CEGEP VANIER COLLEGE
CENTRE FOR CONTINUING EDUCATION
Web Services
420-941-VA

Teacher: Samir Chebbine **Lab 2** **Sep 25, 2024**

Lab 2: Analyse HTTP Request/Response and REST vs SOAP

Complete all these following programs as explained in class. All *missing coding statements* are presented during class time and public REST and SOAP links are available in Presentation 2.

Create and Submit a Word file ***Lab2WebServicesYourName.doc*** which contains Answers of theory questions if any and output screenshots for every Java EE Project. Submit the Java projects too and submit the whole Lab 1 as compressed zip file.

1. **Using CURL Tool:** cURL is Console-based and command-line tool for analysing Request/Response using various network protocols as shown in Figure 1.

   a) Use CURL command to display HTTP Request/Response when fetching the Servlet resource developed in **WebHelloWorldProject of Lab 1.**

```
C:\windows\system32>curl -v http://localhost:7070/WebHelloWorldProject/WebHelloWorld
*   Trying ::1...
* TCP_NODELAY set
* Connected to localhost (::1) port 7070 (#0)
> GET /WebHelloWorldProject/WebHelloWorld HTTP/1.1
> Host: localhost:7070
> User-Agent: curl/7.55.1
> Accept: */*
>
< HTTP/1.1 200 OK
< Server: Eclipse GlassFish  6.2.3
< X-Powered-By: Servlet/5.0 JSP/3.0(Eclipse GlassFish  6.2.3  Java/Oracle Corporation/15)
< Content-Type: text/html
< Transfer-Encoding: chunked
<
<body>Hello World, So cool to develop Web Services
<h1>Vanier College</h1>
<table border="1"><tr>
<td>Prd Price</td><td>Prd Qty</td><td>Total Billing</td></tr>
<tr><td>5.99</td><td>6</td><td><b>35.94</b></td></tr></table>
<br/>Montreal Uni
<br/>2022
<br/>3</body>
```

HTTP Request

HTTP Response

Figure 1

   b) Use CURL command to display HTTP Request/Response when fetching the Servlet resource developed in **WebProcessBillingProject of Lab 1.**
   c) Use CURL command to display HTTP Request/Response when fetching the Servlet resource developed in **WebCourseProject of Lab 1.**
   d) Save each output as screenshot in your Word Document.

2. **Using Postman Tool:** Postman is Graphical-based tool for analysing Request/Response using various network protocols as shown in Figure 2.

a) Using Postman, create Postman **collection Lab 2 Testing** to save **all Lab2 requests** as shown in Figure 2. Display HTTP Request/Response when fetching the Servlet resource developed in **WebHelloWorldProject of Lab 1.**

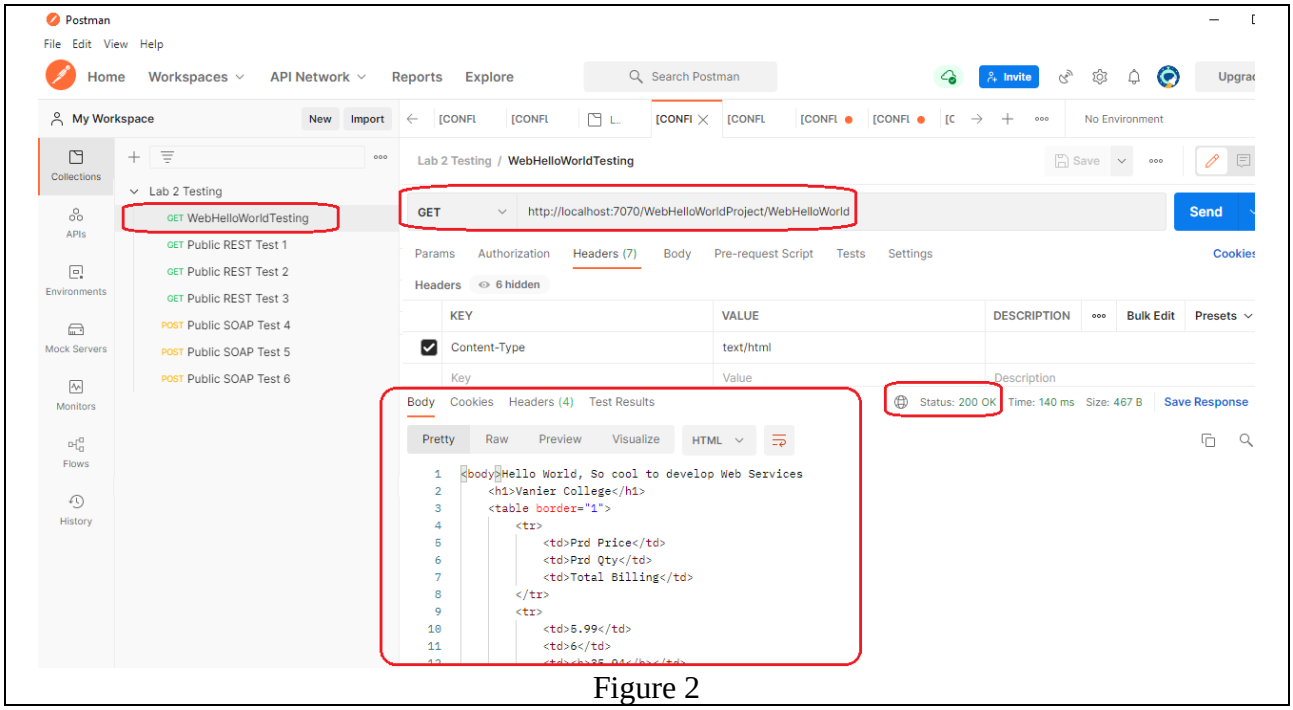
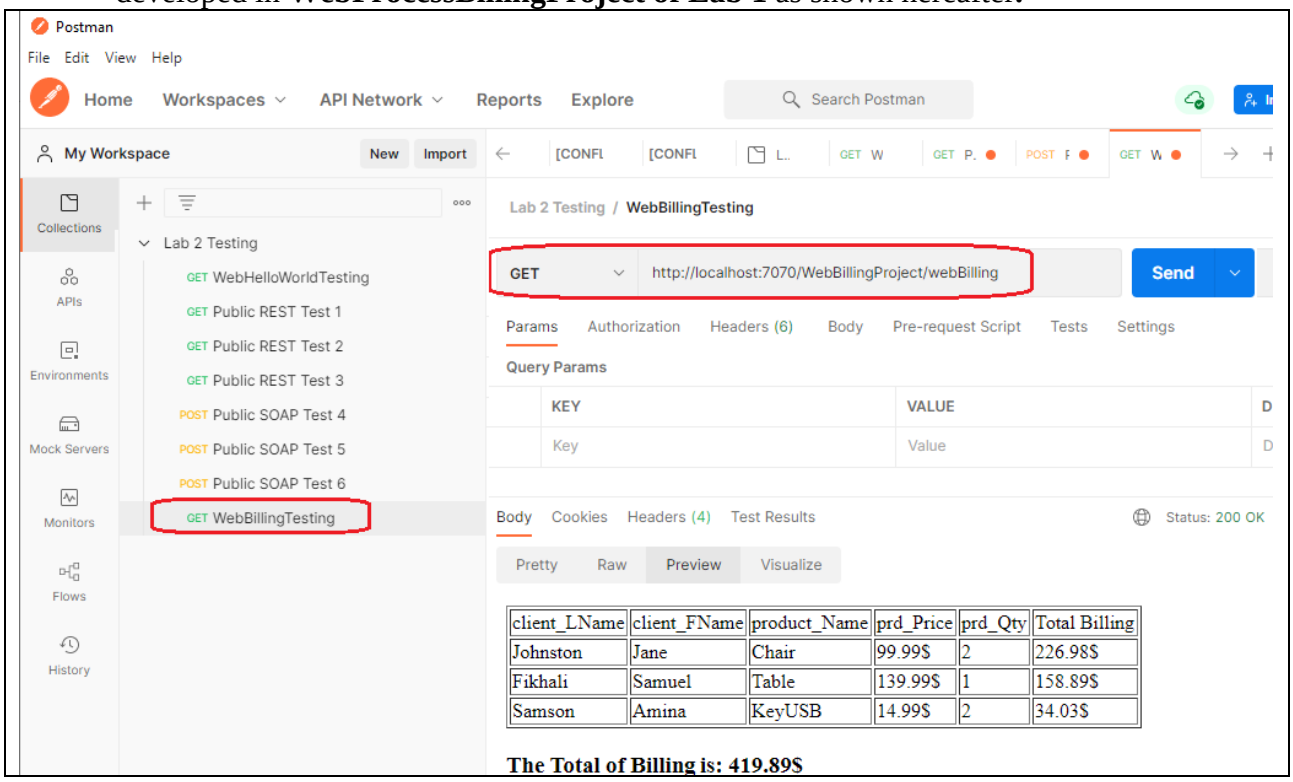


Figure 2

b) Use Postman to display HTTP Request/Response when fetching the Servlet resource developed in **WebProcessBillingProject of Lab 1** as shown hereafter**.**



c) Use Postman to display HTTP Request/Response when fetching the Servlet resource developed in **WebCourseProject of Lab 1.**

d) Save each output as screenshot in your Word Document.

3. **Consuming Public REST Resources listed in Presentation 2:**
   a) Using Postman, and within the same **collection Lab 2 Testing**. Display HTTP Request/Response when fetching all **three PUBLIC REST Resources** where Links are available in **Presentation 2** as in Figure 3.
   Here for example: Request include US Zip code 98121 and Response shows the country, place name, state, etc in JSON format from accessible server http://api.zippopotam.us.
   b) Save each output as screenshot in your Word Document.

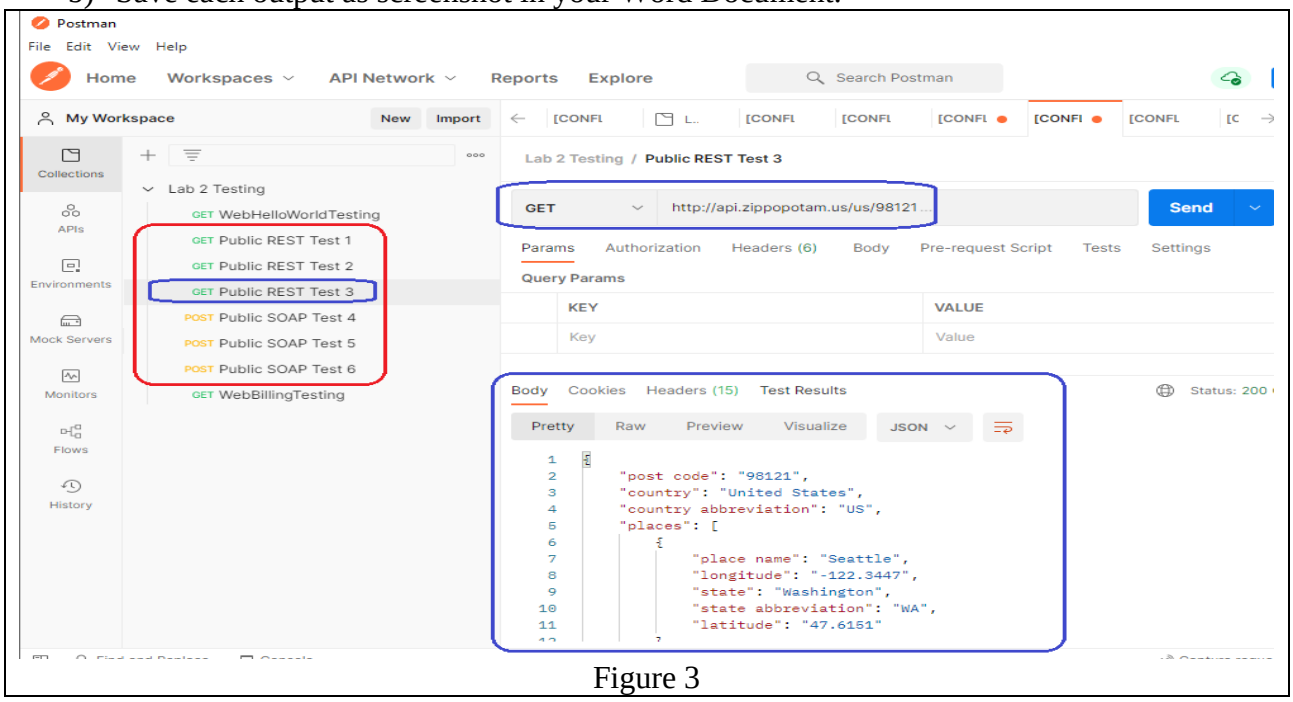


Figure 3

4. **Consuming Public SOAP Services listed in Presentation 2:**
   a) Using Postman, and within the same **collection Lab 2 Testing**. Display HTTP Request/Response when fetching all **three PUBLIC SOAP Services** where Links are available in **Presentation 2** as in Figure 4.

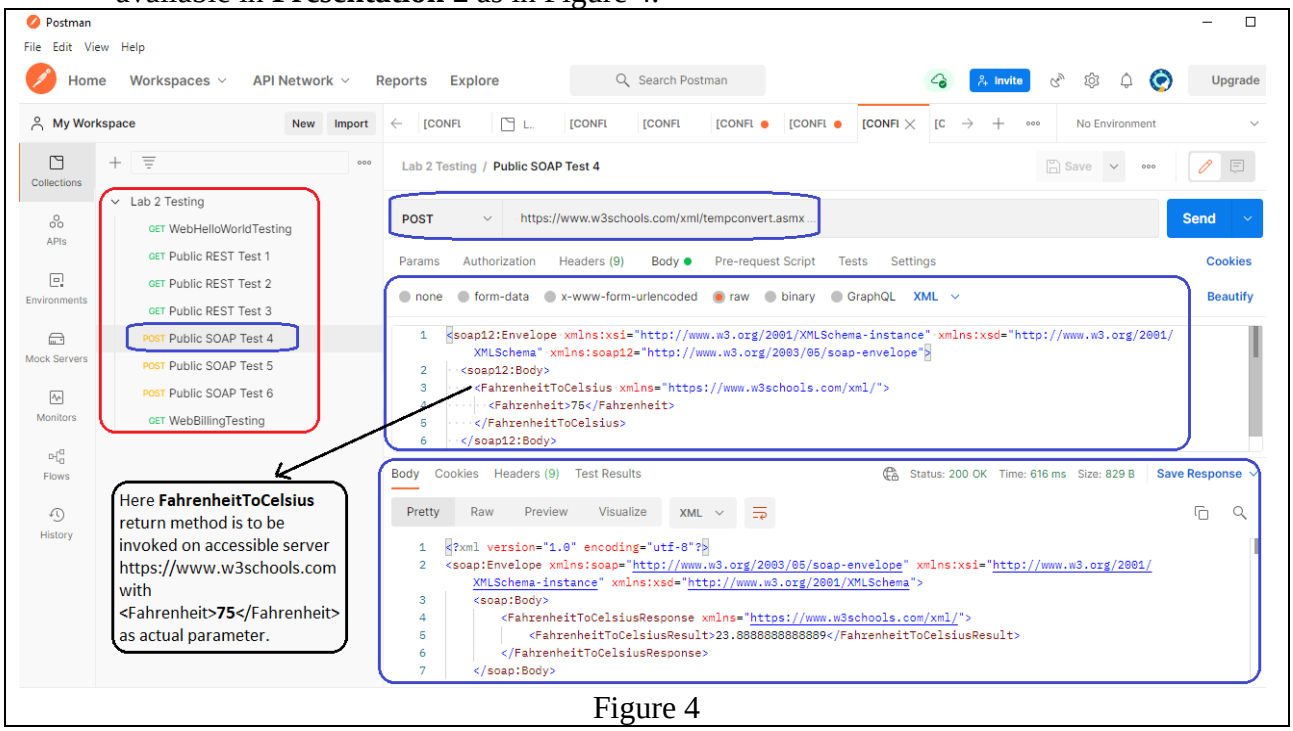


Figure 4

   b) Save each output as screenshot in your Word Document.

5. **SEARCH for Public REST Resources OTHER THAN listed in Presentation 2:**

   a) Using Postman, and within the same **collection Lab 2 Testing**. Display HTTP Request/Response when fetching **three PUBLIC REST Resources** accessible to public. Use Internet Search engine to look for these public REST resources.

   b) You have to present the result of your search within the following table format:

HTTP link request	For example: http://api.zippopotam.us/us/98121
Request Method used	For example: GET
HTTP Response	To be copied **as text** from Postman Response body
Data Format of Response	Such as JSON format data included in Response (Figure 3)
Overall Image Screenshot	Such as Figure 3

6. **SEARCH for Public SOAP Services OTHER THAN listed in Presentation 2:**

   a) Using Postman, and within the same **collection Lab 2 Testing**. Display HTTP Request/Response when fetching **three PUBLIC SOAP Services** accessible to public. Use Internet Search engine to look for these public SOAP resources.

   b) You have to present the result of your search within the following table format:

HTTP link request	For example: https://www.w3schools.com/xml/tempconvert.asmx
Request Method used	For example: POST
Request Headers used	For example, in Figure 4 I used Content-Type: text/xml

Request XML body	To be copied **as text** such as:
	`<soap12:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap12="http://www.w3.org/2003/05/soap-envelope">`
	`  <soap12:Body>`
	`  <FahrenheitToCelsius xmlns="https://www.w3schools.com/xml/">`
	`  <Fahrenheit>75</Fahrenheit>`
	`  </FahrenheitToCelsius>`
	`  </soap12:Body>`
	`</soap12:Envelope>`

Response XML body	To be copied **as text** from Postman Response XML body as:
	`<?xml version="1.0" encoding="utf-8"?>`
	`<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema">`
	`  <soap:Body>`
	`<FahrenheitToCelsiusResponse`
	`  xmlns="https://www.w3schools.com/xml/">`
	`  <FahrenheitToCelsiusResult>23.8888888888889`
	`</FahrenheitToCelsiusResult>`
	`</FahrenheitToCelsiusResponse>`
	`  </soap:Body>`
	`</soap:Envelope>`

Overall Image Screenshot	Such as Figure 4

7. **Submit WebFacultyProject /WebCarProject done during class time.**