

# IOCO Assessment

## Invoice-API

### Testing Document

This is just a document, illustrating simple steps to run and test the functionality of my Invoice-API, A Spring Boot REST API application.

We will be using **Postman** to achieve this.

This is the same Scenario used in my Integration Test.

#### Github link to my application

<https://github.com/Arshadee/Invoice-API>

#### Clone the application

<https://github.com/Arshadee/Invoice-API.git>

#### Build / Compile the application using maven

In command-Line / term navigate to the project folder  
and run : **mvn clean install**

#### Run the application

In command-Line / term navigate to the project folder  
and run : **java -jar target/invoice-api-0.0.1-SNAPSHOT.jar**

Alternatively, you can run the app without packaging it using  
**mvn spring-boot:run**

The application will start running at

<http://localhost:8080>

## Step 1

### Create an Invoice: (using Postman)

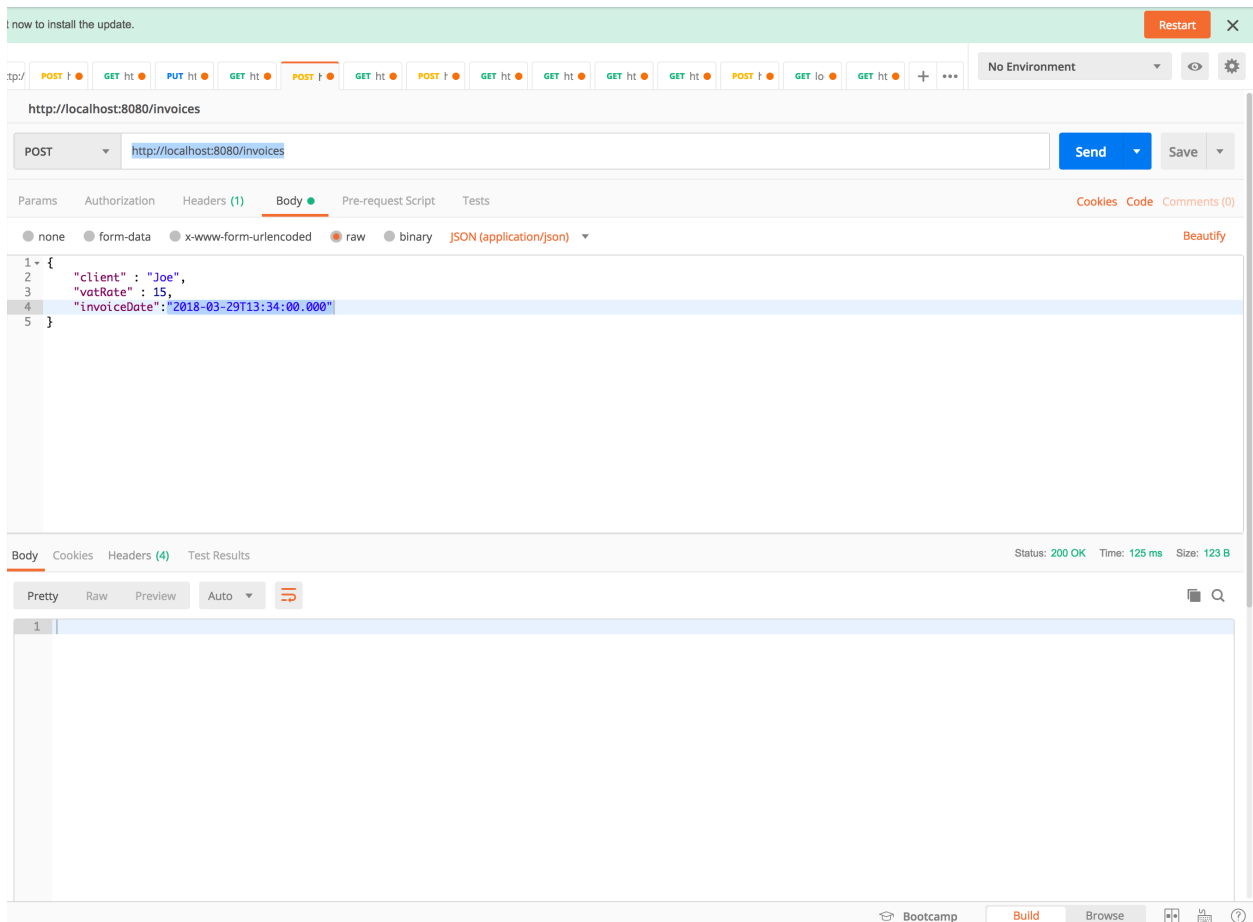
Using our REST End Point:

Method: POST

URL: <http://localhost:8080/invoices>

Send the following JSON on the Request Body,  
in the Request Header set **Content-Type = application/json**  
as displayed in screen shot below

```
{  
  "client": "Joe"  
  "vatRate": 15  
  "invoiceDate": "2018-03-29T13:34:00.000"  
}
```



## Step 2

### Create a 2nd Invoice: (using Postman) (Same as Step1)

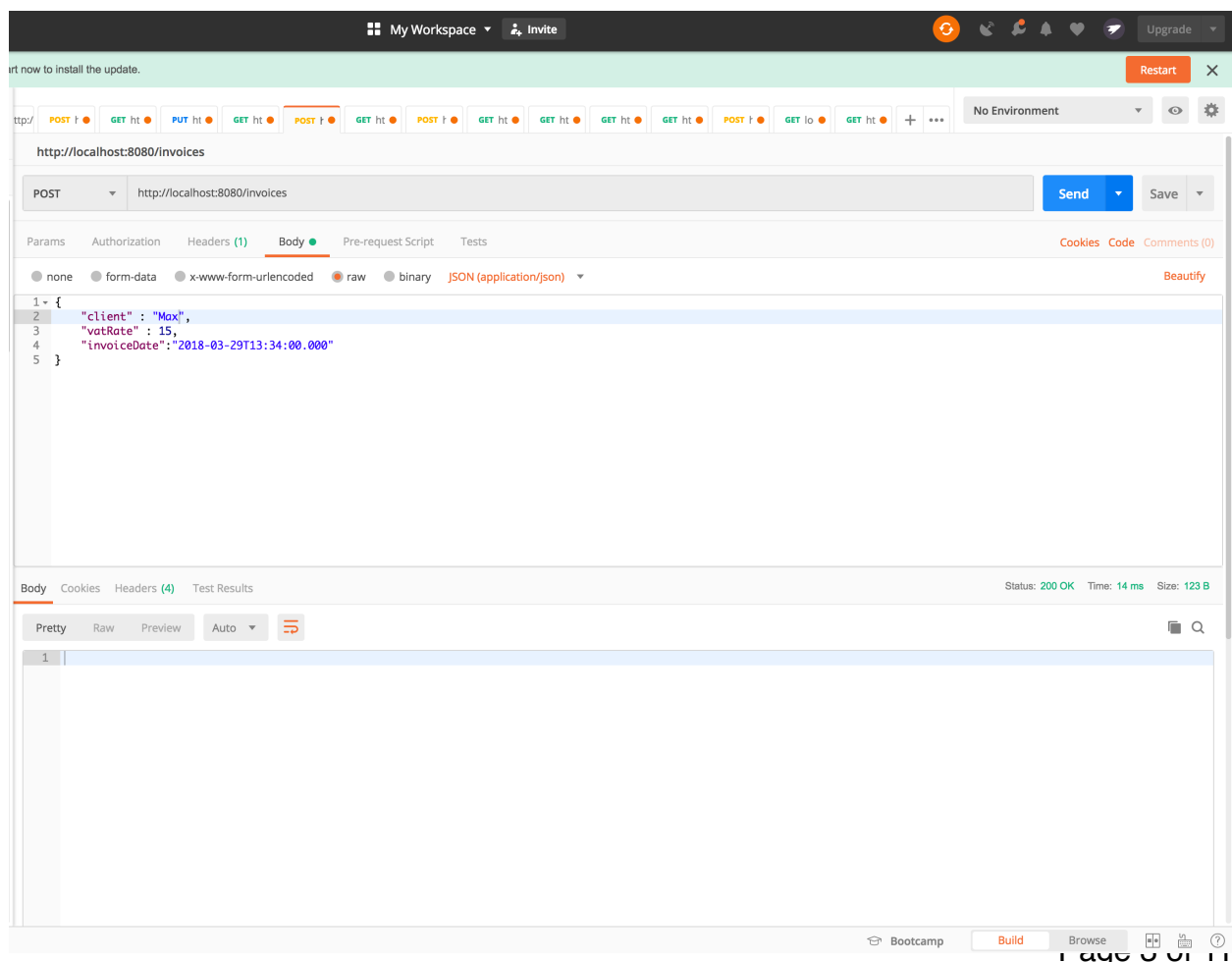
Using our REST End Point:

Method: POST

URL: <http://localhost:8080/invoices>

Send the following JSON on the Request Body,  
in the Request Header set **Content-Type = application/json**  
as displayed in screen shot below

```
{  
  "client" : "Max"  
  "vatRate": 15  
  "invoiceDate": "2018-03-29T13:34:00.000"  
}
```



### Step 3

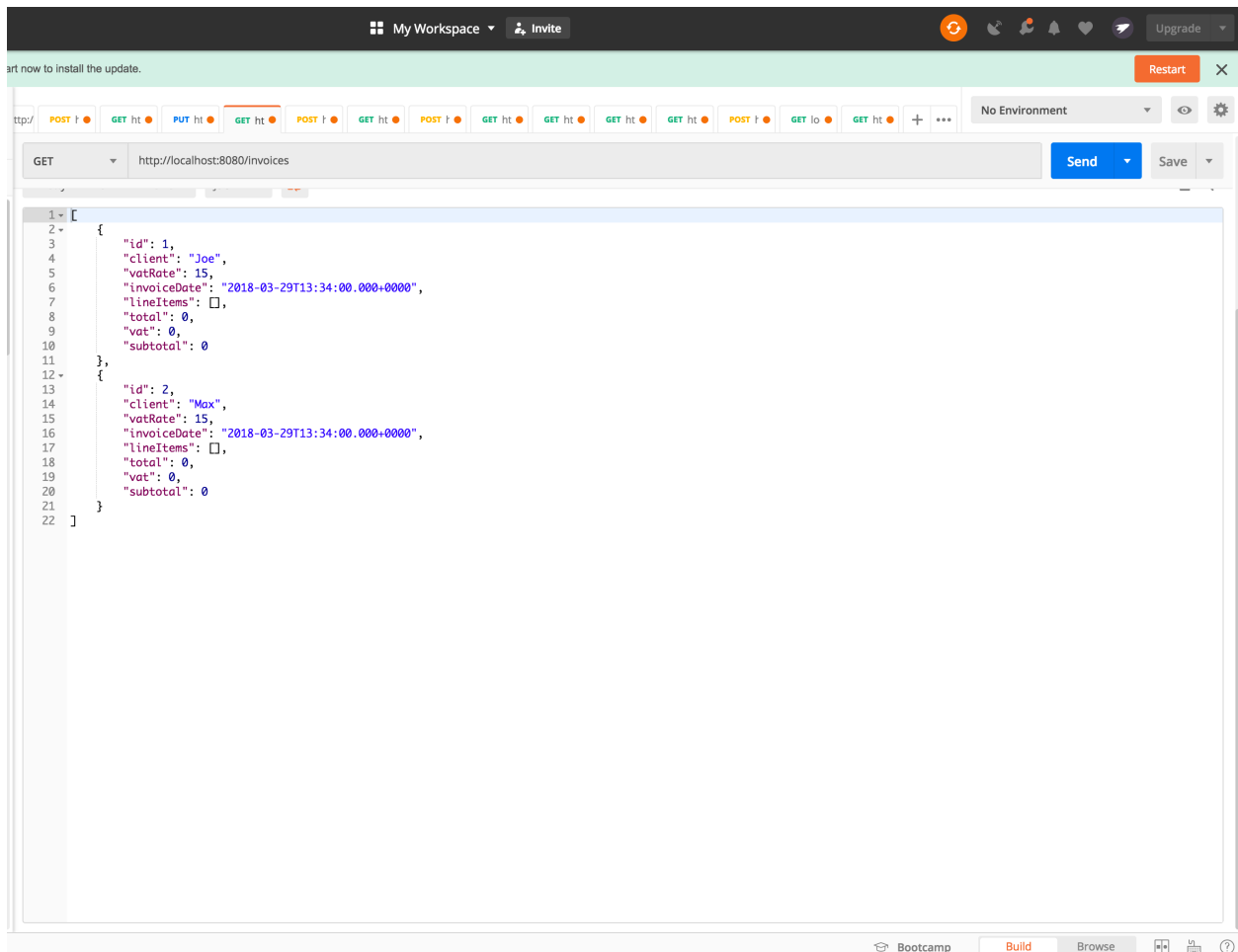
#### Check if our Invoices are created: (using Postman)

Using our REST End Point:

Method: GET

URL: <http://localhost:8080/invoices>

As done in the screen shot below:



## Step 4

### Add a Line Item to Invoice - id= 1 Client = Joe : (using Postman)

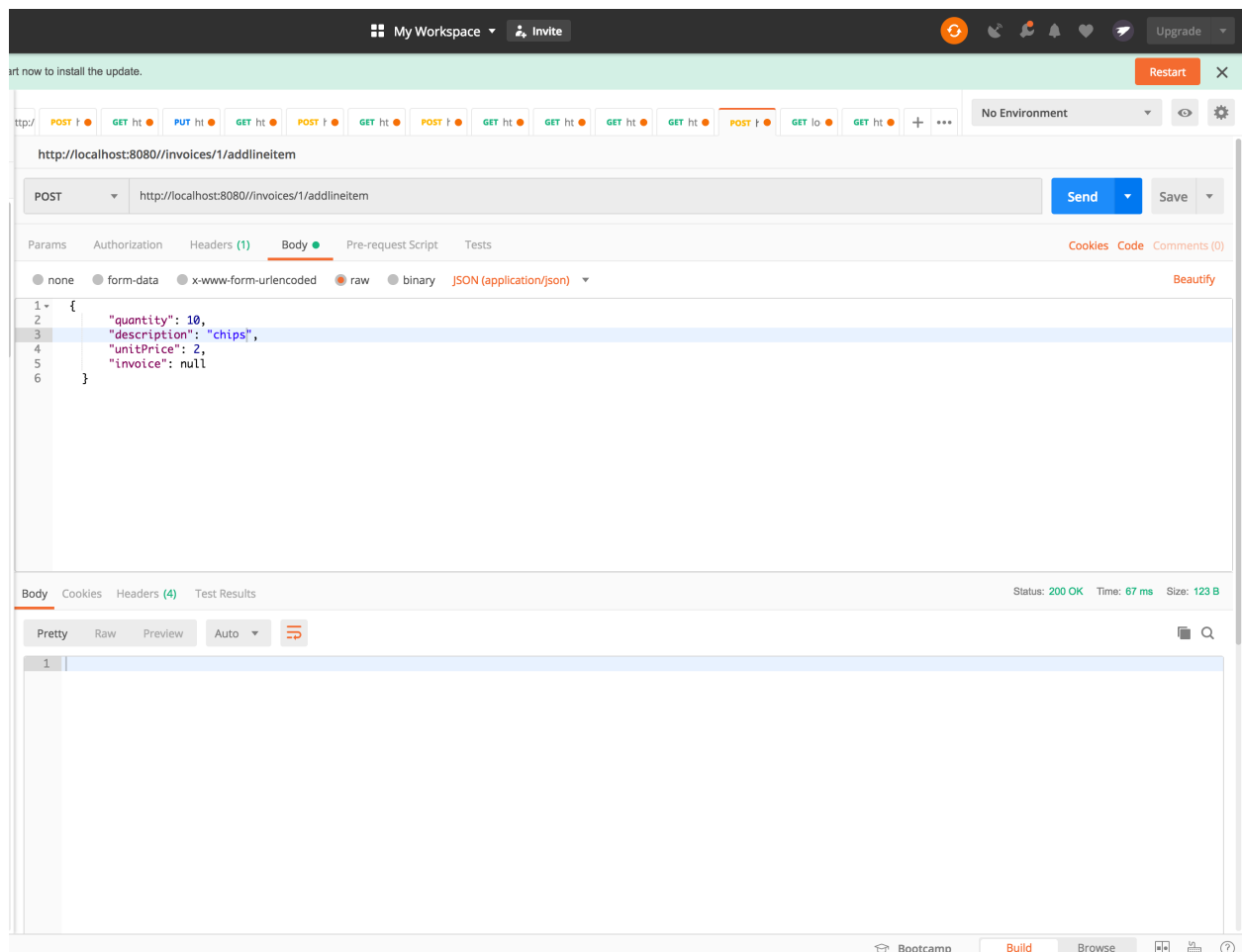
Using our REST End Point:

Method: **POST**

URL: <http://localhost:8080/invoices/{invoiceId}/addlineitem>

Send the following JSON on the Request Body,  
in the Request Header set **Content-Type = application/json**  
as displayed in screen shot below

```
{  
  "quantity": 10,  
  "description": "chips",  
  "unitPrice": 2,  
  "invoice": null  
}
```



## Step 5

**Add another Line Item to Invoice - id= 1 Client = Joe : (using Postman)**  
**(same as Step 4)**

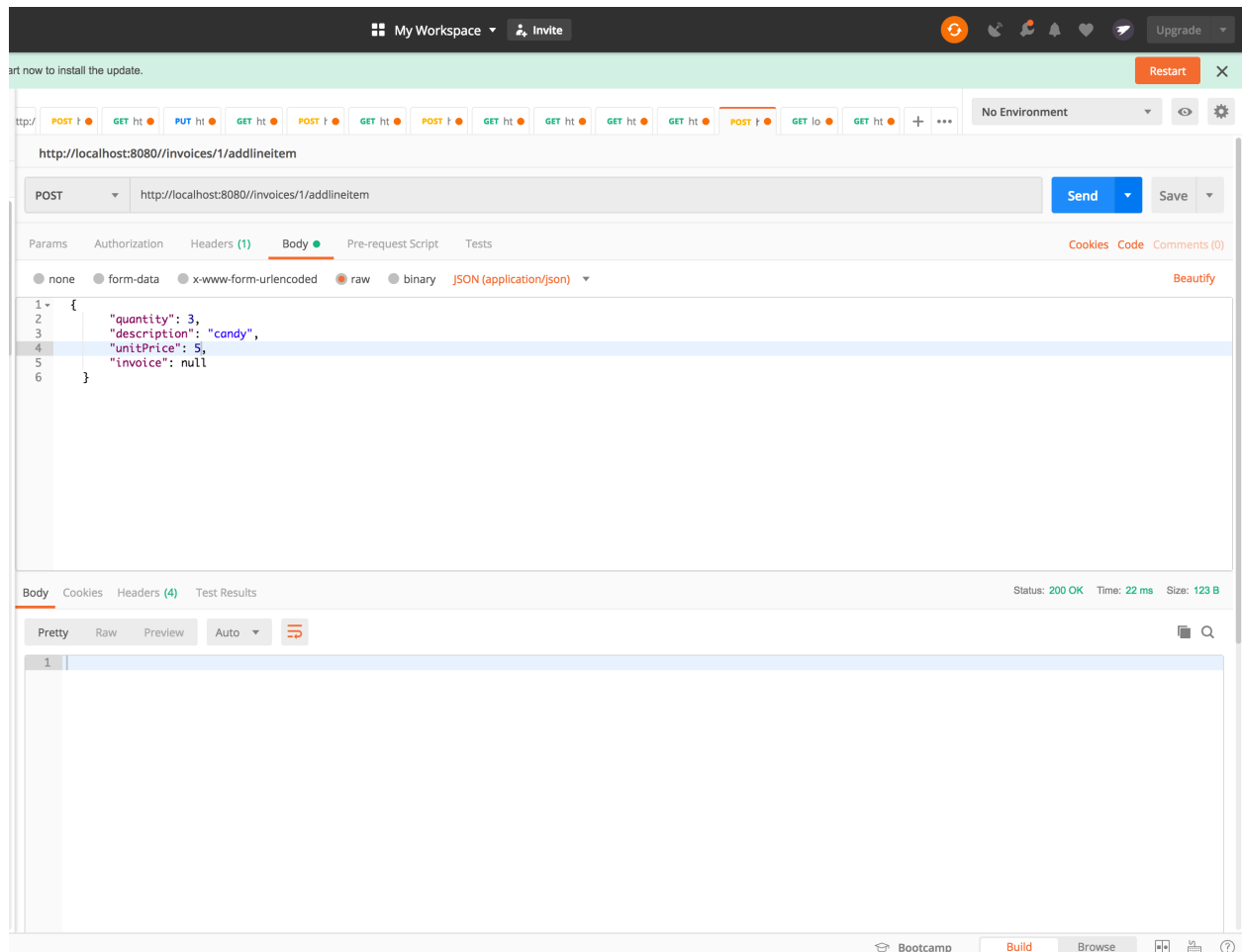
Using our REST End Point:

Method: **POST**

URL: <http://localhost:8080/invoices/{invoiceId}/addlineitem>

Send the following JSON on the Request Body,  
in the Request Header set **Content-Type = application/json**  
as displayed in screen shot below

```
{
  "quantity": 10,
  "description": "chips",
  "unitPrice": 2,
  "invoice": null
}
```



## Step 6

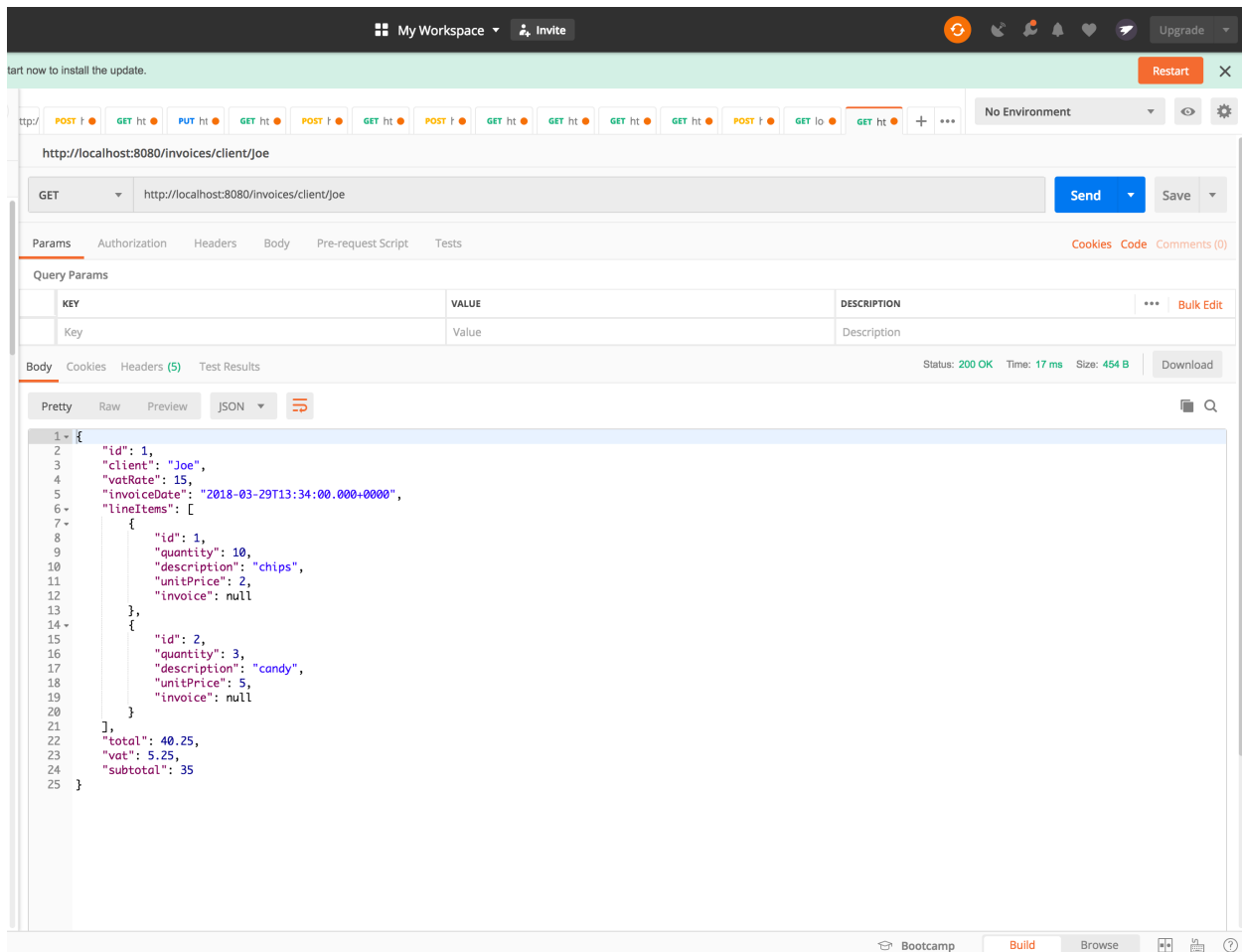
### View Invoice - id = 1 Client = Joe : (using Postman) To see our LineItems added

Using our REST End Point:

Method: **GET**

URL: <http://localhost:8080/invoices/client/{client}>

As done in the screen shot below:



### Note on Calculations:

#### Sub Total = 35

Line Item - id= 1, desc = Chips, quantity = 10 , unitPrice = 2

quantity \* unitPrice = 10 \* 2 = 20

Line Item - id= 2, desc = Candy, quantity = 3 , unitPrice = 5

quantity \* unitPrice = 3 \* 5 = 15

20 + 15 = 35

**Vat** = Sub Total \* vat Rate = 35 \* 15% = 5.25

**Total** = Sub Total + Vat = 35 + 5.25 = 40.25

## Step 7

### Add a Line Item to Invoice - id= 2 Client = Max : (using Postman)

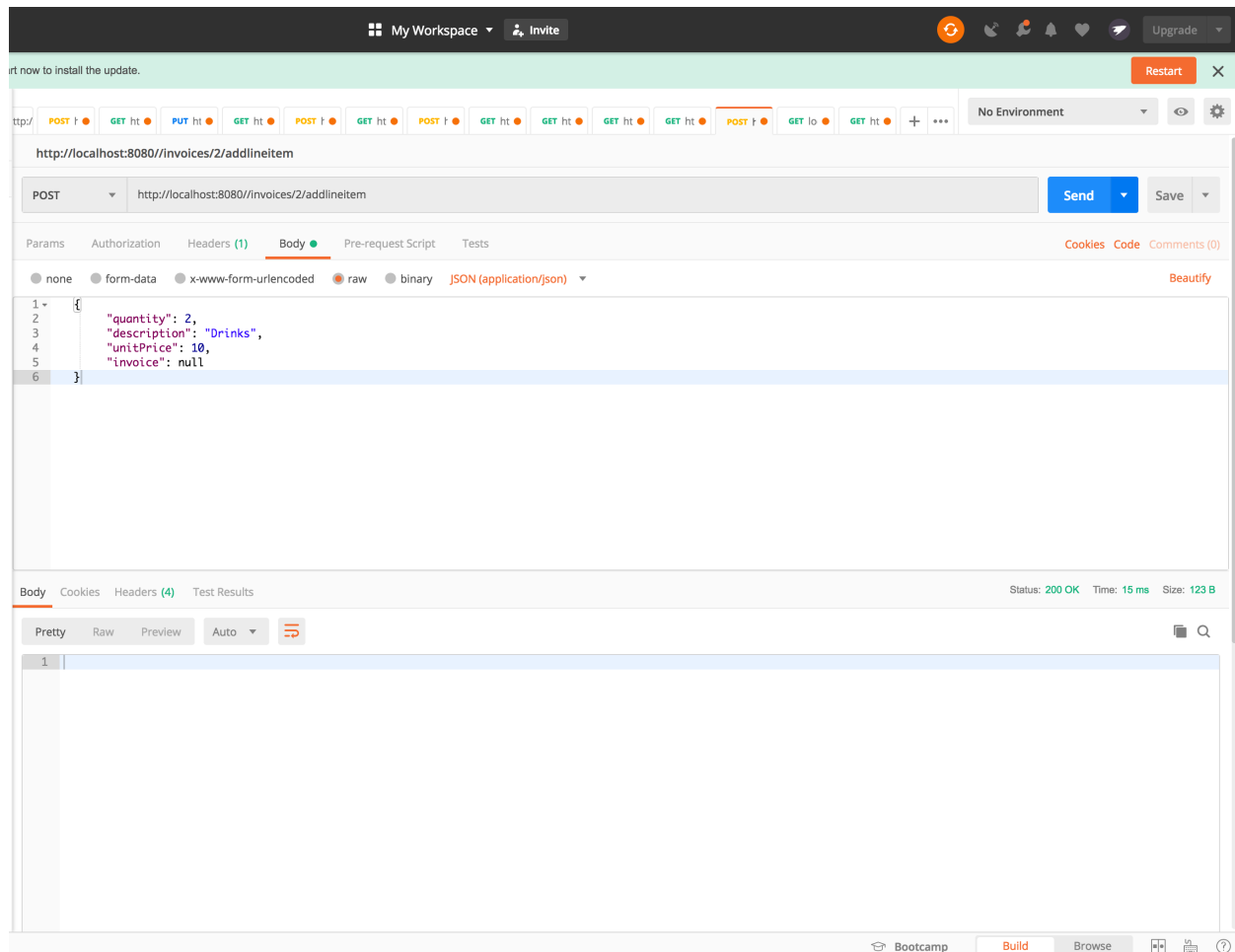
Using our REST End Point:

Method: **POST**

URL: <http://localhost:8080/invoices/{invoiceId}/addlineitem>

Send the following JSON on the Request Body,  
in the Request Header set **Content-Type = application/json**  
as displayed in screen shot below

```
{
  "quantity": 2,
  "description": "Drinks",
  "unitPrice": 10,
  "invoice": null
}
```





## Step 8

### Add another Line Item to Invoice - id= 2 Client = Max : (using Postman) (same as Step 7)

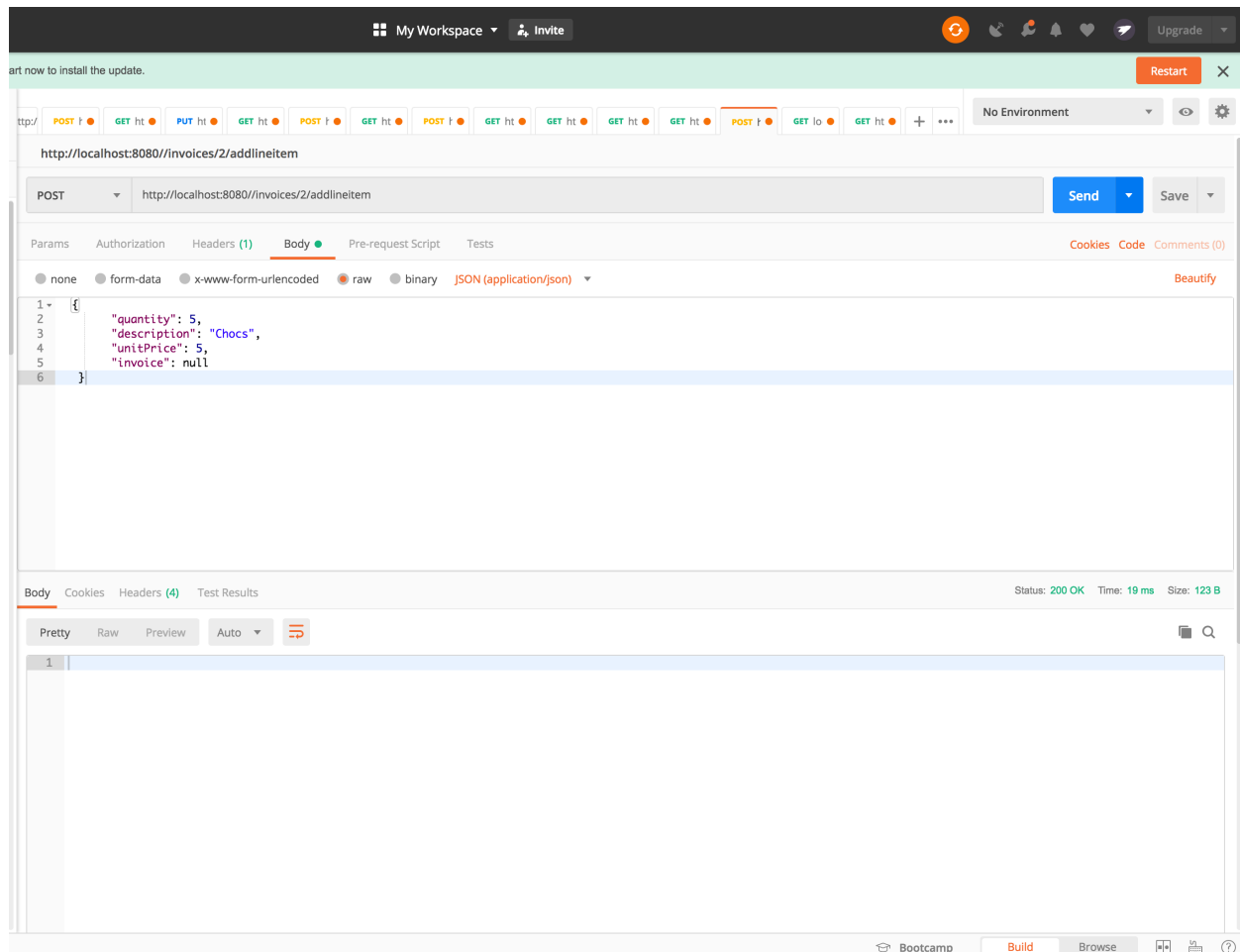
Using our REST End Point:

Method: **POST**

URL: <http://localhost:8080/invoices/{invoiceId}/addlineitem>

Send the following JSON on the Request Body,  
in the Request Header set **Content-Type = application/json**  
as displayed in screen shot below

```
{
  "quantity": 5,
  "description": "Chocs",
  "unitPrice": 5,
  "invoice": null
}
```



## Step 9

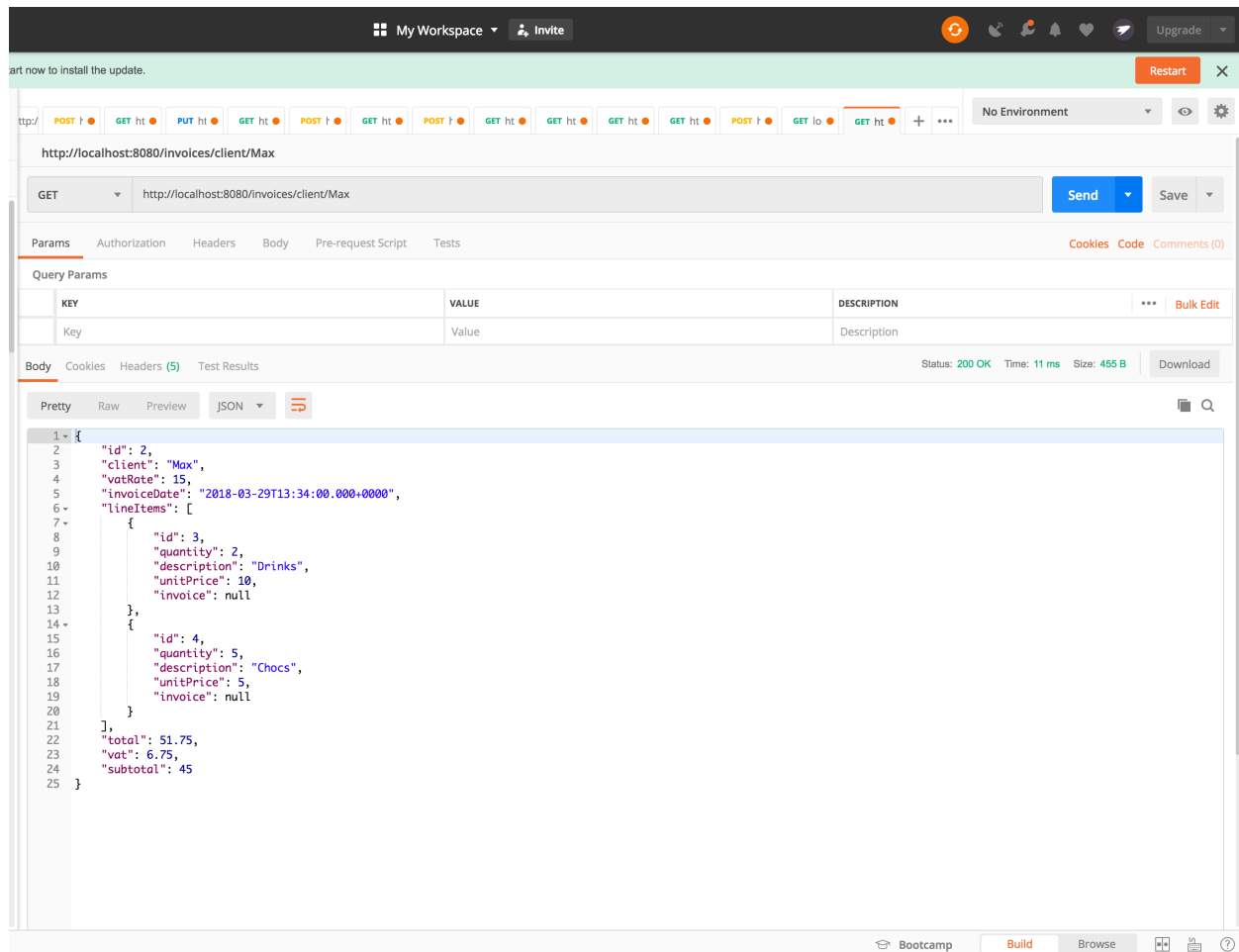
**View Invoice - id = 2 Client = Max : (using Postman);  
To see our LineItems added**

Using our REST End Point:

Method: **GET**

URL: <http://localhost:8080/invoices/client/{client}>

As done in the screen shot below:



### Note on Calculations:

#### Sub Total = 45

Line Item - id= 3, desc = Drinks, quantity = 2 , unitPrice = 10  
quantity \* unitPrice = 2 \* 10 = 20  
Line Item - id= 4, desc = Chocs, quantity = 5 , unitPrice = 5  
quantity \* unitPrice = 5 \* 5 = 25  
20 + 25 = 45

**Vat** = Sub Total \* vat Rate = 45 \* 15% = 6.75

**Total** = Sub Total + Vat = 45 + 6.75 = 51.75

## Step 10

### View all Invoices: (using Postman)

Using our REST End Point:

Method: **GET**

URL: <http://localhost:8080/invoices>

Note All LinelItems are added to their invoice and the calculations for Sub Total, Vat Total and Total are displayed for each Invoice

As done in the screen shot below:

