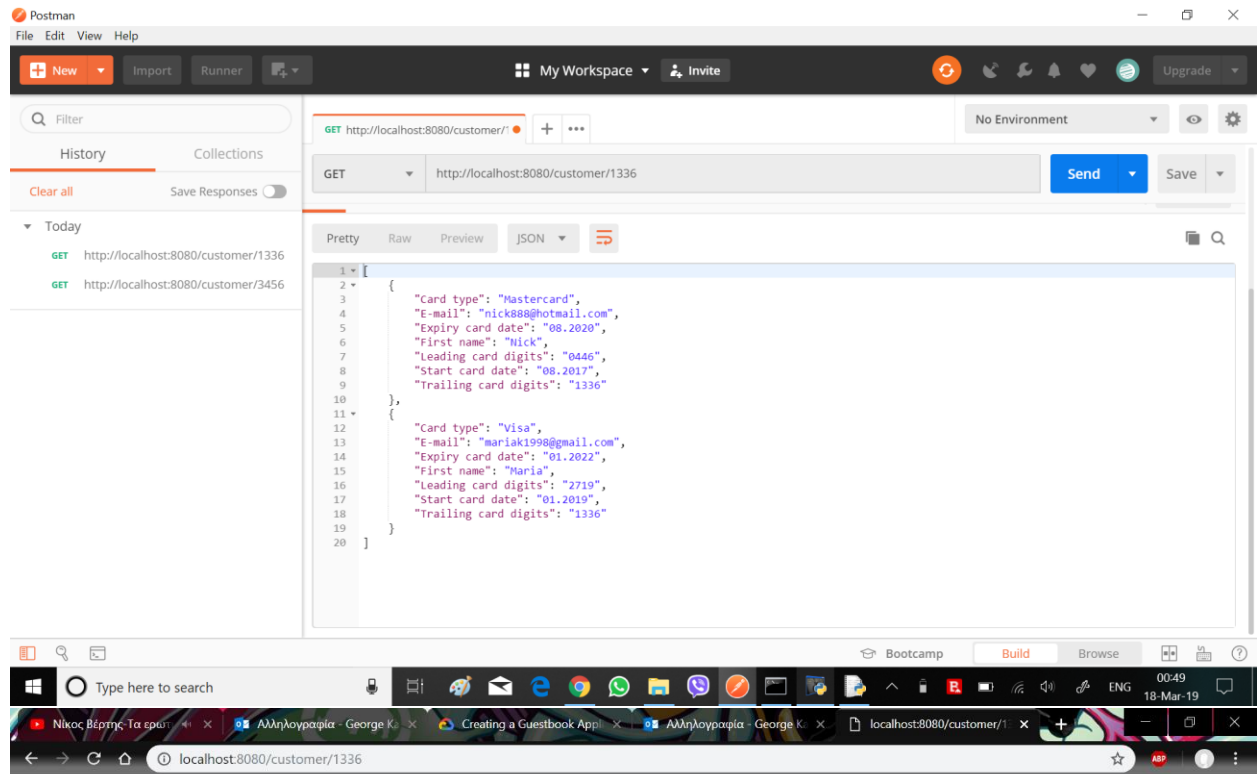


```
[
  {
    "Card type": "Mastercard",
    "E-mail": "kar.giorgos7@hotmail.com",
    "Expiry card date": "08.2020",
    "First name": "George",
    "Leading card digits": "4536",
    "Start card date": "08.2017",
    "Trailing card digits": "3456"
  },
  {
    "Card type": "Visa",
    "E-mail": "alex98@outlook.com",
    "Expiry card date": "02.2021",
    "First name": "Alex",
    "Leading card digits": "1819",
    "Start card date": "02.2018",
    "Trailing card digits": "3456"
  }
]
```



## Example 2

- 1) On Postman GET -> <http://localhost:8080/customer/1336>
- 2) Expecting to see the records of Nick and Maria because both have the same trailing digits, like in chrome (**succeed**)

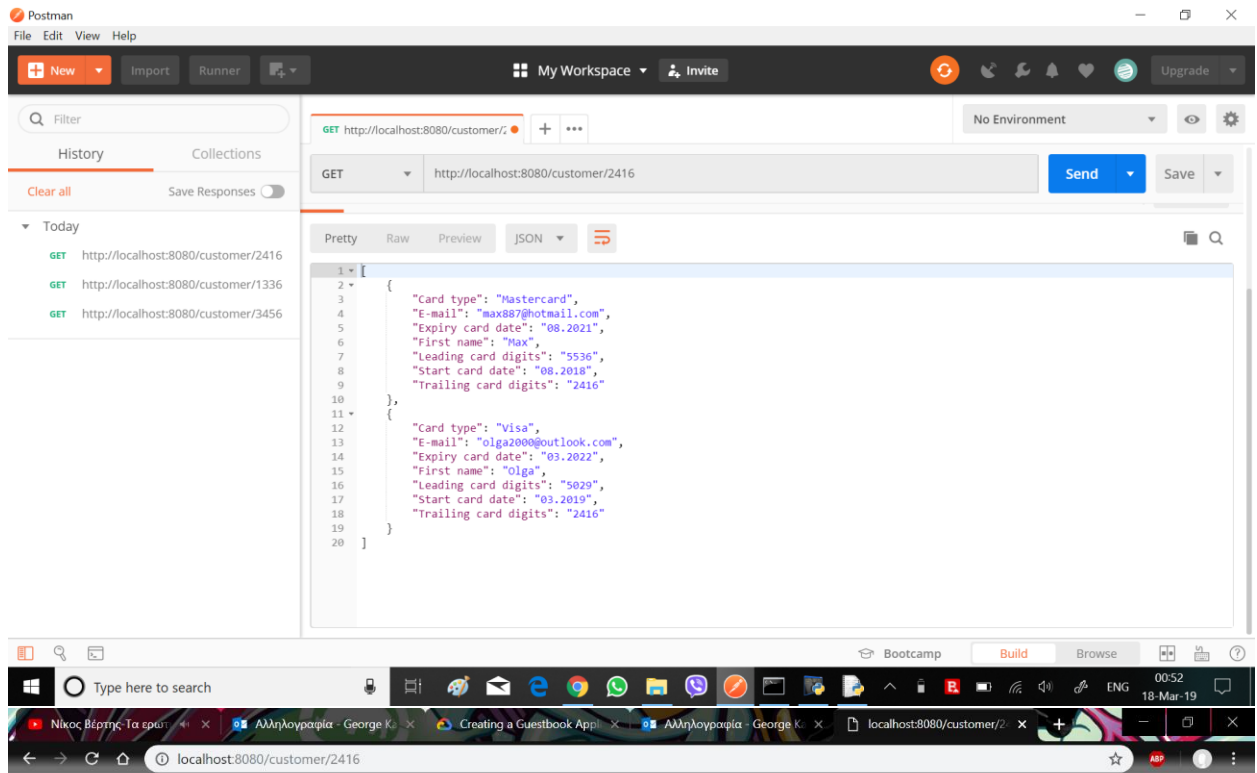


```
[
  {
    "Card type": "Mastercard",
    "E-mail": "nick888@hotmail.com",
    "Expiry card date": "08.2020",
    "First name": "Nick",
    "Leading card digits": "0446",
    "Start card date": "08.2017",
    "Trailing card digits": "1336"
  },
  {
    "Card type": "Visa",
    "E-mail": "mariaki1998@gmail.com",
    "Expiry card date": "01.2022",
    "First name": "Maria",
    "Leading card digits": "2719",
    "Start card date": "01.2019",
    "Trailing card digits": "1336"
  }
]
```



### Example 3

- 1) On Postman GET -> <http://localhost:8080/customer/2416>
- 2) Expecting to see the records of Max and Olga because both have the same trailing digits, like in chrome (**succeed**)



```
[
  {
    "Card type": "Mastercard",
    "E-mail": "max887@hotmail.com",
    "Expiry card date": "08.2021",
    "First name": "Max",
    "Leading card digits": "5536",
    "Start card date": "08.2018",
    "Trailing card digits": "2416"
  },
  {
    "Card type": "Visa",
    "E-mail": "olga2000@outlook.com",
    "Expiry card date": "03.2022",
    "First name": "Olga",
    "Leading card digits": "5029",
    "Start card date": "03.2019",
    "Trailing card digits": "2416"
  }
]
```

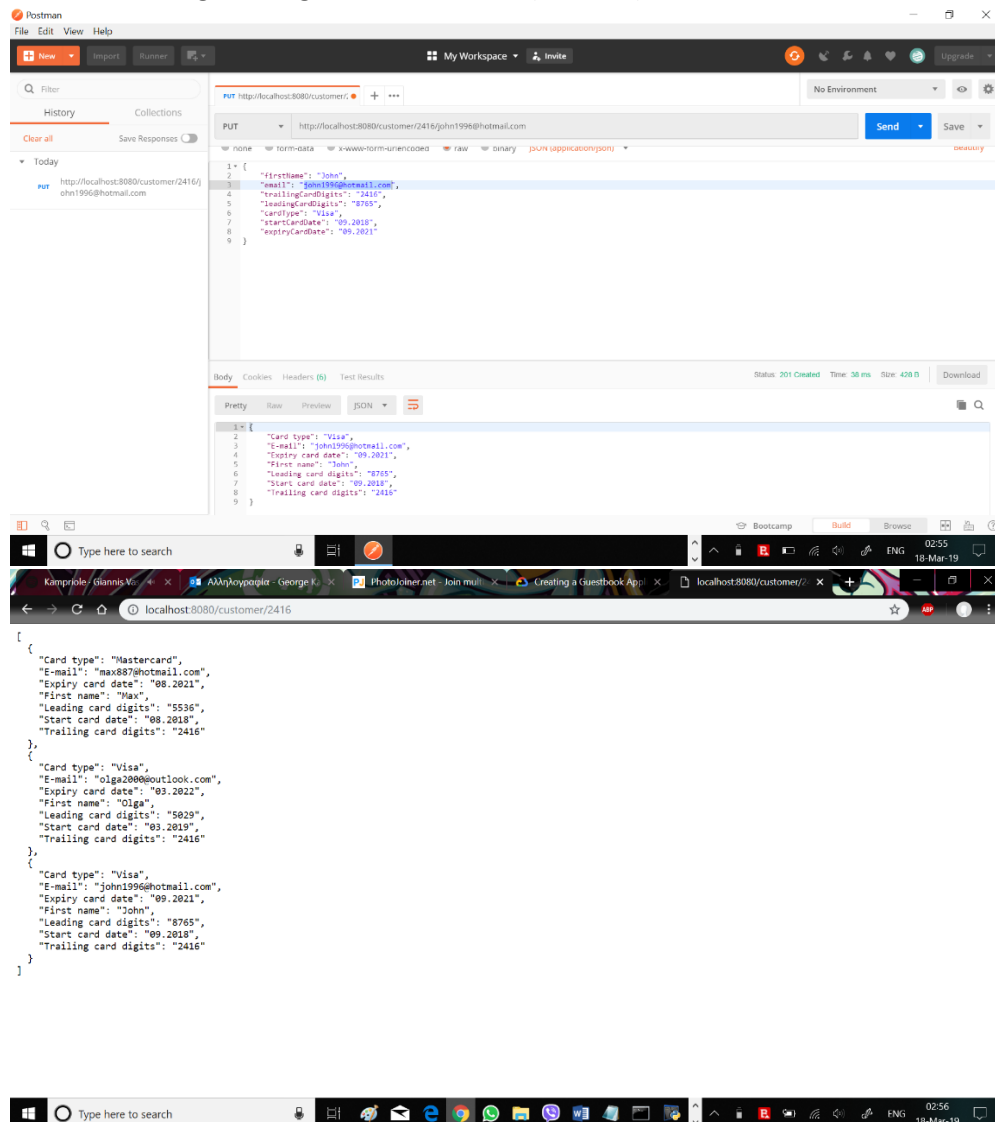


### 3. Test PUT handler – Add new customer/partial card record

PUT handler accepts partial credit card and customer information in JSON and stores it. In general, the PUT method has the ability to change or add new customer/card details. In my application in order to change or add a new customer, first, you have to specify the customer by using also his e-mail address (the only unique information) in the link. You cannot just use his trailing digits only because in this way the application will not understand who should be changed as other customers may have the same trailing digits.

Steps (**ZOOM FOR BETTER VIEW**):

- 1) On Postman PUT -> <http://localhost:8080/customer/2416/john1996@hotmail.com>
- 2) Add a new Customer with:  
(Trailing digits: 2416, First name: John, E-mail: [john1996@hotmail.com](mailto:john1996@hotmail.com),  
Leading card digits: 8765, Card type: Visa, Start Card Date: 09.2018,  
Expiry Card Date: 09.2021)
- 3) Expecting to see his record in <http://localhost:8080/customer/2416> with the others who have the same trailing card digits, like in chrome (**succeed**)

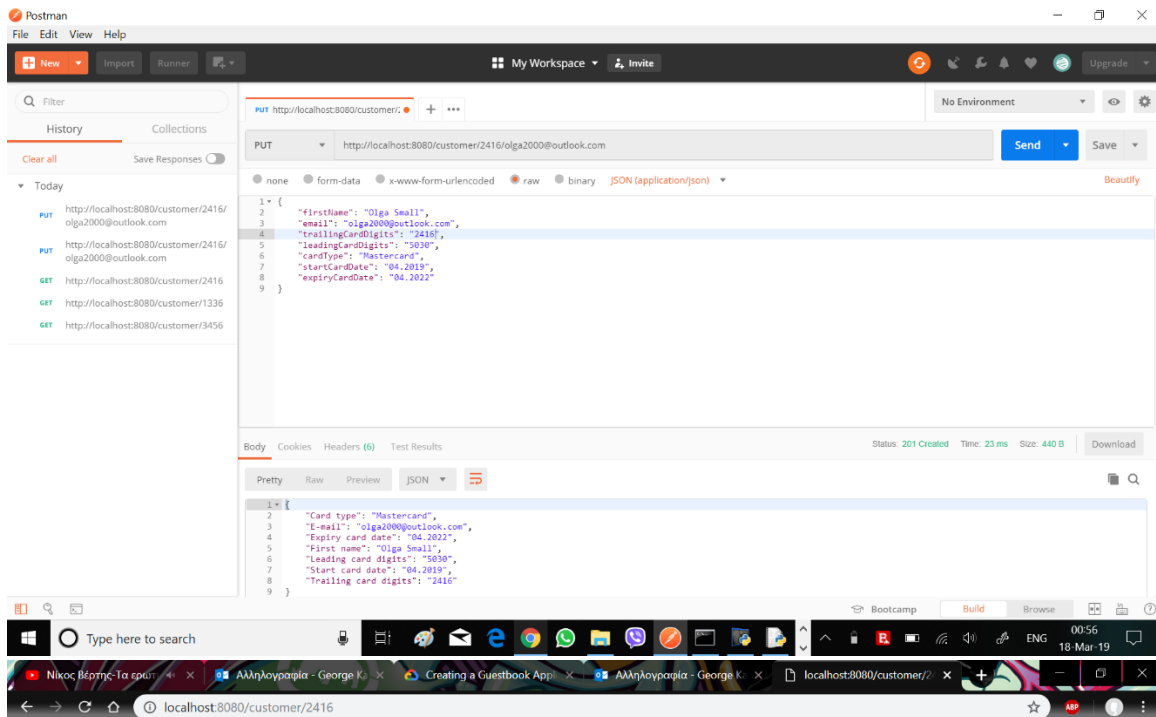


## 4. Test PUT handler

### Example 1 (change some details)

Steps (**ZOOM FOR BETTER VIEW**):

- 1) On Postman PUT -> <http://localhost:8080/customer/2416/olga2000@outlook.com>
- 2) Change the customer called Olga to:  
(Trailing digits: 2416, First name: Olga -> Olga Small, E-mail: [olga2000@outlook.com](mailto:olga2000@outlook.com),  
Leading card digits: 5029 -> 5030, Card type: Mastercard, Start Card Date: 08.2018 -> 04.2019,  
Expiry Card Date: 08.2021 -> 04.2022)
- 3) Expecting to see her changes in <http://localhost:8080/customer/2416> with Max who has the same trailing card digits, like in chrome (**succeed**)

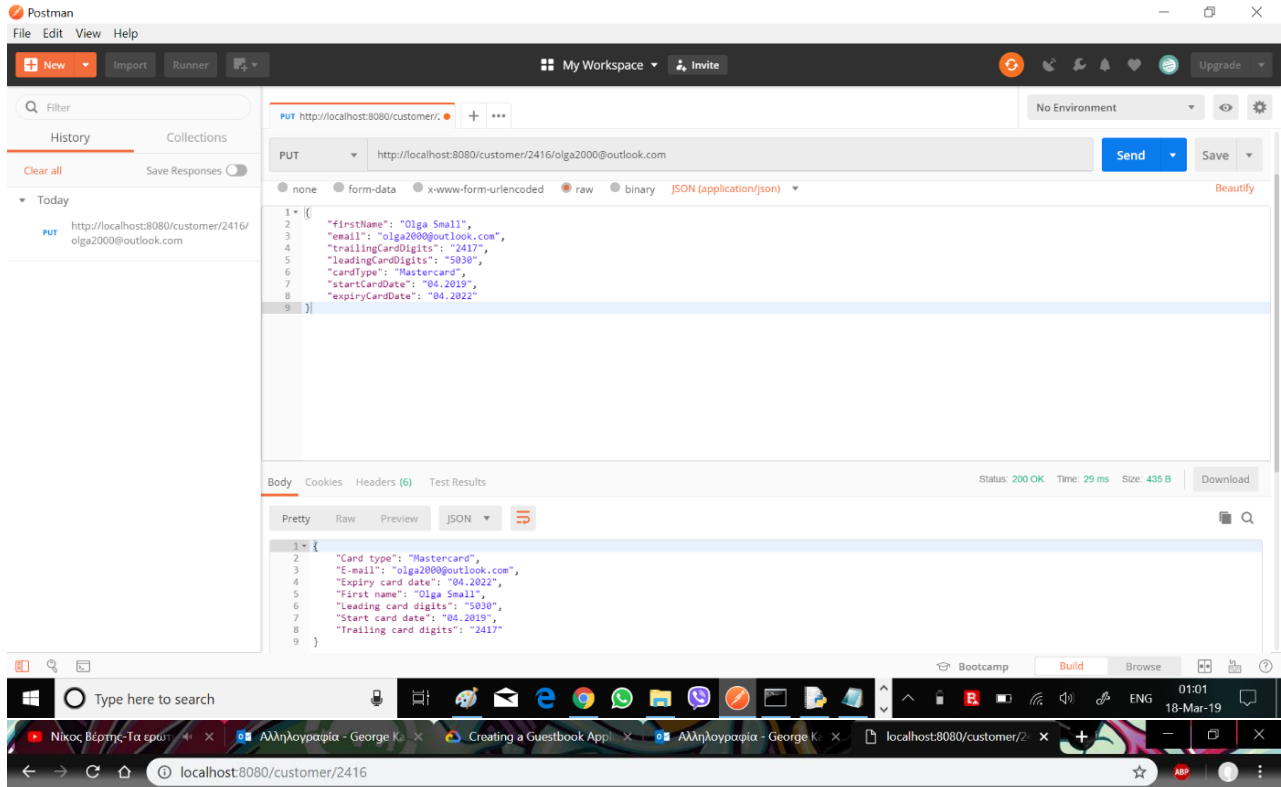


```
[
  {
    "Card type": "Mastercard",
    "E-mail": "max887@hotmail.com",
    "Expiry card date": "08.2021",
    "First name": "Max",
    "Leading card digits": "5536",
    "Start card date": "08.2018",
    "Trailing card digits": "2416"
  },
  {
    "Card type": "Mastercard",
    "E-mail": "olga2000@outlook.com",
    "Expiry card date": "04.2022",
    "First name": "Olga Small",
    "Leading card digits": "5030",
    "Start card date": "04.2019",
    "Trailing card digits": "2416"
  }
]
```

## Example 2 (change trailing digits)

Steps :

- 1) On Postman PUT -> <http://localhost:8080/customer/2416/olga2000@outlook.com>
- 2) Change the Trailing digits of customer called Olga Small (previous case) from 2416 to 2417
- 3) Expecting to disappear from the <http://localhost:8080/customer/2416> and appear to <http://localhost:8080/customer/2417> as is the only one who has 2417 as trailing card digits now, like in chrome (**succeed**)



```
[  {    "Card type": "Mastercard",    "E-mail": "max887@hotmail.com",    "Expiry card date": "08.2021",    "First name": "Max",    "Leading card digits": "5536",    "Start card date": "08.2018",    "Trailing card digits": "2416"  }]
```





Postman

File Edit View Help

New Import Runner

My Workspace Invite

Filter

History Collections

Clear all Save Responses

Today

- GET http://localhost:8080/customer/2417
- GET http://localhost:8080/customer/2417/
- GET http://localhost:8080/customer/2417/
- PUT http://localhost:8080/customer/2416/ olga2000@outlook.com

GET http://localhost:8080/customer/2417

Params Authorization Headers (1) Body Pre-request Script Tests

none form-data x-www-form-urlencoded raw binary

This request does not have a body

Body Cookies Headers (6) Test Results

Status: 200 OK Time: 24 ms Size: 457 B Download

Pretty Raw Preview JSON

```
1 - {
2   {
3     "Card type": "Mastercard",
4     "E-mail": "olga2000@outlook.com",
5     "Expiry card date": "04.2022",
6     "First name": "Olga Small",
7     "Leading card digits": "5030",
8     "Start card date": "04.2019",
9     "Trailing card digits": "2417"
10  }
11 }
```

Type here to search

Bootcamp Build Browse

localhost:8080/customer/2417

```
{
  {
    "Card type": "Mastercard",
    "E-mail": "olga2000@outlook.com",
    "Expiry card date": "04.2022",
    "First name": "Olga Small",
    "Leading card digits": "5030",
    "Start card date": "04.2019",
    "Trailing card digits": "2417"
  }
}
```

Type here to search

01:01 18-Mar-19

### Example 3 (change trailing digits)

Compared to the last example, now we want to change the customer's e-mail too, but we have to specify his new e-mail in the link, not the old one. Else, the application will not accept the change.

Steps :

- 1) On Postman PUT -> <http://localhost:8080/customer/2416/olga2001@outlook.com>
- 2) Change the customer called Olga to:  
(Trailing digits: 2416 -> 2417, e-mail [olga2000@outlook.com](mailto:olga2000@outlook.com) -> [olga2001@outlook.com](mailto:olga2001@outlook.com))
- 3) Expecting to disappear from the <http://localhost:8080/customer/2416> (like before) and to appear with the changes (new e-mail) to <http://localhost:8080/customer/2417> as is the only one who has 2417 as trailing card digits now, like in chrome (**succeed**)

