

4.4 The OWL Language

This section introduces the language primitives of OWL2. Because of its close affinity with formal logic, it is convenient to adopt some of the related vocabulary:

- In OWL2, the members of classes are commonly called *individuals* rather than *instances*, but we will use the two terms interchangeably.
- When we state that some resource is of a certain type, we call this an *assertion*. For instance:

```
:roger_federer rdf:type :Person .
```

is a *class assertion* relating the individual `:roger_federer` to its class.

- When we combine classes, properties, and instances, they form *expressions*. For instance:

```
_:x rdf:type owl:Class ;  
    owl:unionOf ( :Man :Woman ) .
```

is a *class expression* that specifies the (anonymous) union of the classes `:Man` and `:Woman`.

- If we then relate this definition to one of our classes, we create an *axiom*. For example:

```
:Person owl:equivalentClass _:x .  
_:x    rdf:type          owl:Class ;  
       owl:unionOf     ( :Man :Woman ) .
```

is an equivalent class *axiom* that states that the class `:Person` is equivalent to the union we introduced above. Class axioms are sometimes called *restrictions*, as they constrain the set of individuals that can be a member of a class.