Série TD 2

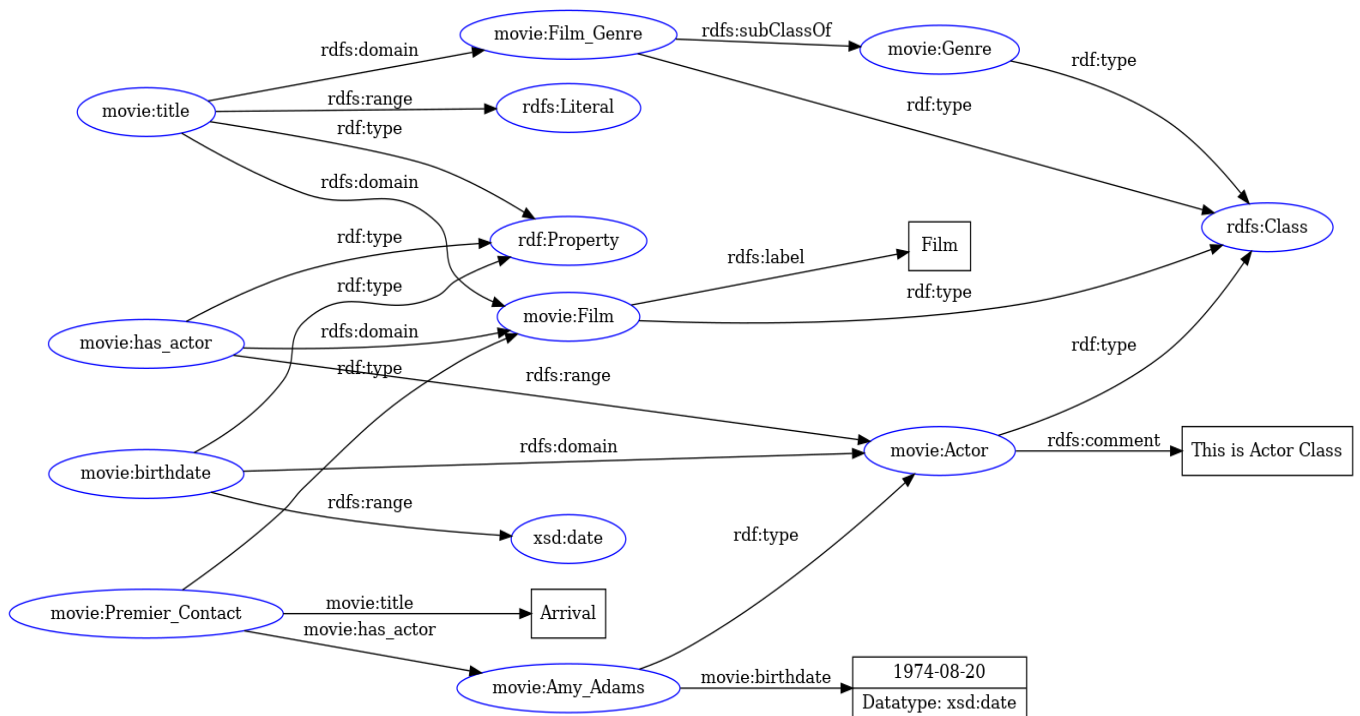**Web Sémantique. Décrire avec RDF et RDFS.**

Exercice 1

1) Définir le vocabulaire RDFS/XML et le graphe RDF/XML (deux documents XML séparés) modélisant les informations décrites dans le graphe suivant :

N.B : Ci-dessous, les namespaces utilisés :

- ✓ movie: http://www.movies_example.org/terms#
- ✓ rdfs: http://www.w3.org/2000/01/rdf-schema#
- ✓ rdf: http://www.w3.org/1999/02/22-rdf-syntax-ns#
- ✓ xsd: http://www.w3.org/2001/XMLSchema#

Namespaces:
rdfs: http://www.w3.org/2000/01/rdf-schema#
rdf: http://www.w3.org/1999/02/22-rdf-syntax-ns#
xsd: http://www.w3.org/2001/XMLSchema#
movie: http://www.movies_example.org/terms#

<u>Correction</u>

1 – RDFS/XML:

```xml
<rdf:RDF xml:base="http://www.movies_example.org/terms"
         xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
         xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#" >

  <rdfs:Class rdf:ID="Film">
    <rdfs:label>Film</rdfs:label>
  </rdfs:Class>

  <rdfs:Class rdf:ID="Actor">
    <rdfs:comment>This is Actor Class</rdfs:comment>
  </rdfs:Class>

  <rdfs:Class rdf:ID="Genre"/>

  <rdfs:Class rdf:ID="Film_Genre">
    <rdfs:subClassOf rdf:resource="#Genre"/>
  </rdfs:Class>

  <rdf:Property rdf:ID="has_actor">
    <rdfs:domain rdf:resource="#Film"/>
    <rdfs:range rdf:resource="#Actor"/>
  </rdf:Property>

  <rdf:Property rdf:ID="title">
    <rdfs:domain rdf:resource="#Film"/>
    <rdfs:domain rdf:resource="#Film_Genre"/>
    <rdfs:range rdf:resource="http://www.w3.org/2000/01/rdf-schema#Literal"/>
  </rdf:Property>

  <rdf:Property rdf:ID="birthdate">
    <rdfs:domain rdf:resource="#Actor"/>
    <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#date"/>
  </rdf:Property>

</rdf:RDF>
```

Ou bien :

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

  <rdfs:Class rdf:about=" http://www.movies_example.org/terms#Film">
    <rdfs:label>Film</rdfs:label>
  </rdfs:Class>

  <rdfs:Class rdf:about=" http://www.movies_example.org/terms#Actor">
```

```
      <rdfs:comment>This is Actor Class</rdfs:comment>
  </rdfs:Class>

  <rdfs:Class rdf:about=" http://www.movies_example.org/terms#Genre" />

  <rdfs:Class rdf:about=" http://www.movies_example.org/terms#Film_Genre">
    <rdfs:subClassOf rdf:resource=" http://www.movies_example.org/terms#Genre"/>
  </rdfs:Class>

  <rdf:Property rdf:about=" http://www.movies_example.org/terms#has_actor">
    <rdfs:domain rdf:resource=" http://www.movies_example.org/terms#Film"/>
    <rdfs:range rdf:resource=" http://www.movies_example.org/terms#Actor"/>
  </rdf:Property>

  <rdf:Property rdf:about=" http://www.movies_example.org/terms#title">
    <rdfs:domain rdf:resource=" http://www.movies_example.org/terms#Film"/>
    <rdfs:domain rdf:resource=" http://www.movies_example.org/terms#Film_Genre"/>
    <rdfs:range rdf:resource="http://www.w3.org/2000/01/rdf-schema#Literal"/>
  </rdf:Property>

  <rdf:Property rdf:about=" http://www.movies_example.org/terms#birthdate">
    <rdfs:domain rdf:resource=" http://www.movies_example.org/terms#Actor"/>
    <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#date"/>
  </rdf:Property>

</rdf:RDF>
```

1 – RDF/XML:

```
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
         xmlns:movie="http://www.movies_example.org/terms#">

  <rdf:Description  rdf:about="http://www.movies_example.org/terms#Premier_Contact">
    <rdf:type rdf:resource="http://www.movies_example.org/terms#Film"/>
    <movie:title>Arrival</movie:title>
    <movie:has_actor rdf:resource="http://www.movies_example.org/terms#Amy_Adams">
  </rdf:Description>

  <rdf:Description rdf:about=" http://www.movies_example.org/terms#Amy_Adams ">
    <rdf:type rdf:resource="http://www.movies_example.org/terms#Actor"/>
    <movie:birthdate rdf:datatype="http://www.w3.org/2001/XMLSchema#date">
        1974-08-20
    </movie:birthdate>
  </rdf:Description>

</rdf:RDF>
```