POX over HTTP Assignment

# Assignment Objective

This assignment is to give you hands on experience writing a client and a server that communicate via XML messages transmitted via HTTP. Technically this is not REST but you will see many people use this approach. (It is bad practice to design a web service this way)

# Assignment Task

You are to read in either the Json or the Xml data file provided. Then you are to allow the user to add 1 or more food items and retrieve 1 or more food items

## AddFoodItem

|  |  |
| --- | --- |
| URI | http://localhost/restservices/FoodItem |
| HTTP Method | POST |
| Media Type | application/xml |

Request Message

<NewFoodItems xmlns=”http://cse564.asu.edu/PoxAssignment”>

<FoodItem country="GB">

<name>Cornish Pasty</name>

<description>Tender cubes of steak, potatoes and swede wrapped in flakey short crust pastry. Seasoned with lots of pepper. Served with mashed potatoes, peas and a side of gravy</description>

<category>Dinner</category>

<price>15.95</price>

</FoodItem>  
</NewFoodItems >

HTTP Response Codes

|  |  |  |
| --- | --- | --- |
| Code | Interpretation | Response Message |
| 200 | Food Item Added | <FoodItemAdded xmlns=”http://cse564.asu.edu/PoxAssignment”>  <FoodItemId>156</FoodItemId>  </FoodItemAdded>  The FoodItemAdded is the Id your server generated for the new food item |
| 200 | Invalid or incorrect input message | <InvalidMessage xmlns=”http://cse564.asu.edu/PoxAssignment”/> |
| 200 | Food Item already in the Food List | <FoodItemExists xmlns=”http://cse564.asu.edu/PoxAssignment”>  <FoodItemId>156</FoodItemId>  </FoodItemExists>  To test if the food item being added already exists in the list you test that the food item name and the category are the same |

## GetFoodItem

|  |  |
| --- | --- |
| URI | http://localhost/restservices/FoodItem |
| HTTP Method | POST |
| Media Type | application/xml |

Request Message

<SelectedFoodItems xmlns=”http://cse564.asu.edu/PoxAssignment”>

<FoodItemId>100</FoodItemId>

<FoodItemId>156</FoodItemId>

</SelectedFoodItems>

HTTP Response Codes

|  |  |  |
| --- | --- | --- |
| Code | Interpretation | Response Message |
| 200 | All Food Item Retrieved | <RetrievedFoodItems xmlns=”http://cse564.asu.edu/PoxAssignment”>  <FoodItem country="GB">  <id>100</id>  <name>Steak and Kidney Pie</name>  <description>Tender cubes of steak, with tender lamb kidney is succulent rich gravy. Served with a side of mashed potatoes and peas.</description>  <category>Dinner</category>  <price>15.95</price>  </FoodItem>  <FoodItem country="GB">  <id>156</id>  <name>Cornish Pasty</name>  <description>Tender cubes of steak, potatoes and sweede wrapped in flakey short crust pastry. Seasoned with lots of pepper. Served with mashed potatoes, peas and a side of gravy</description>  <category>Dinner</category>  <price>15.95</price>  </FoodItem> </RetrievedFoodItems> |
| 200 | Food Item does not exist in the Food List | <RetrievedFoodItems xmlns=”http://cse564.asu.edu/PoxAssignment”>  <FoodItem country="GB">  <id>100</id>  <name>Steak and Kidney Pie</name>  <description>  Tender cubes of steak, with tender lamb kidney is  succulent rich gravy. Served with a side of mashed  potatoes and peas.  </description>  <category>Dinner</category>  <price>15.95</price>  </FoodItem>  <InvalidFoodItem>  <FoodItemId>156</FoodItemId>  </InvalidFoodItem> </RetrievedFoodItems> |
| 200 | Invalid or incorrect input message | <InvalidMessage xmlns=”http://cse564.asu.edu/PoxAssignment”/> |

## Some XML and JSON helpful sites

If you need some help is figuring out how to read in XML or JSON, you may find the following sites helpful

XML - <http://www.mkyong.com/tutorials/java-xml-tutorials/>

JSON - <http://www.mkyong.com/java/how-to-convert-java-object-to-from-json-jackson/>

# Assignment Submission

1. Create a REST project with a name of the form

POX-FoodMenu-<userid>-<IDE-Name>

Where userid is the alphanumeric id that ASU gave you (not the numeric on id), and IDE-Name is the name of the IDE you used e.g., Eclipse or Netbeans

1. Create a ZIP file containing
   1. The completed project.
   2. Complete and detailed build and run instructions in a file called ReadMe.
      1. **IMPORTANT** - If I cannot follow the instructions to build and run the submission then I cannot give you credit for the submission. I have too many submissions to grade to read through your code and try to figure it out
      2. **WARNING** – Make sure you submit a zip file. I cannot process RAR files
2. Upload the ZIP file to Blackboard