

**ISIT315 –ASSIGNMENT 4 (15%)**  
**Due Date: Week 12 (during the tutorial)**

**Instruction**

This is a group assignment consisting of **four** students. You need to submit the details (name, student number and email) of your team members to the tutor by end of tutorial in Week 6.

**IMPORTANT: If you do not form a group with other students by the end of tutorial in Week 6, you must complete this assignment on your own.**

1. The objective of this assignment is the creation of an ontology based on a domain your team has selected. You are required to use Protégé to create the ontology. The ontology will be marked based on complexity and relevance of the ontology you have designed. Ideally, this domain should be something you know about. You are also expected to create a set of instances that demonstrate the use of your ontology, you should also choose a domain that has data you can access. Your team is encouraged to meet with the tutor to discuss the domain to ensure that you have selected an appropriate domain.
2. It is expected that you describe approximately 50 to 100 classes and properties. You should use a reasoner to ensure that your classes are satisfiable and that your ontology does not lead to unintended inferences. You should make use of rdfs:label and rdfs:comment to document your classes and properties.
3. You should create at least 50 instances. These instances should be based on real data.
4. You must demonstrate evidence of inferencing when reasoning is applied.
5. You are required to do a 5 minutes **PowerPoint** presentation to the tutor in Week 12. The presentation must include
  - a. Discussion of your domain and why did you choose this domain.
  - b. Discussion of classes, properties and individuals (note: you do not need to describe every class and property; however, you need to present an overview of decisions you made in designing the classes and properties).
  - c. Demonstration of inferencing.
  - d. All team members must be present during the presentation. Any member who is not present during the presentation will not be awarded a mark for this component of the assignment.
6. You are required to submit a written report. The report should include the following sections:
  - a. Methodological approach to build this ontology, justifying adequately aspects that include planning, requirement specifications, conceptualisation and evaluation.
  - b. Issues/problems encountered during the ontology development.
  - c. Clearly describe the contribution of each team member in this assignment.
  - d. A reflective learning document from **each** team member. The reflective report should reflect what you have learnt in this assignment.

**What to submit**

**You MUST inform your tutor which team member is responsible to submit the assignment to the subject Moodle. Only ONE submission is required for each team.**

Only soft-copy submission is required. Your submission must include the following files:

- PowerPoint Slides
- Report
- OWL file (Ontology file from Protégé)

**Marking Criteria**

Criteria	Mark
Complexity of the ontology and correct knowledge representation in Protégé <ul style="list-style-type: none"><li>• 50-100 classes &amp; properties (classes and properties well documented)</li><li>• At least 50 instances of real data</li><li>• Evidence of inferencing</li></ul>	60
PowerPoint presentation meeting all requirements	10
Report - Methodological approach on developing ontology & discussion of issues/problems	20
Report – Contribution of each team member	5
Report - Reflective learning of each team member	5
Total	100