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# Extending the Metadata Registry for Semantic Web

## - Enforcing the MDR for supporting ontology concept -

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- ✓ MDR
- ✓ Web Ontology

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# Background

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## ❖ MDR(ISO/IEC 11179)

- ✓ Is used whenever data must be used consistently within an organization or group of organizations

## ❖ Web Ontology

- ✓ For the web, ontology is about the exact description of web information and relationships between web information.
- ✓ RDF, RDF-S, and OWL
- ✓ Consists of classes, instances, properties
- ✓ Triple set <S,P,O>

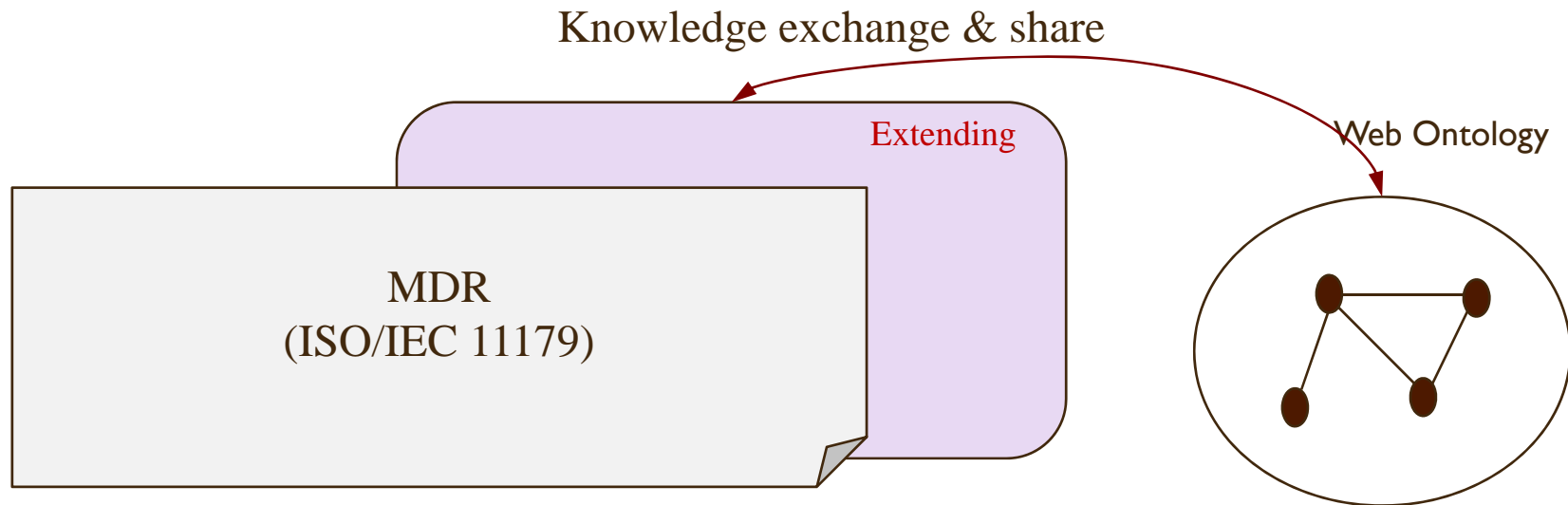
# Motivation : Why a MDR needs to be extended to support OWL

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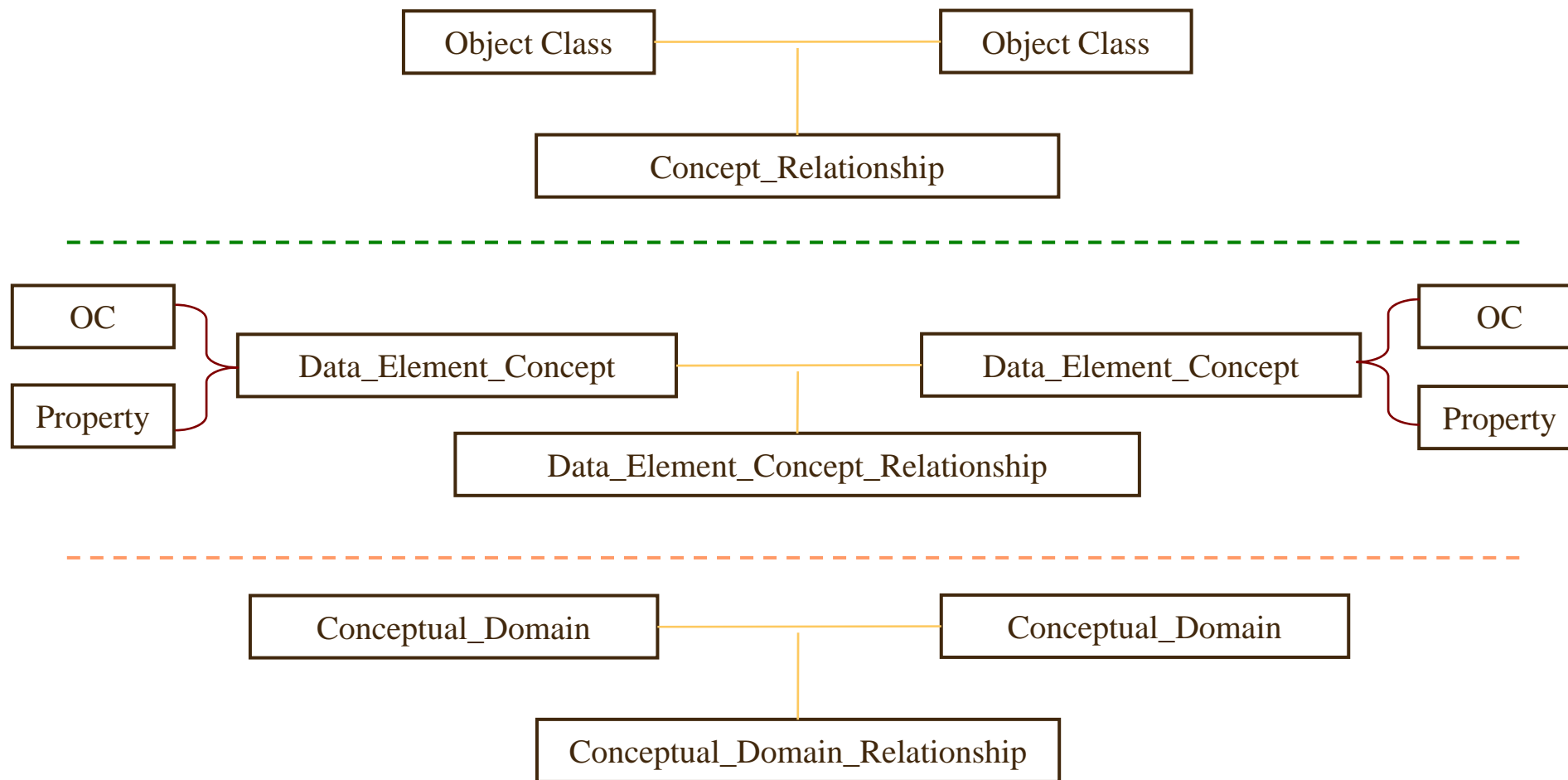
- ❖ **Web Ontology is widely used**
- ❖ **Web Ontology includes many metadata**
- ❖ **These metadata needs to be registered**
- ❖ **But, current MDR can not support these, for example**
  - ✓ Property's relation
  - ✓ Restriction
  - ✓ intersectionOf
- ❖ **So, we need....**

# Purpose

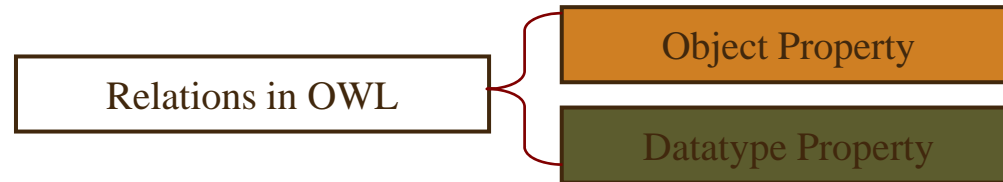
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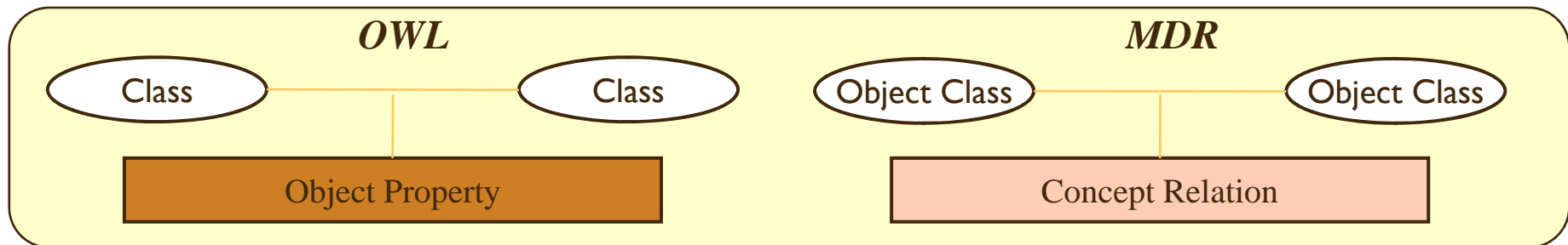
# Relationships in MDR



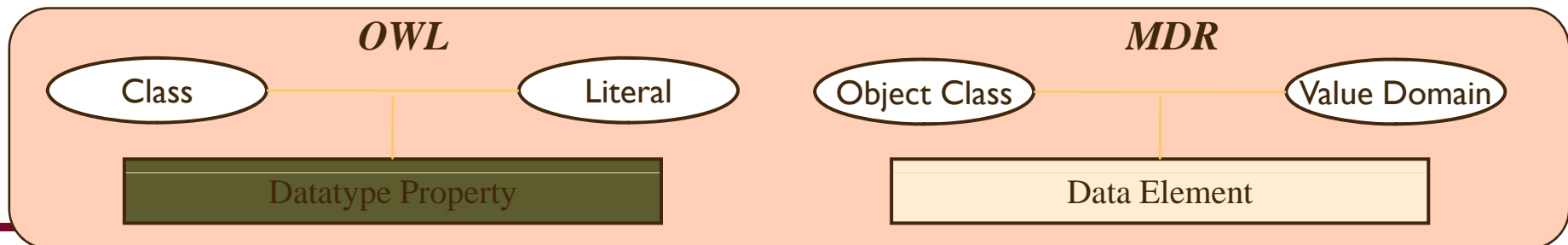
# Mapping between MDR & OWL



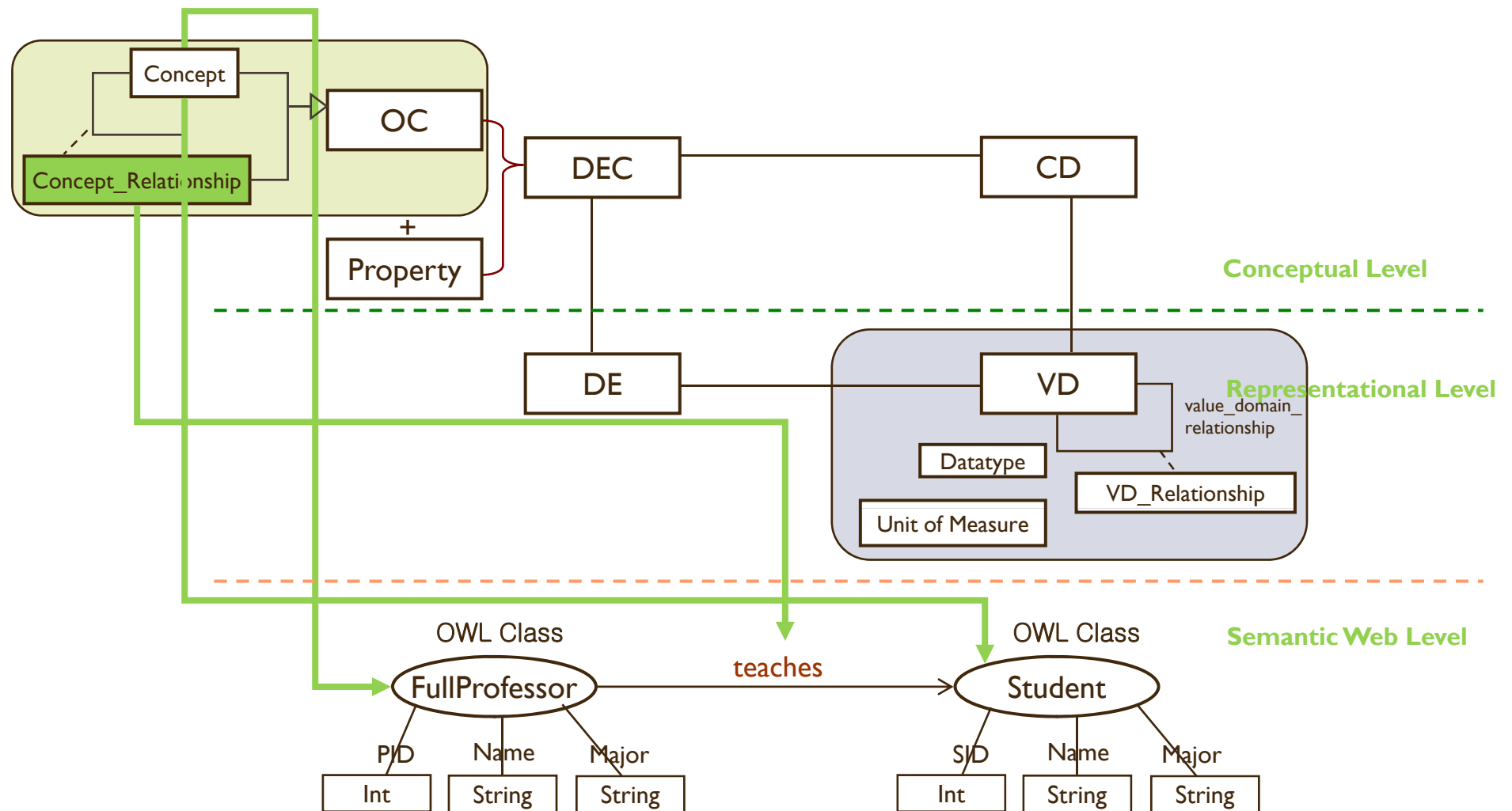
## Map Object Property with Concept Relationship



## Map Datatype Property with Data Element

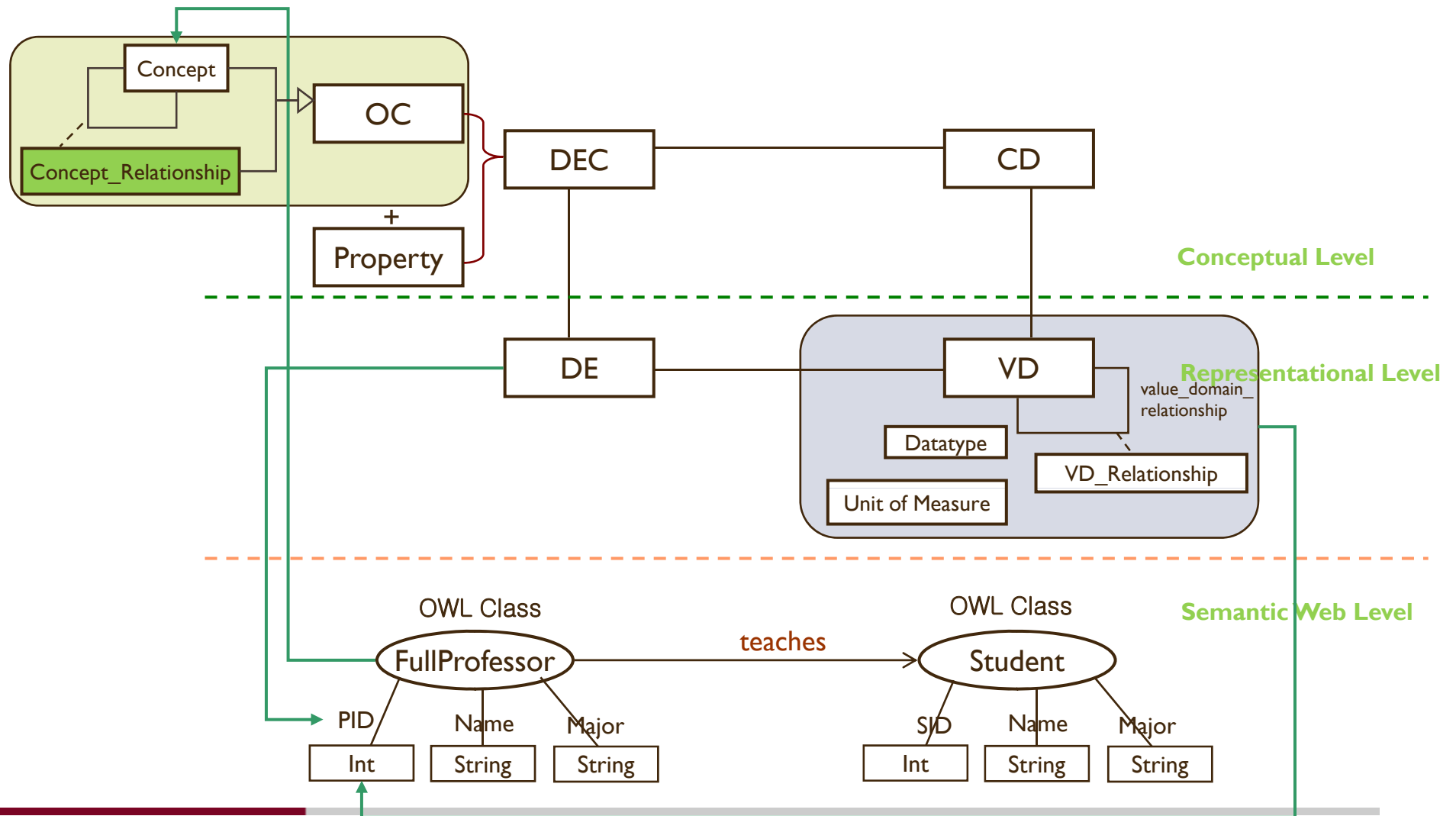


# Example of mapping : between OWL ObjectProperty & Concept\_Relationship





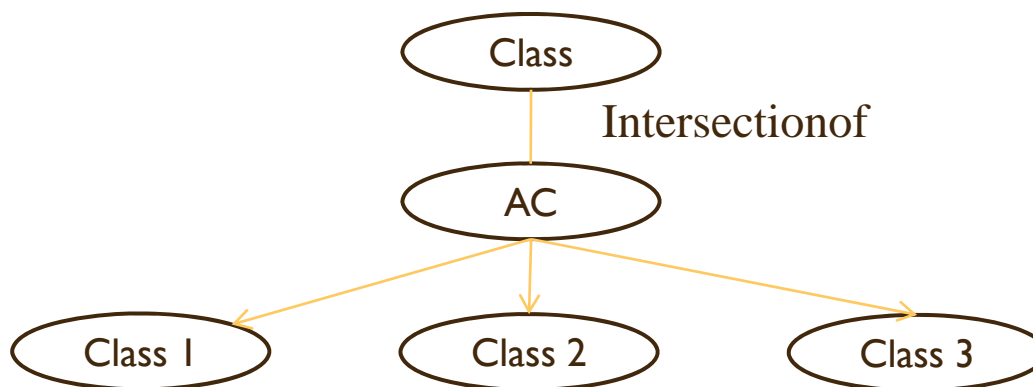
# Example of mapping : between OWL DatatypeProperty & DataElement



# Future Issues

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- ❖ **The MDR does not have the definition about the relation between Properties.**
- ❖ **Anonymous Class needs to be considered**
  - ✓ There is no Id
    - For example, a class is intersection of three classes using AC



# Summary

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- ❖ **The current MDR does not support to register metadata of Web Ontology**
- ❖ **Using mapping between MDR and Web Ontology, we can exchange data between MDR and Web Ontology**

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Thank you!!

Q&A

