
Algorithm 1 The WimUQ source selection

Input: \mathbf{Q} ▷ The SPARQL query
Output: $\mathbf{E}, \mathbf{H}, \mathbf{T}, \mathbf{N}$ ▷ Hash sets of relevant sources
of SPARQL endpoints, HDT files, dataset with dereferenceable URIs, datadump with
non-dereferenceable URIs, respectively

- 1: $\mathbf{U} = \text{extractURIs}(\mathbf{Q})$ ▷ Extract the URIs from the SPARQL query
- 2: **for all** $\mathbf{u} \in \mathbf{U}$ **do**
- 3: $\mathbf{D} = \mathbf{D} \cup \text{wimuLookup}(\mathbf{u})$ ▷ Datasets from the WIMU
- 4: **end for**
- 5: **for all** $d \in \mathbf{D}$ **do** ▷ For each dataset
- 6: **if** d is SPARQL endpoint **then**
- 7: **for all** $t \in \mathbf{Q}$ **do** ▷ For each Triple pattern in query
- 8: $b = \text{ASK}(t, d)$ ▷ SPARQL ASK of t in d
- 9: **if** $b = \text{true}$ **then**
- 10: $\mathbf{E}.\text{add}(d)$
- 11: **end if**
- 12: **end for**
- 13: **end if**
- 14: **if** d is HDT file **then**
- 15: $\mathbf{H}.\text{add}(d)$
- 16: **end if**
- 17: **if** d is dataset with dereferenceable URIs **then**
- 18: $\mathbf{T}.\text{add}(d)$
- 19: **end if**
- 20: **if** d is datadump with non-dereferenceable URIs **then**
- 21: $\mathbf{N}.\text{add}(\text{RDFSlice}(d))$ ▷ only add the relevant slice
- 22: **end if**
- 23: **end for**
- 24: **return** $\mathbf{E}, \mathbf{H}, \mathbf{T}, \mathbf{N}$ ▷ final relevant sources set
