

Modular Ontology Evaluation Report

Ontology IRI: <https://w3id.org/polifonia/ON/musical-performance>
Date: January 23, 2024

1 Evaluation Matrices

1.1 Naming Convention

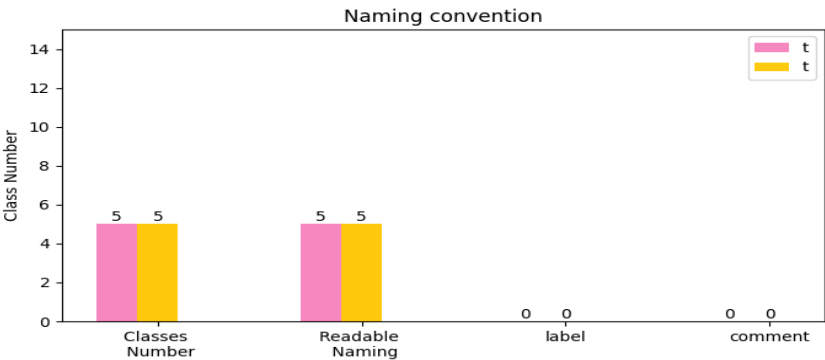


Figure 1: Classes Naming Convention Histogram

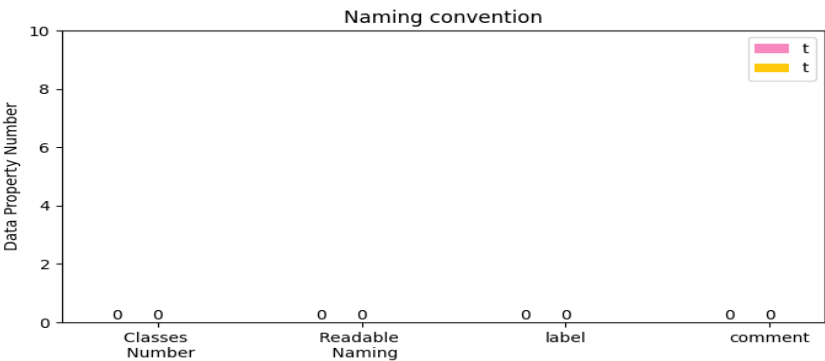


Figure 2: Data Properties Naming Convention Histogram

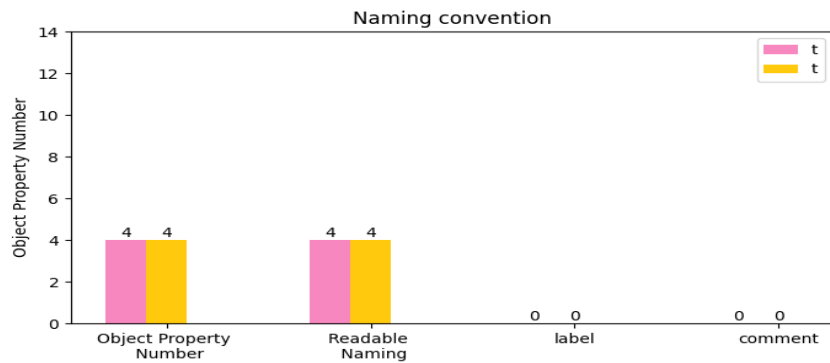


Figure 3: Object Properties Naming Convention Histogram

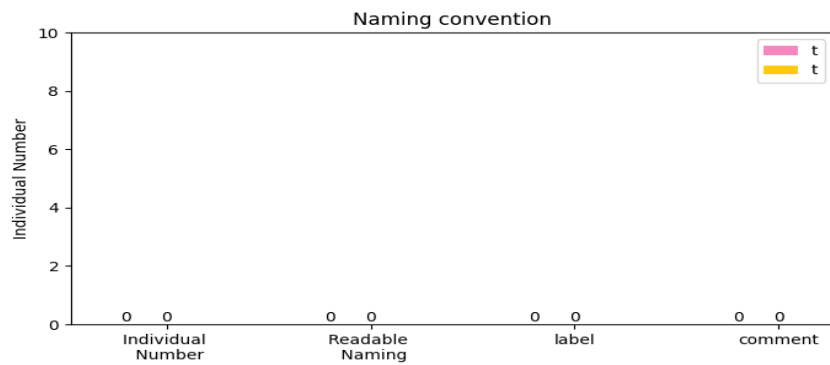


Figure 4: Individuals Naming Convention Histogram

1.2 Syntax Evaluation

Module	Lawfulness	Richness	Syntactic Quality
Core	1.000	0.111	0.556
MP	0.320	0.074	0.197

Table 1: Modules Syntax Evaluation Results

1.3 Categorization & Distribution Evaluation

Module	Class Distribution	Attribute Distribution	Relationship Distribution	Module Distribution
Core	1.000	0.000	0.000	1.000
MP	0.120	0.000	0.160	0.280

Table 2: Modules Categorization & Distribution Evaluation Results

1.4 Structure Evaluation

Module	Size of Module	Appropriate-ness	Relative Size	Depth of Module	Average Depth of inheritance Tree
Core	2	0.117	0.074	1.000	1.000
MP	25	1.000	0.926	1.000	1.000

Module	Atomic Size	Module Density	Breadth of Module	Overall Complexity of Module
Core	0.800	2.250	2	1.752
MP	1.500	9.833	3	3.608

Table 3: Modules Structure Evaluation Results

1.5 Richness Evaluation

Module	Attribute Richness	Inheritance Richness	Relationship Richness
Core	0.000	1.000	0.000
MP	0.000	0.000	1.000

Table 4: Modules Richness Evaluation Results

1.6 Logical Criteria Evaluation

Module	Correctness of Module	Completeness of Module
Core	True	True
MP	True	True

Table 5: Modules Logical Criteria Evaluation Results

1.7 Relatedness Evaluation

Module	Inter-Module Distance	Intra-Module Distance	Relative Intra-Module Distance
Core	2	0.000	3.981
MP	2	3.714	0.267

Module	Encapsulation	Redundancy	Independency
Core	2	0	50.000
MP	2	0	92.593

Table 6: Modules Relatedness Evaluation Results

1.8 Quality Evaluation

Module	Precision	Recall	Module Cohesion	Module Coupling	Module Overall Quality
Core	1.000	0.400	0.800	(2,2)	0.600
MP	1.000	0.600	1.500	(3,24)	7.500

Table 7: Modules Quality Evaluation Results

2 Use cases tested

Use case N 1:

Input

Individuals	Features
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Output

Individuals	New features
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