Steps :

PREFIX : <http://your-ontology-iri#>

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

SELECT ?metric

WHERE {

?metric rdf:type/rdfs:subClassOf\* :TimeMetric .

}

``` |

| \*\*metric\*\* |

|------------------|

| `desktop\_login\_time` |

| `mobile\_login\_time` |

| Validates that `desktop\_login\_time` and `mobile\_login\_time` are correctly classified as `TimeMetric` instances. |

| \*\*2\*\* | \*\*List data properties and their domains/ranges\*\* |

```sparql

PREFIX : <http://your-ontology-iri#>

PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

PREFIX owl: <http://www.w3.org/2002/07/owl#>

SELECT ?property ?domain ?range

WHERE {

?property rdfs:subPropertyOf\* :hasValueInSeconds ;

rdfs:domain ?domain ;

rdfs:range ?range .

}

``` |

| \*\*property\*\* | \*\*domain\*\* | \*\*range\*\* |

|--------------|------------|-----------|

| `desktopLoginTime` | `TimeMetric` | `xsd:decimal` |

| `mobileLoginTime` | `TimeMetric` | `xsd:decimal` |

| Confirms that sub-properties (`desktopLoginTime`, `mobileLoginTime`) inherit the domain (`TimeMetric`) and range (`xsd:decimal`) from `hasValueInSeconds`. |

| \*\*3\*\* | \*\*Retrieve login times for desktop and mobile\*\* |

```sparql

PREFIX : <http://your-ontology-iri#>

PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>

SELECT ?metric ?value ?deviceType

WHERE {

{ ?metric :desktopLoginTime ?value . BIND("Desktop" AS ?deviceType) }

UNION

{ ?metric :mobileLoginTime ?value . BIND("Mobile" AS ?deviceType) }

}

ORDER BY ?metric

``` |

| \*\*metric\*\* | \*\*value\*\* | \*\*deviceType\*\* |

|------------|-----------|----------------|

| `desktop\_login\_time` | 4.5 | Desktop |

| `mobile\_login\_time` | 6.2 | Mobile |

| Answers the original question by combining results for desktop and mobile using `UNION`. |

---

### \*\*Key Takeaways\*\*

1. \*\*Step 1\*\* validates instance creation.

2. \*\*Step 2\*\* checks property inheritance and structure.

3. \*\*Step 3\*\* retrieves platform-specific benchmark values.

Copy this table into Word for easy reference! 📄

Sparqle :

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

PREFIX owl: <http://www.w3.org/2002/07/owl#>

PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>

PREFIX onto: <http://www.semanticweb.org/asifcomputer/ontology/2025/ui\_ux\_automation#>

SELECT ?metric ?value ?deviceType

WHERE {

{

?metric onto:desktopLoginTime ?value .

BIND("Desktop" AS ?deviceType)

}

UNION

{

?metric onto:phoneLoginTime ?value .

BIND("Mobile" AS ?deviceType)

}

}

ORDER BY ?metric

Class: DesktopTimeMetric

EquivalentTo: TimeMetric and

(desktopLoginTime exactly 1 xsd:decimal)

Class: MobileTimeMetric

EquivalentTo: TimeMetric and

(mobileLoginTime exactly 1 xsd:decimal)