TRAINING TR-102 REPORT DAY 20

9 JULY 2024

Overview:

The day included further study and detailed exploration of SPARQL queries. And use of TOTP with SPARL Queries.

SPARQL Queries:

The session included an in-depth study and practice of SPARQL queries using the following resources:

1. Cambridge Semantics: SPARQL Queries Basic Queries:

o SELECT queries to retrieve data.

o Constructing queries to filter and sort results.

 Advanced Features:

o Use of CONSTRUCT to create new RDF graphs.

o ASK queries to return boolean results.

o DESCRIBE queries to return RDF data about resources.

 Functions and Expressions:

o String manipulation, mathematical operations, and date functions. o Aggregation functions like COUNT, SUM, AVG, MIN, MAX.

 Modifying Data:

o INSERT DATA, DELETE DATA, MODIFY statements to alter RDF datasets.

2. Medium: Constructing SPARQL Queries

 Best Practices:

o Structuring queries for readability and efficiency.

o Use of comments and proper indentation.

 Complex Queries:

o Nested queries and subqueries.

o OPTIONAL and UNION clauses to handle optional data and multiple patterns.

 Example Queries:

o Practical examples demonstrating real-world use cases.

o Step-by-step breakdown of constructing complex queries

Implementation:

 Participants practiced writing and executing various SPARQL queries based on the examples and guidelinesprovided by the resources.

 Queries included retrieving specific data, constructing new RDF triples, and manipulating datasets.

 Emphasis was placed on understanding query optimization and the efficient use of SPARQL features.

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Conclusion:

Day 20 of the training was successful in providing participants with practical knowledge and hands-on experience with TOTP apps for 2FA and advanced SPARQL queries. The comprehensive study of SPARQL from the provided resources enabled participants to enhance their query-writing skills and better understand the intricacies of RDF data manipulation.