Cairo University	**Mid-term Exam**
Faculty of Computers & Artificial Intelligence	**Fall 2021**
Semantic web and ontology	**CS465**

Student Name:

Student ID:

Marks

Q1	*Q2*	*Total(10)*

Question 1[6 marks]
A) State True/False (Correct the answer in case of false, Explain)[2Marks]

[1]   The first step to develop an ontology is to identify the main terms of a domain (self_standing_entities)

False, Determine the Scope and Domian

[2] Namespaces are used in RDF statement as reference to ontology where subjects are defined
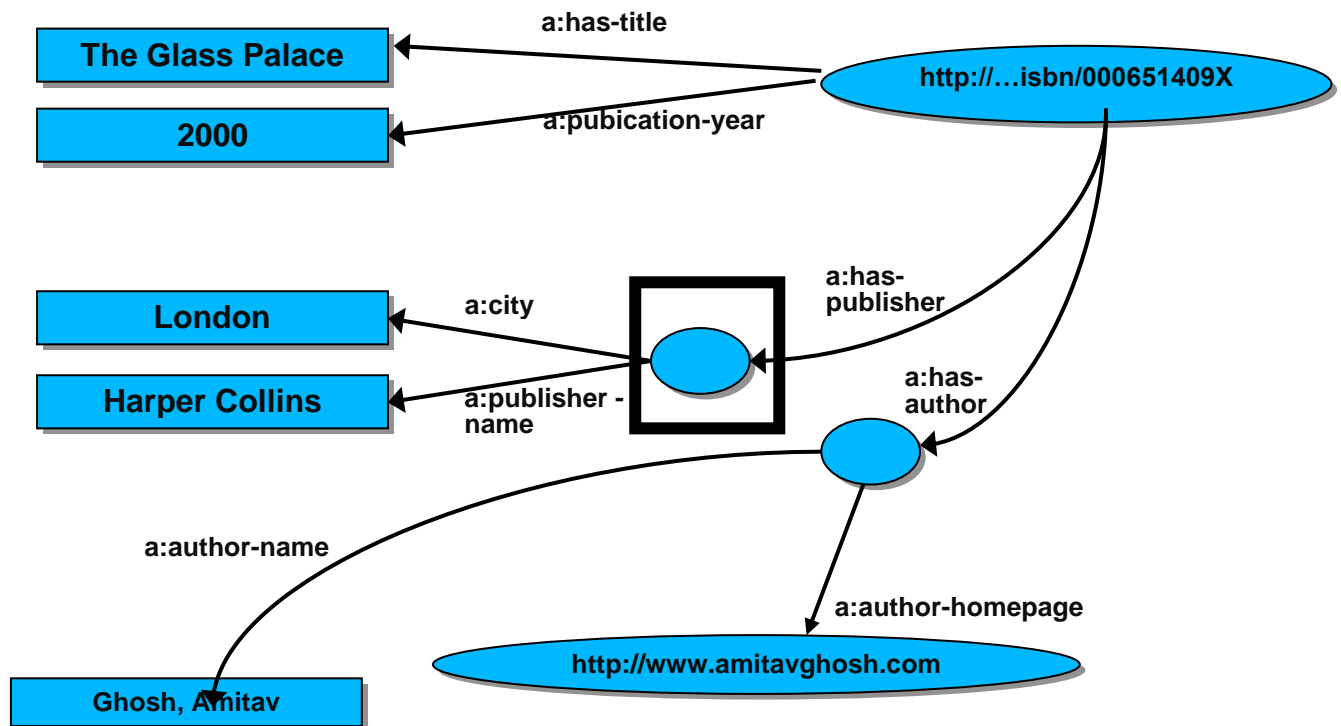**False, Predicates**

[3] An instance of a superclass is also an instance of its subclasses.

False, An Instance of SubClass is Also an instance of SuperClass

[4] RDF statement is represented using graph only
False, (Predicate, Graph, Code)

B) Consider the following ontology that describes book entity and answer the following questions: [**4 Marks**]

1. Identify the main classes of this ontology

2. For each of the identified classes, complete the following table:

	Class name1	**Class name2**	**Class name3**
Data property			
Object property			
Domain			
Range			

3) What are the usage of empty ovel inside the black square

4) Give example of Cardinality of any property

Question 2[4 marks]

Consider the following RDF code and answer the following questions:

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<rdf:RDF
xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xmlns:dc="http://purl.org/dc/elements/1.1"
xmlns:ex="http://example.org/stuff/1.0">
  <rdf:Description rdf:about="http://www.w3.org/TR/rdf-syntax-grammar"
             dc:title="RDF/XML Syntax Specification (Revised)">
    <ex:editor>
      <rdf:Description ex:fullName="Dave Beckett">
        <ex:homepage rdf:resource="http://purl.org/net/dajobe/" />
      </rdf:Description>
    </ex:editor>
  </rdf:Description>
</rdf:RDF>
```

1. Construct the RDF graph of this code?

Exam is only 3 pages   3

2. What are the namespaces used in this example

3. Show that if this graph could contain a blank node, please explain your answer

4. Extract the main predicts of this code ?