ISIT315 LAB EXERCISE

WEEK 2

Question 1

Model as RDF's graph model (i.e. node-arc-node).

Use the following prefix namespace URI
rdf: http://www.w3.org/1999/02/22-rdf-syntax-ns#
rdfs: http://www.w3.org/2000/01/rdf-schema#
dc: http://purl.org/dc/elements/1.1/
ex: http://www.example.org/
xsd: http://www.w3.org/2001/XMLSchema#
exterms: http://www.example.org/terms/
exstaff: http://www.example.org/staff/

For each question, identify the prefix you will use in your model. All subjects and predicate should be expressed using URIref. You should use typed literal in the model (rather than literals). You can also refer to http://dublincore.org/documents/dcmi-terms/ for appropriate use of metadata terms used. You can create your own URI if it is not given in the question.

1. The individual whose name is John Smith (age 30), email johnsmith@example.org, creates the webpage http://www.example.org/index.html on 30 July 2012. The language in the web page ttp://www.example.org/index.html is English. Paul Peterson is another employee of example.org and he is a contributor of the web page http://www.example.org/index.html and his phone number is 3875507.

2. J.K. Rowling is the author of the book Harry Potter and the Philosopher's Stone. The book is written in English and the genre is fantasy. The book is published by Bloomsbury Publishing in 1997 and has an ISBN number 978-0-262-01242-3.

3. J.K. Rowling is the author of the following books
    i. Harry Potter and the Philosopher's Stone.
    ii. Harry Potter and the Chamber of Secrets
    iii. Harry Potter and the Prisoner of Azkaban
    iv. Harry Potter and the Goblet of Fire
    v. Harry Potter and the Order of the Phoenix
    vi. Harry Potter and the Half-Blood Prince
    vii. Harry Potter and the Deathly Hallows

    The books are written in English and are published by Bloomsburry Publishing in United Kingdom. The books can be bought as hardback, paperback, audiobook or ebook. The genres of the books can be classified as: fantasy, mystery, thriller and magical realism. The main characters of the books include Harry Potter, Ronald Weasley and Hermione Granger, all are students at the Hogwarts School of Witchcraft and Wizardly.

Question 2

Write the following statements in RDF/XML and use RDF Validator (https://www.w3.org/RDF/Validator/) to parse the RDF/XML statements to test for correctness. Choose display outputs as triple and graph.

     a. John Smith is the owner of the web page http://www.example.org/index.html

     b. The web page http://www.example.org/index.html was created on 30 July 2010.

     c. The language in the web page http://www.example.org/index.html is English.

     d. John Smith is the owner of the web page http://www.example.org/index.html and his phone number is 3875507.

     e. The individual whose name is Olivia, email Olivia@example.org, is the creator of http://www.example.org/home/Olivia

     f. The individual referred to by employee id 12345 is named Olivia and has email address Olivia@example.org. The resource http://www.example.org/home/Olivia was created by this individual.

     g. The web site http"//www.w3.org/ hosts the homepage for the W3C Semantic Web activity.

Question 3

For each sub-question in Question 1, write RDF/XML statements for the graph model, then use RDF Validator (https://www.w3.org/RDF/Validator/) to parse the RDF/XML statements to test for correctness. Choose display outputs as triple and graph.