

# Training Day10

## Report:

26 June 2024

### Keys Takeways:

#### 1. Downloading Apache Jena Fuseki

- **Visit Official Website:** Go to the Apache Jena website at [jena.apache.org](http://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](#)

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

SPARQL Endpoint:

Content Type (SELECT):

Content Type (GRAPH):

```

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 Ellipse 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 < 1 >   |   |  |