

TRAINING DAY-10

REPORT:

26 June 2024

Keys Takeways:

1. Downloading Apache Jena Fuseki

- **Visit Official Website:** Go to the Apache Jena website at jena.apache.org.
- **Navigate to Downloads:** Find the download section for Fuseki.
- **Select Version:** Choose the desired version of Fuseki. The latest stable release is recommended.
- **Download Archive:** Download the zip or tar.gz archive suitable for your operating system.
- **Extract Files:** Extract the downloaded archive to a preferred directory on your

system. **2. Java Version Requirements**

- **Java Compatibility:** Ensure that you have Java installed on your system. Apache Jena Fuseki requires Java 8 or later.
- **Check Java Version:** Open a terminal or command prompt and run the command
`java -version` to verify your Java version.
- **Install/Update Java:** If needed, download and install the latest Java Development Kit (JDK) from the [Oracle website](http://www.oracle.com) or use an open-source alternative like OpenJDK.

3. Uploading Data Over Apache Jena Fuseki

- **Start Fuseki Server:** Navigate to the directory where Fuseki is extracted and run the server using the command `./fuseki-server` (Linux/Mac) or `fuseki-server.bat` (Windows).
- **Access Fuseki UI:** Open a web browser and go to `http://localhost:3030` to access the Fuseki user interface.

- **Create a Dataset:**
 - Click on "Datasets". ◦ Click on "Add new dataset".
 - Enter a name and select the dataset type (e.g., in-memory or TDB).
- **Upload RDF Data:** ◦ Select the newly created dataset. ◦ Go to the "Upload" tab. ◦ Choose the RDF data file (e.g., .ttl, .rdf) from your local machine. ◦ Click "Upload" to load the data into the dataset.

4. Writing and Executing a Query

- **SPARQL Query Execution:** ◦ Select the dataset you want to query from the Fuseki interface. ◦ Go to the "Query" tab.

SPARQL Query

To try out some SPARQL queries against the selected dataset, enter your query here.

Example Queries: [Selection of triples](#) [Selection of classes](#)

SPARQL Endpoint:

Content Type (SELECT):

Content Type (GRAPH):

Prefixes: [rdf](#) [rdfs](#) [owl](#) [xsd](#)

```

1. PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
2. PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
3. SELECT * WHERE {
4.   ?sub ?pred ?obj .
5. } LIMIT 10

```

- **Writing a Query:**
 - Use SPARQL, a query language for RDF data. Example query:

```

sparql
Copy code
PREFIX foaf: <http://xmlns.com/foaf/0.1/>
SELECT ?name WHERE {
  ?person a foaf:Person .
  ?person foaf:name ?name .
}

```

- This query selects the names of all persons in the dataset.
- **Running the Query:**

- Enter the SPARQL query into the query text area.
- Click "Run Query" to execute.
- View results in the results pane, which displays the query output in tabular form.

Table			Response			10 results in 0.086 seconds			Simple view			Filter query results			Page size: 50					
sub			pred			obj														
1	<http://visualdataweb.org/newOntology/contain>			<http://www.w3.org/1999/02/22-rdf-syntax-ns#type>		<http://www.w3.org/2002/07/owl#ObjectProperty>														
2	<http://visualdataweb.org/newOntology/contain>			<http://www.w3.org/2000/01/rdf-schema#label>		"has access"@en														
3	<http://visualdataweb.org/newOntology/contain>			<http://www.w3.org/2000/01/rdf-schema#range>		<http://visualdataweb.org/newOntology/medicine_store>														
4	<http://visualdataweb.org/newOntology/contain>			<http://www.w3.org/2000/01/rdf-schema#domain>		<http://visualdataweb.org/newOntology/Patients>														
5	<http://visualdataweb.org/newOntology/Bone_Patient>			<http://www.w3.org/1999/02/22-rdf-syntax-ns#type>		<http://www.w3.org/2002/07/owl#Class>														
6	<http://visualdataweb.org/newOntology/Bone_Patient>			<http://www.w3.org/2000/01/rdf-schema#label>		"Bone Patient"@en														
7	<http://visualdataweb.org/newOntology/givesss>			<http://www.w3.org/1999/02/22-rdf-syntax-ns#type>		<http://www.w3.org/2002/07/owl#DatatypeProperty>														
8	<http://visualdataweb.org/newOntology/givesss>			<http://www.w3.org/2000/01/rdf-schema#label>		"givesss"@en														
9	<http://visualdataweb.org/newOntology/givesss>			<http://www.w3.org/2000/01/rdf-schema#range>		<http://www.w3.org/2000/01/rdf-schema#Datatype>														
10	<http://visualdataweb.org/newOntology/givesss>			<http://www.w3.org/2000/01/rdf-schema#domain>		<http://visualdataweb.org/newOntology/vehicles_facility>														

Showing 1 to 10 of 10 entries

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