

## Flow of the program

To understand how it works the processing of the program you should understand the producer-consumer problem<sup>1</sup>. In this lab, the problem is solved in the project eis-lab in the package `de.unibonn.iai.eis.qaentlod.io.streamprocessor`.

This is implemented to improve the times that takes to stream one SPARQL endpoint, because usually these endpoints contained millions of RDF points of information.

Then the producer is in charge to establish the connection to the SPARQL endpoint, then using SPARQL queries it retrieved all the information by batches of size 10000 triples per time<sup>2</sup>.

While the producer is calling the information, the consumer is running and waiting for all the information that is published by the consumer.

In the consumer are located all instances of the Quality Metrics, so in every lecture that the program does it send to every metric to compute the value of the metrics.

This process continue while the producer is publishing information, when this one stops, then the consumer received the message that there is no more information pending to be publish. So it continues to end the program.

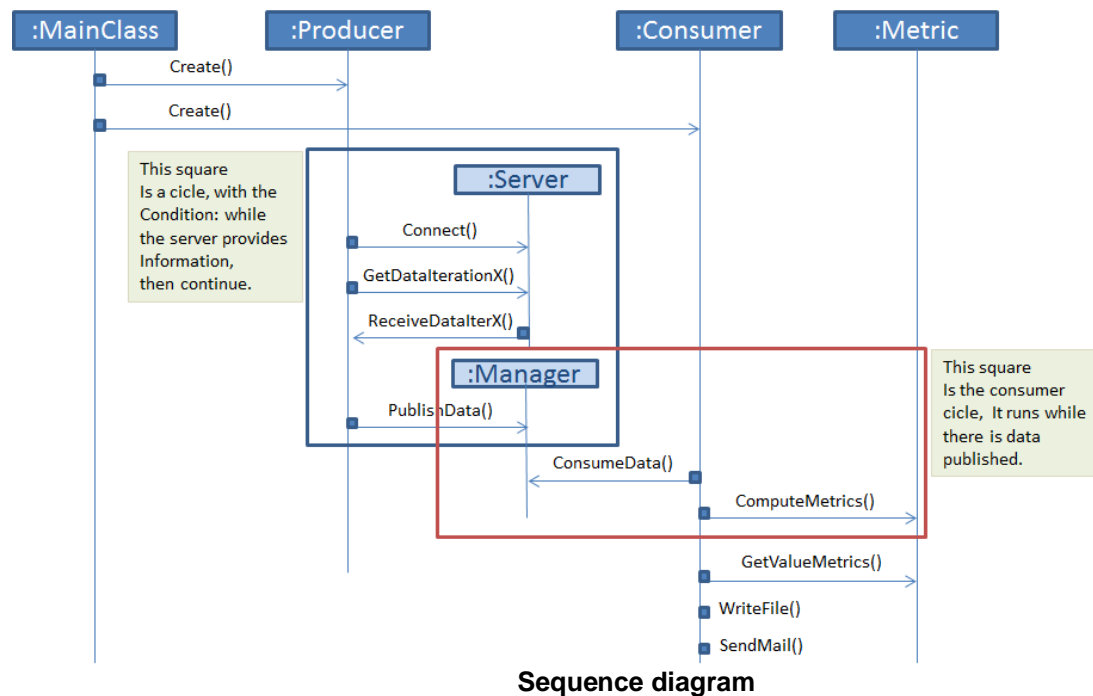
After ending the consumer, with all the values obtained by the metrics, it goes and save the information of every metric into the File that is design for this

The final step is that the client sends a mail of confirmation when the process is done. Next is a sequence diagram to explain the process.

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<sup>1</sup> [http://en.wikipedia.org/wiki/Producer%E2%80%93consumer\\_problem](http://en.wikipedia.org/wiki/Producer%E2%80%93consumer_problem)

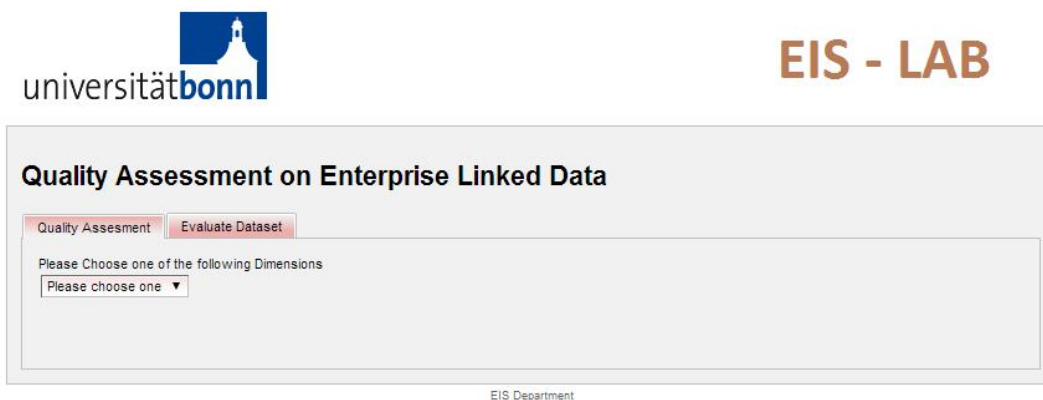
<sup>2</sup> To accomplish this the project use LIMIT and OFFSET, see: <http://www.w3.org/TR/rdf-sparql-query/#modOffset>



## How to Access and use the program.

To access to the web application the user need to access on the Web navigator to the link:  
[http://localhost:8080/EIS\\_LAB\\_QAENTLOD/index.jsf](http://localhost:8080/EIS_LAB_QAENTLOD/index.jsf).

Once it is running the user should be able to see the next things.

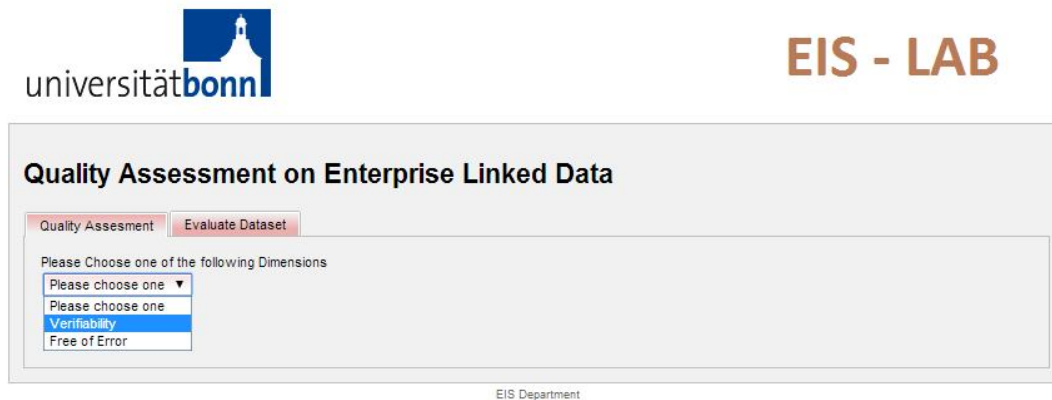


There are two different functionalities available in the system:

### 1.1.1.1 Visualize results

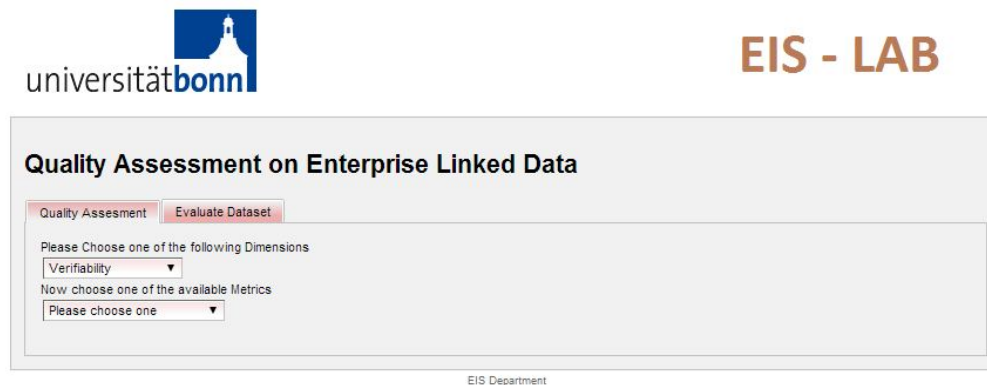
The first tab was created with the aim to visualize the results; to make it work the user should follow the next steps.

First the user should choose one of the dimension that are display on the select panel, the next image show how it works.



The screenshot shows the 'Quality Assessment on Enterprise Linked Data' interface. At the top left is the 'universität bonn' logo, and at the top right is the 'EIS - LAB' logo. Below the title, there are two tabs: 'Quality Assessment' (active) and 'Evaluate Dataset'. A label 'Please Choose one of the following Dimensions' is above a dropdown menu. The dropdown menu is open, showing three options: 'Please choose one', 'Verifiability' (highlighted in blue), and 'Free of Error'. At the bottom right, there is a small 'EIS Department' link.

When the user has selected one of the dimensions then the system shows a new selectable combo box as shown in the next image.



The screenshot shows the same 'Quality Assessment on Enterprise Linked Data' interface. The 'Please Choose one of the following Dimensions' dropdown menu now has 'Verifiability' selected. Below it, a new label 'Now choose one of the available Metrics' is above a second dropdown menu. This second dropdown menu is open, showing the option 'Please choose one'. The 'EIS Department' link remains at the bottom right.

The user should select one of the available dimensions, once this is done, then the system display a new combo box, to show the available Data Sets that already had been evaluated.

**Quality Assessment on Enterprise Linked Data**

Quality Assessment Evaluate Dataset

Please Choose one of the following Dimensions  
Verifiability

Now choose one of the available Metrics  
Digital Signatures

Now choose one of the available Datasets  
Please choose one

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Then the user should select one of the datasets to see the results of this metric over the data set.

**Quality Assessment on Enterprise Linked Data**

Quality Assessment Evaluate Dataset

Please Choose one of the following Dimensions  
Verifiability

Now choose one of the available Metrics  
Digital Signatures

Now choose one of the available Datasets  
http://cultura.linkeddata.es/sparql

The Selected Data Set is: <http://cultura.linkeddata.es/sparql>

The value of the Metric Digital Signatures, that belongs to the dimension: Verifiability, is: 0.0

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## Evaluate new Dataset

The second tab provide by the system is in charge to evaluate a new data set or can be used to reevaluate one of the existing datasets.

When the user access to the second tab, the system shows the next screen:

### Quality Assessment on Enterprise Linked Data

Quality Assessment

Evaluate Dataset

To be able to run the process over a new Dataset we need one mail and when the process finish, then it will send a msg to the mail

Please write a mail

Please write the url of the SPARQL endpoint to be evaluated

Now you can start the process

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Then the user should to fill the information of user mail and SPARQL endpoint and then activate the “Start Process” button, this is going to start the process of evaluate the data set, once the process is done then the program will send an automatic mail to the specified mail.

Also the user can download the eis-lab.jar to work with it if they want to do it. To accomplish this, the user only has to click on the bottom “download” automatically it will be save to the computer.