CoModIDE Evaluation

Subject identifier

_____

Instructions

Thank you for participating in this usability evaluation. The evaluation is expected to run ca 60 minutes, divided as follows:

- 10-minute introduction to the study, to ontologies, and to ontology engineering
- 20-minute individual modelling task A (page 2)
- 20-minute individual modelling task B (page 3)
- 10-minute follow-up -- handing in solutions and filling out the questionnaire (pages 4-6)

You will use the CoModIDE tool for one of the two modelling tasks, and standard Protégé (without CoModIDE) for the other. The specific order in which you use either tool is randomized between the participants, i.e., some will use CoModIDE first, and others will use standard Protégé first.

Note that this study aims to evaluate and compare the usability/intuitiveness of the two tools, in terms of time taken, completeness and correctness of results, and user evaluation of the tools; therefore, the test leader cannot answer any questions on how to use the tools or how to complete the tasks properly, as this would taint the experiment. If you get stuck, use your instinct and training to try and resolve the issue; but know *that it is ok to get stuck* – should this happen, it also provides us with valuable knowledge! (especially if you note this in the free-form field on the follow-up questionnaire)

If you complete either task quicker than the 20 minutes allocated, please note, in the designated field on the task description, the time (e.g., "10:25") when you finished the task -- then proceed to the next task. At the 20-minute and 40-minute marks, the test leader will signal that it is time to move on from the task; at that time, note down the time in that same field, save your work (*File/Save as..,* select *RDF/XML* format) to disk, and proceed with the next task or the follow-up step. Name your file using the pattern *[SUBJECT_IDENTIFIER]-[A/B].owl*, e.g., *"105-A.owl"* or *"110-B.owl"*.

Once you have completed the two tasks, please hand in your solution files to the test leader using the provided USB memory sticks, and then fill out the survey form at the end of this compendium (page 4).

Task A

You and your team have been tasked with building a modular ontology for an emergency services agency. Essentially, they want to capture the relationships between their employees and the reports they generate during and emergency.

Over some time, the team has identified two main patterns to combine in order to make the ontology.

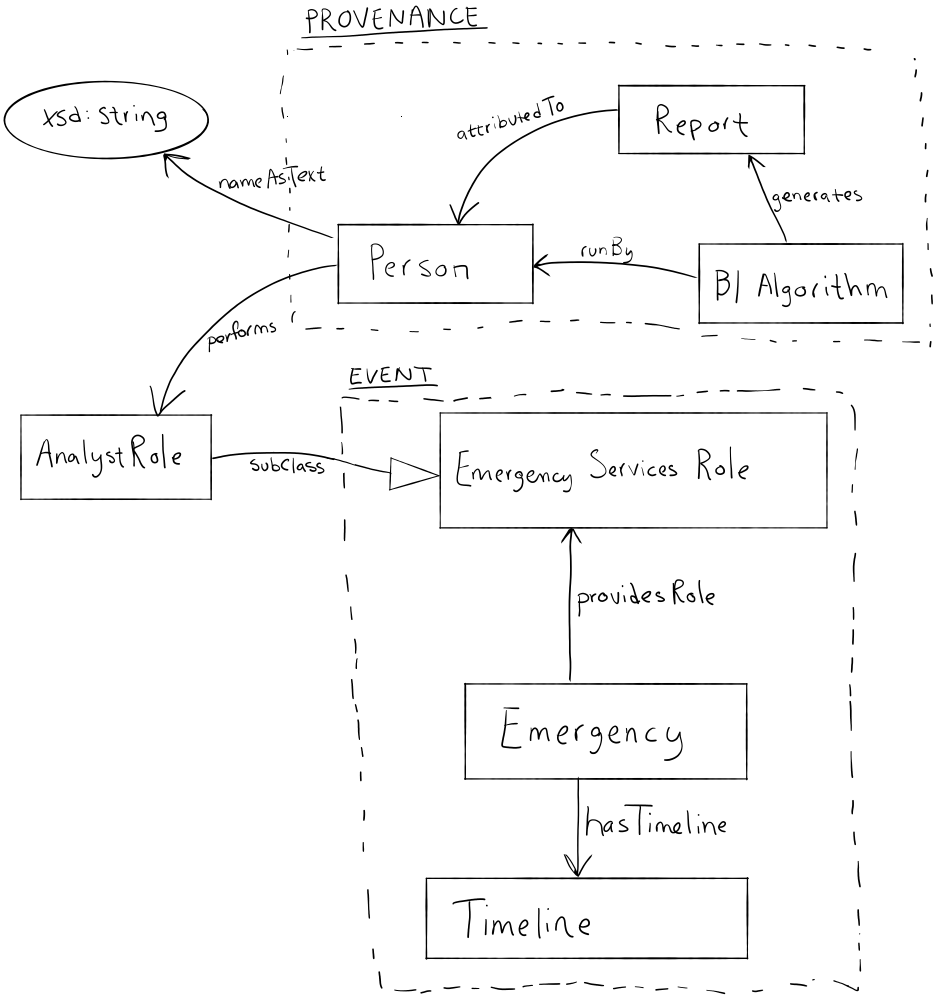
They are:

- **Provenance** – to track who made a report and how;
- **Event** – to capture the notion of an emergency

The results of modifying and combining these patterns are in the schema diagram below and have been informally highlighted.

As part of the team, your job is to take the schema diagram that has been developed and now produce an OWL file. During this translation from the schema diagram, the team would like to use **RDFS Domain/Range Constraints** to represent the arrows (edges) between boxes. To do so, you have decided to use **Protege**, a popular ontology IDE.

Time when proceeded to next page: _____



Task B

You and your team have been tasked with building a modular ontology for a chemical laboratory. Essentially, they want to capture the relationships between their procedures for their experiments, as well as the apparatuses used.

Over some time, the team has identified two main patterns to combine in order to make the ontology.

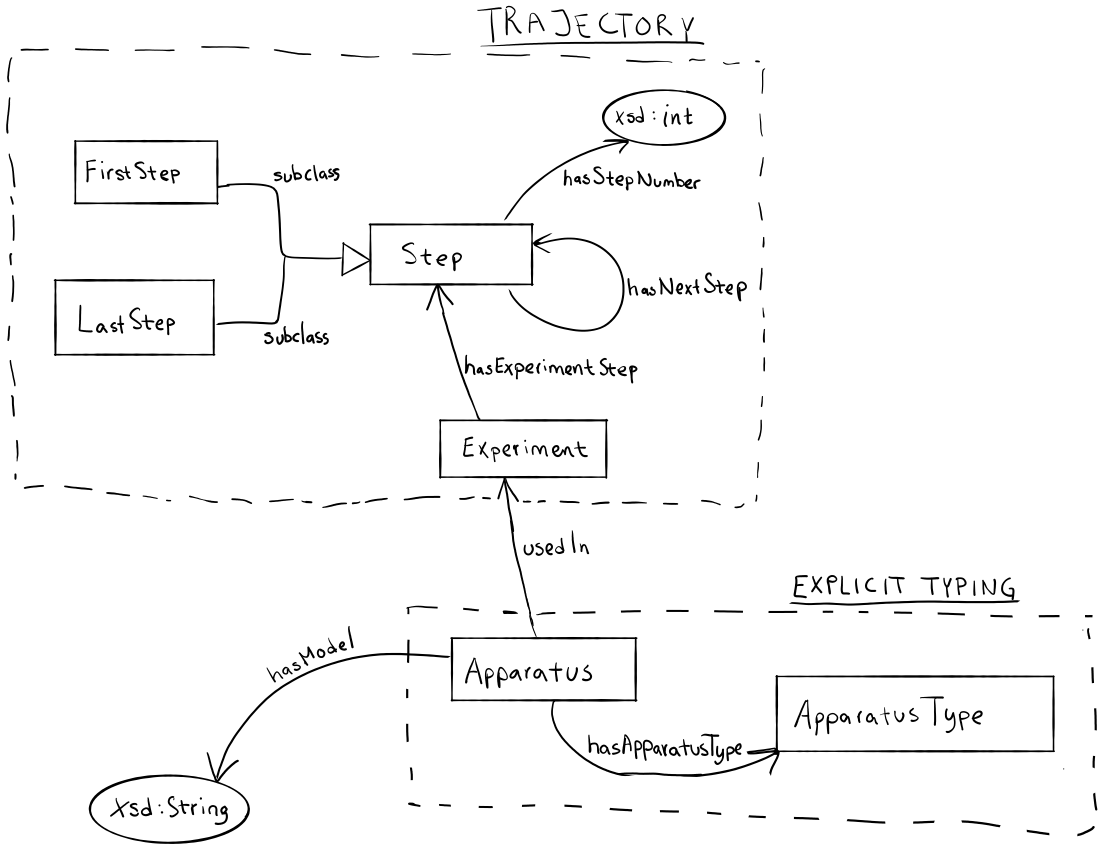
They are:

- **Trajectory** – to track the order of the steps
- **ExplicitTyping** – to easily model different types of apparatus

The results of modifying and combining these patterns are in the schema diagram below and have been informally highlighted.

As part of the team, your job is to take the schema diagram that has been developed and now produce an OWL file. During this translation from the schema diagram, the team would like to use **RDFS Domain/Range Constraints** to represent the arrows (edges) between boxes. To do so, you have decided to use **CoModIDE**, a graphical ontology editing plugin for Protege.

Time when proceeded to next page: _____



Follow-up Questionnaire

Please submit your whole or partial solutions, saved using the naming pattern *[SUBJECT_IDENTIFIER]-[A/B].owl* (e.g., *"105-A.owl"* or *"110-B.owl"*) to the USB memory sticks provided by the test leader. Then fill out the below form, and hand in this entire compendium to the test leader.

Do not leave any self-identifying information on this form.

A-priori knowledge

Please rate the following statements using the following scale.

1. Strongly Disagree
2. Somewhat Disagree
3. Neither Agree nor Disagree
4. Somewhat Agree
5. Strongly Agree

	Strongly disagree				**Strongly agree**
I have done ontology modelling before.	1	2	3	4	5
I am familiar with Ontology Design Patterns.	1	2	3	4	5
I am familiar with Manchester Syntax.	1	2	3	4	5
I am familiar with Description Logics.	1	2	3	4	5
I am familiar with Protege.	1	2	3	4	5

Please state your relationship with the test leader (e.g. student, colleague, same research lab, not familiar).

SUS Evaluation - Protégé

Please rate the following statements using the following scale. *"This system"* or *"the system"* refers to standard Protégé, without the CoModIDE plugin (i.e., as you used it in task A).

1. Strongly Disagree
2. Somewhat Disagree
3. Neither Agree nor Disagree
4. Somewhat Agree
5. Strongly Agree

	Strong disagree				**Strong agree**
I think that I would like to use this system frequently.	1	2	3	4	5
I found the system unnecessarily complex.	1	2	3	4	5
I thought the system was easy to use.	1	2	3	4	5
I think that I would need the support of a technical person to be able to use this system.	1	2	3	4	5
I found the various functions in this system were well integrated.	1	2	3	4	5
I thought there was too much inconsistency in this system.	1	2	3	4	5
I would imagine that most people would learn to use this system very quickly.	1	2	3	4	5
I found the system very cumbersome to use.	1	2	3	4	5
I felt very confident using the system.	1	2	3	4	5
I needed to learn a lot of things before I could get going with this system.	1	2	3	4	5

SUS Evaluation – CoModIDE

Please rate the following statements using the same scale. *"This system"* or *"the system"* refers to standard the CoModIDE Protégé plugin (i.e., as you used it in task B).

	Strong disagree				**Strong agree**
I think that I would like to use this system frequently.	1	2	3	4	5
I found the system unnecessarily complex.	1	2	3	4	5
I thought the system was easy to use.	1	2	3	4	5
I think that I would need the support of a technical person to be able to use this system.	1	2	3	4	5
I found the various functions in this system were well integrated.	1	2	3	4	5
I thought there was too much inconsistency in this system.	1	2	3	4	5
I would imagine that most people would learn to use this system very quickly.	1	2	3	4	5
I found the system very cumbersome to use.	1	2	3	4	5
I felt very confident using the system.	1	2	3	4	5
I needed to learn a lot of things before I could get going with this system.	1	2	3	4	5

CoModIDE-specific Features

Please rate the following statements using the following scale.

1. Strongly Disagree
2. Somewhat Disagree
3. Neither Agree nor Disagree
4. Somewhat Agree
5. Strongly Agree

	Strongly disagree				**Strongly agree**
It was easy to find the patterns.	1	2	3	4	5
It was easy to add patterns to the ontology.	1	2	3	4	5
It was easy to verify the correctness of the design.	1	2	3	4	5
I used the documentation to understand what I was doing.	1	2	3	4	5
I knew where to look for the "oval" in the pallete.	1	2	3	4	5

Please provide any additional comments you may have on CoModIDE and its features below (not mandatory).