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Semantic and Ontological Modelling

Assignment 2

# Classes and their instances

# Object type Properties

If a property relates individuals to individuals, then it is object property

# Functional properties

this means that for any given individual, the property can have at most one value

:Patient :admittedTo :Hospital

# Inverse Functional properties

 this means the inverse property of the selected property (whether it explicitly declared or not) is Functional. In other words, there can be at most one incoming relationship along the property for that individual

# Non Functional properties

this means that for any given individual, the property can have at more than one value

:Hospital :hasPhysicalResources :PhysicalResource

# Transitive Properties

this means that if individual x is related to individual y, and individual y is related to individual z, then individual x will be related to individual z.

# Symmetric Properties

this means that the property has itself as an inverse, so if individual x is related to individual y then individual y must also be related to individual x along the same property.

# Asymmetric Properties

this means that if individual x is related to individual y then individual y is not related to individual x along the same property.

# Reflexive Properties

 Asserting that a property is reflexive causes every single individual to be related to itself via that property.

# Irreflexive Properties

Asserting that a property is irreflexive means that an individual cannot be related to itself via that property.

# Data Type properties

if property relates individuals to literals, then it is a datatype property

# Functional properties

this means that for any given individual, the property can have at most one value

# Necessary and sufficient conditions

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