KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS PADJADJARAN
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
PROGRAM STUDI S-1 TEKNIK INFORMATIKA
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UJIAN TENGAH SEMESTER GENAP 2018/2019

Mata Kuliah : Semantik Web
Dosen : Aditya Pradana
Kelas : B
Hari/Tanggal : Jumat, 26 April 2019
Waktu : 08.30 s.d. 09.45
Sifat : Tutup buku

Soal

30% 1. Consider the following RDF document

```
<rdf:RDF
    xmlns:rdf=”http://www.w3.org/1999/02/22-rdf-syntax-ns#”
    xmlns:rdfs=”http://www.w3.org/2000/01/rdf-schema#”
    xmlns:iswww=”http://sw.edu/#” >

    <rdf:Description rdf:about=”http://sw.edu/#germany”>
        <rdf:type rdf:resources=”http://sw.edu/#country” />
    </rdf:Description>

    <rdf:Description rdf:about=”http://sw.edu/#capital_of”>
        <rdf:type rdf_resource=”http://www.w3.org/1999/02/22-rdf-syntax-ns#Property”
        />
        <rdfs:domain rdf:resource=”http://sw.edu/#city” />
        <rdfs:range rdf:resource=”http://sw.edu/#country” />
    </rdf:Description>

    <rdf:Description rdf:about=”http://sw.edu/#country”>
        <rdf:type rdf:resource=”http://www.w3.org/2000/01/rdf-schema#Class” />
        <rdfs:label xml:lang=”de”>Land</rdfs:label>
    </rdf:Description>

    <rdf:Description rdf:about=”http://sw.edu/#berlin”>
        <rdfs:label xml:lang=”en”>Berlin</rdfs:label>
        <rdf:type rdf:resource=”http://sw.edu/#city” />
        <iswww:capital_of rdf:resource=”http://sw.edu/#germany” />
    </rdf:Description>

    <rdf:Description rdf:about=”http://sw.edu/#city”>
        <rdf:type rdf:resource=”http://www.w3.org/2000/01/rdf-schema#Class” />
        <rdfs:label xml:lang=”de”>Stadt</rdfs:label>
    </rdf:Description>

</rdf:RDF>
```

a) Describe in natural language the content of this document
b) Draw the graph representation of the above document

30% 2. Represent the following sentences graphically by means of reified triples
- Romeo thought that Juliet was dead
- John believes that Mary wants to marry him
- The dwarf noticed that somebody had been eating from his plate

40% 3. Decide whether the following propositions can be satisfactorily modeled in RDFS and give the corresponding RDF(S) specification
- every pizza is a meal
- pizzas always have at least two toppings
- every pizza from the class PizzaMargarita has a Tomato topping

- everything having a toppings is a pizza
- no pizza from the class PizzaMargarita has a topping from the class Meat
- “Having a topping” is a containedness relation

Pengesahan	Tim Penjaminan Mutu Prodi	Pembuat Soal
Dr. Juli Rejito, M.Kom		