

DLs	Protégé	Owlready	OWLAPI
			OWLOntologyManager m = OWLManager.createOWLOntologyManager(); OWLDataFactory df = OWLManager.getOWLDataFactory(); OWLOntology o = m.createOntology(MY_IRI); m.applyChange(new AddAxiom(o, df.getOWLSubClassOfAxiom(A, B))); df.getOWLObjectIntersectionOf(A, B) df.getOWLObjectUnionOf(A, B) df.getOWLObjectComplementOf(A) m.applyChange(new AddAxiom(o, df.getOWLDIsjointClassesAxiom(A, B))); m.applyChange(new AddAxiom(o, df.getOWLEquivalentClassesAxiom(A, B))); df.getOWLObjectOneOf(i, j, ...) df.getOWLObjectSomeValuesFrom(R, B) df.getOWLObjectOnlyValuesFrom(R, B) df.getOWLObjectExactCardinality(2, R, B) df.getOWLObjectHasValue(R, i) m.applyChange(new AddAxiom(o, df.getOWLObjectPropertyDomainAxiom(R, A))); m.applyChange(new AddAxiom(o, df.getOWLObjectPropertyRangeAxiom(R, B))); m.applyChange(new AddAxiom(o, df.getOWLInverseObjectPropertiesAxiom(R, S))); m.applyChange(new AddAxiom(o, df.getOWLClassAssertionAxiom(A, i))); m.applyChange(new AddAxiom(o, df.getOWLObjectPropertyAssertionAxiom(R, i, j))); m.applyChange(new AddAxiom(o, df.getOWLDataPropertyAssertionAxiom(R, i, n)));
$A \sqsubseteq B$	A subclass of B	class A(B): ... (or) A.is_a.append(B)	
$A \sqcap B$	A and B	A & B	
$A \sqcup B$	A or B	A B	
$\neg A$	not A	Not(A)	
$A \sqcap B = \emptyset$	A disjoint with B	AllDisjoint([A, B])	
$A \equiv B$	A equivalent to B	A.equivalent_to.append(B)	
$\{i, j, \dots\}$	$\{i, j, \dots\}$	OneOf([i, j, ...])	
$\exists R.B$	R some B	R.some(B)	
$\forall R.B$	R only B	R.only(B)	
$=2R.B$	R exactly 2 B	R.exactly(2, B)	
$\exists R.\{i\}$	R value i	R.value(i)	
$\exists R.T \sqsubseteq A$	R domain A	R.domain = [A]	
$T \sqsubseteq \forall R.B$	R range B	R.range = [B]	
$S \equiv R^{-}$	S inverse of R	S.inverse = R	
$A(i)$	i type A	i = A() (or) i.is_instance_of.append(A)	
$R(i, j)$	i object property assertion j	i.R = j (R is functional) (or) i.R.append(j) (otherwise)	
$R(i, n)$	i data property assertion j	i.R = n (R is functional) (or) i.R.append(n) (otherwise)	
$A \sqsubseteq \exists R.\{i\} \wedge (\exists R^{-}.A)(i)$	-	A.R = i (R is functional) (or) A.R.append(i) (otherwise)	-

Table 3: Correspondence between DLs, Protégé notations, Owlready syntax and OWLAPI syntax. A and B are classes, R and S are properties, i and j are individuals, n is a literal. The last line of the table shows the Owlready syntax for asserting role-fillers as class attributes, and the corresponding assertion in DLs.