Shape Expressions Visualization

This questionnaire contains 20 questions.

* Obligatoria

Preliminary questionnaire

Gathering demographic data and background knowledge

1. Year of Birth: *

2. Country of origin: *

3. Have you studied the Degree in Software Engineering? *

- ◯ Yes
- ◯ No

4. How would you rate your knowledge of the following technologies? *

	Nonexistent	Basic	Average	High	Very High
UML	◯	◯	◯	◯	◯
RDF	◯	◯	◯	◯	◯
Shape Expressions	◯	◯	◯	◯	◯

5. How do you assess your spatial ability? *

Spatial ability refers to the ability to form a mental representation of two- or three-dimensional space. E.g., being able to imagine the consequences of a change of position or orientation of an object, or to interpret maps correctly.

- ◯ Nonexistant
- ◯ Poor
- ◯ Average
- ◯ High
- ◯ Very high

Test Case 1

Open the indicated tool and display the following Shape Expression.
https://github.com/fidalgoLXXVI/shex-visualization-paper/blob/master/data/webindex.shex
(This schema describes the data model of a Linked Data portal).
Then answer each of the questions by carrying out the exposed steps.

6. Is the shape :Organization closed? *

   Reminder: closed shapes are indicated by the qualifier CLOSED.

   - ◯ Yes
   - ◯ No

7. Which shape has the triple constraint "cex:value xsd:float"? *

8. Ignoring references to other shapes, how many triple constraints does the shape :DataSet have? *

   Reminder: a triple constraint consists of a property and a nodal constraint. Optionally, they can include cardinality. Examples are :age xsd:integer, :url IRI, :gender [:male]...

9. What is the reference/s between the :Slice and :Observation shapes? *

10. ¿What shapes are connected by the reference cex:ref-area? *

11. How many shapes are referred to from :Observation? *

Test Case 2

Open the indicated tool and display the following Shape Expression.
https://github.com/fidalgoLXXVI/shex-visualization-paper/blob/master/data/genewiki.shex
(This schema describes biomedical data relating to human genetics.)
Then answer each of the questions by carrying out the above steps.

12. Is the :chromosome shape closed? *

- ◯ Yes
- ◯ No

13. Specify a shape that has the triple constraint ":geneOntologyId xsd:string". *

Reminder: a triple constraint consists of a property and a nodal constraint. Optionally, they can include cardinality. Examples are :age xsd:integer, :url IRI, :gender [:male]...

14. Ignoring references to other shapes, how many triple constraints does the :molecular_function shape have? *

15. What reference/s is/are there between the forms :chemical_compound and :therapeutic_use? *

16. Which shapes are connected by the reference :codifiedBy? *

17. With how many shapes is :disease related? *

Either referring to or being referred by them.

Final questionnaire

Assessments and impressions

18. Which tool have you used? *

- ◯ RDFShape
- ◯ Shumlex
- ◯ 3DShEx

19. Please indicate whether you agree with the following statements: *

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The experience with the tool was satisfactory	◯	◯	◯	◯	◯
The tool was easy to use	◯	◯	◯	◯	◯
Visual notation was easy to learn	◯	◯	◯	◯	◯
The meaning of the symbols can be inferred from their appearance.	◯	◯	◯	◯	◯
The tool can be useful for understanding Shape Expressions.	◯	◯	◯	◯	◯
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

Tool design is error-prone	◯	◯	◯	◯	◯
The tool facilitates the understanding of complex areas	◯	◯	◯	◯	◯
The tool is most useful in large use cases.	◯	◯	◯	◯	◯
The tool is useful for examining references between shapes.	◯	◯	◯	◯	◯
The tool is useful for examining shape constraints.	◯	◯	◯	◯	◯

20. Do you have any additional comments on the tool (optional)?