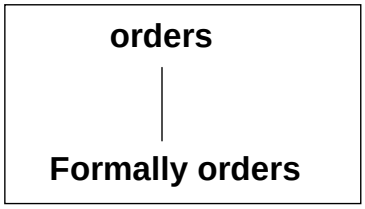
Language-OS

// Metadata

Name	Language-0S
Keywords	Language, Natural language, Formal language, Computer language, Logical language
Creation date	September 12th, 2008
Has contributor	Gilles Kassel
Used ontology engineering methodology	OntoSpec
Is of type	Core ontology
Natural language	English
Has ontology language	OntoSpec
Has formality level	Semi-informal
Ressource locator	http://www.laria.u-picardie.fr/IC/site/IMG/pdf/Language-OS.pdf
Version	1.0
Number of concepts (classes)	5
Number of relations (properties)	2

// Relations



Orders

Properties

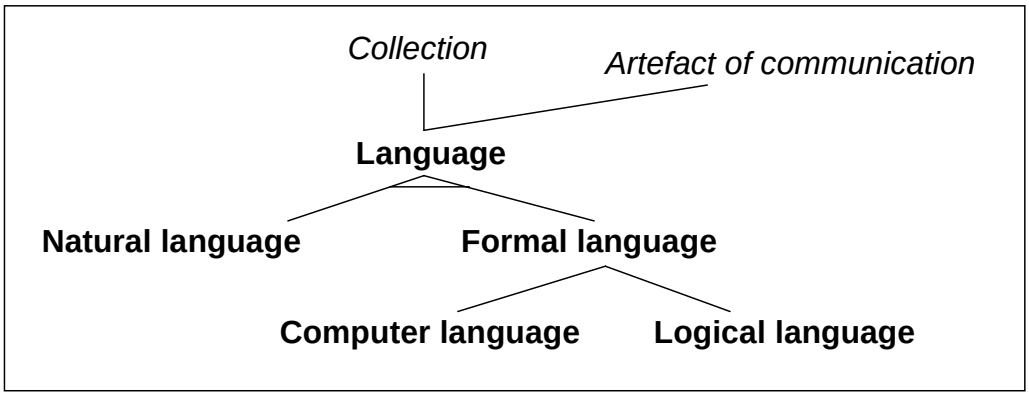
[EP/DR & RR] A LANGUAGE *orders* EXPRESSIONS. [EP/IVL] x *orders* y mutually implies y *is ordered by* x.

Formally orders

Properties

[EP/DR & RR] A FORMAL LANGUAGE *formally orders* FORMAL EXPRESSIONS. [EP/SL] x *formally orders* y implies that x *orders* y. [EP/IVL] x *formally orders* y mutually implies y *is a well formed formula of* x.

// Concepts



Language

Meta-properties

LANGUAGE is RIGID (**+R**). LANGUAGE is EXTERNALLY-DEPENDENT (**+D**). NATURAL LANGUAGE and FORMAL LANGUAGE *is a non-trivial partition of* LANGUAGE.

Properties

[EP/SL] A LANGUAGE is a COLLECTION which is an ARTEFACT OF COMMUNICATION.

Comment

[DEF] Article "Language" of Wikipedia: A language is a *system*, used for *communication*, comprising a finite set of arbitrary *symbols* and a set of rules (or *grammar*) by which the manipulation of these symbols is governed.

Natural language, human language, ordinary language

Meta-properties

NATURAL LANGUAGE is RIGID (**+R**). NATURAL LANGUAGE is EXTERNALLY-DEPENDENT (**+D**).

Properties

[EP/SL] A NATURAL LANGUAGE, or HUMAN LANGUAGE or ORDINARY language, is a LANGUAGE.

Comment

[DEF] Article "Natural language" of Wikipedia: In the philosophy of language, a natural language (or ordinary language) is a language that is spoken, written, or signed (visually or tactilely) by humans for general-purpose communication.

Formal language

Meta-properties

FORMAL LANGUAGE is RIGID (**+R**). FORMAL LANGUAGE is EXTERNALLY-DEPENDENT (**+D**).

Properties

[EP/SL] A FORMAL LANGUAGE is a LANGUAGE.

Comment

[DEF] Article "Formal language" of Wikipedia: In mathematics, logic, and computer science, a formal language consists of a set of finite-length sequences of elements drawn from a specified finite set of symbols.

Logical language

Meta-properties

LOGICAL LANGUAGE is RIGID (**+R**). LOGICAL LANGUAGE is EXTERNALLY-DEPENDENT (**+D**).

Properties

[EP/SL] A LOGICAL LANGUAGE is a FORMAL LANGUAGE.

Comment

[DEF] Article “Logical language” of Wikipedia: Logical languages are meant to allow (or enforce) unambiguous statements. They are typically based on “predicate logic” but can be based on any system of formal “logic”.

Computer language

Meta-properties

COMPUTER LANGUAGE is RIGID (**+R**). COMPUTER LANGUAGE is EXTERNALLY-DEPENDENT (**+D**). HIGH-LEVEL COMPUTER LANGUAGE and LOW-LEVEL COMPUTER LANGUAGE *is a non-trivial partition of* COMPUTER LANGUAGE. DATA MANIPULATION LANGUAGE and DATA DESCRIPTION LANGUAGE *is a non-trivial partition of* COMPUTER LANGUAGE.

Properties

[EP/SL] A COMPUTER LANGUAGE is a FORMAL LANGUAGE.

Comment

[DEF] [Lando *et al.*, 2008]: “A computer language is a formal language designed for interpretation by a computer (microprocessor) or a program.”