

Uploading Data into Opal 2.5.x

This manual is based on the online Opal documentation (<http://wiki.obiba.org/display/OPALDOC>). It describes how to prepare and upload data into Opal.

1 Data source

Opal supports several different data source types, but only CSV data source will be described in this manual, because it more likely to be used for data import. For more supported data formats see <http://wiki.obiba.org/display/OPALDOC/Datasource+Types>.

CSV is a “delimiter separated values” text file format. First row are the variable names, subsequent rows are the participant values. First column is expected to be the identifier. The test data prepared for this manual and stored in *epic.csv* file has following content:

```
ID,AGE,SEX,WEIGHT,HEIGHT
1,22,1,80,190
2,20,2,45,165
3,40,1,90,185
4,35,2,60,175
```

A CSV file can be imported as it is, but the variables will be considered as being of text type, unless the data dictionary is prepared before the data import.

2 Data dictionary

The data dictionary contains detailed information about variables from the data source such as variable name, type of value, measurement unit and value description. The data dictionary can be created directly in Opal. An other option is to import the data dictionary from an xls/xlsx-file created with MicrosoftOffice Excel or LibreOffice Calc.

Such an import file was prepared according to agreed variable catalogue for the federated meta analysis (DataSHIELD_Casestudy_OS_Variable_catalogue_V3.xlsx) and saved in file *epic-dictionary.xlsx*. This file will be distributed with this manual and can be used by all ENPADASI partners for importing of their data into Opal.

3 Data import

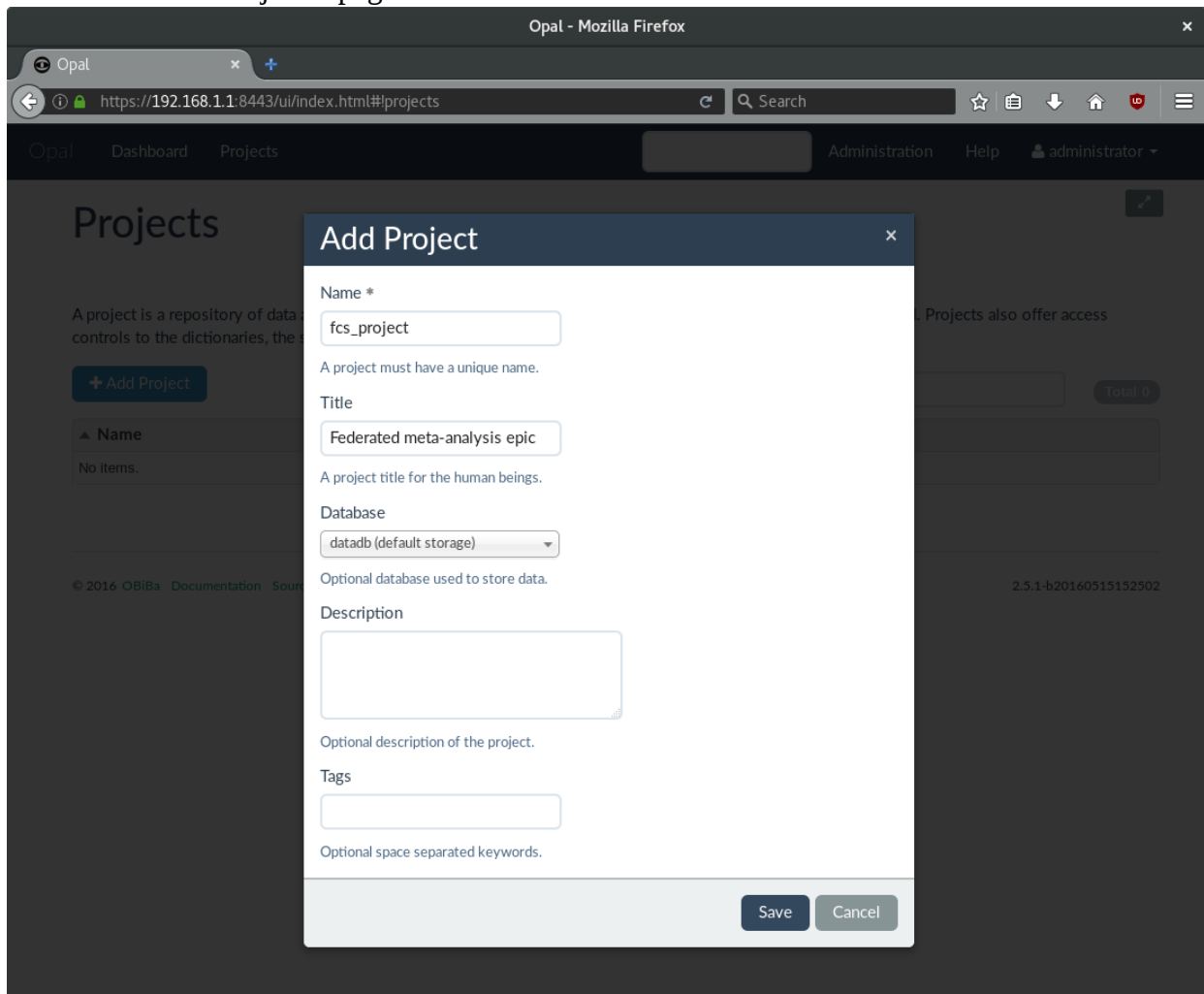
3.1 Creating a Project

In Opal, a project is the workspace for managing data. It is required to create a project before importing data into Opal.

1. Open Opal web interface and login as administrator



2. Go to the "Projects" page.



3. Add a Project by clicking on the "Add Project" button.

4. In the "Add Project" popup window:

- Enter name of the project
- Select name of data database created by the installation
- Optional enter the project title and description
- Save the project

Opal - Mozilla Firefox

Opal Dashboard Projects Administration Help administrator

Projects

A project is a repository of data and dictionaries. In a project, data can be imported, exported, analysed and transformed. Projects also offer access controls to the dictionaries, the summaries and the individual data.

[+ Add Project](#) Total 1

Name	Title	Description	Last updated
fcs_project	Federated meta-analysis epic		a few seconds ago

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3.2 Uploading Data

Data source and data dictionary files have to be uploaded, before they can be imported. Follow these steps to do this:

1. Go to page of the created project, files section

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Opal Dashboard Projects fcs_pr... Administration Help administrator

Projects / Federated meta-analysis epic

Files

/ projects / fcs_project

[+ Add Folder](#) [Upload](#) [Download](#) [Copy](#) [Paste](#) [Delete](#)

Name	Size	Last Modified
No items.		

HOMES

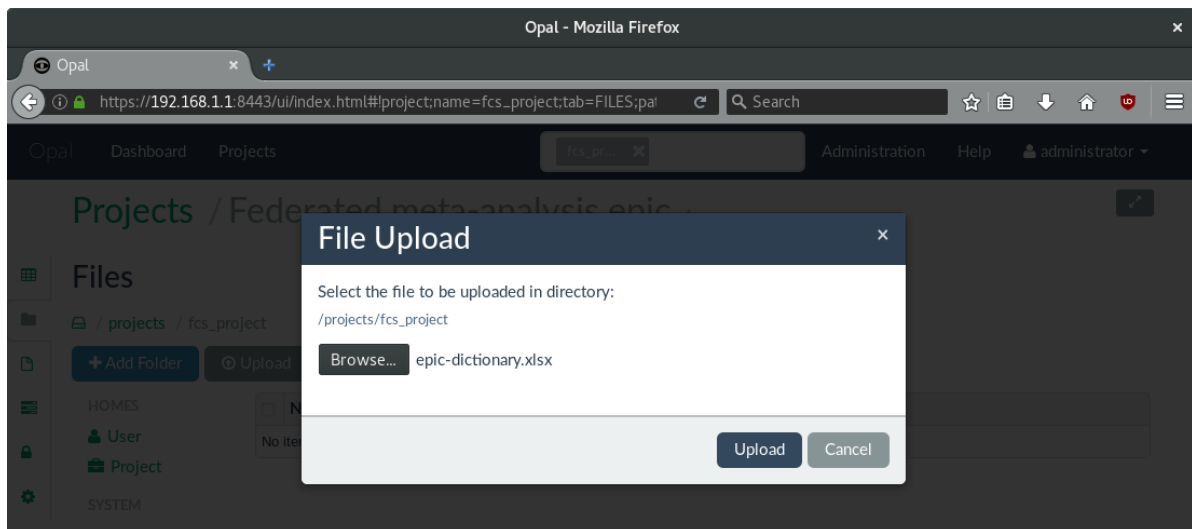
- User
- Project

SYSTEM

- File System
- Users
- Projects
- Reports

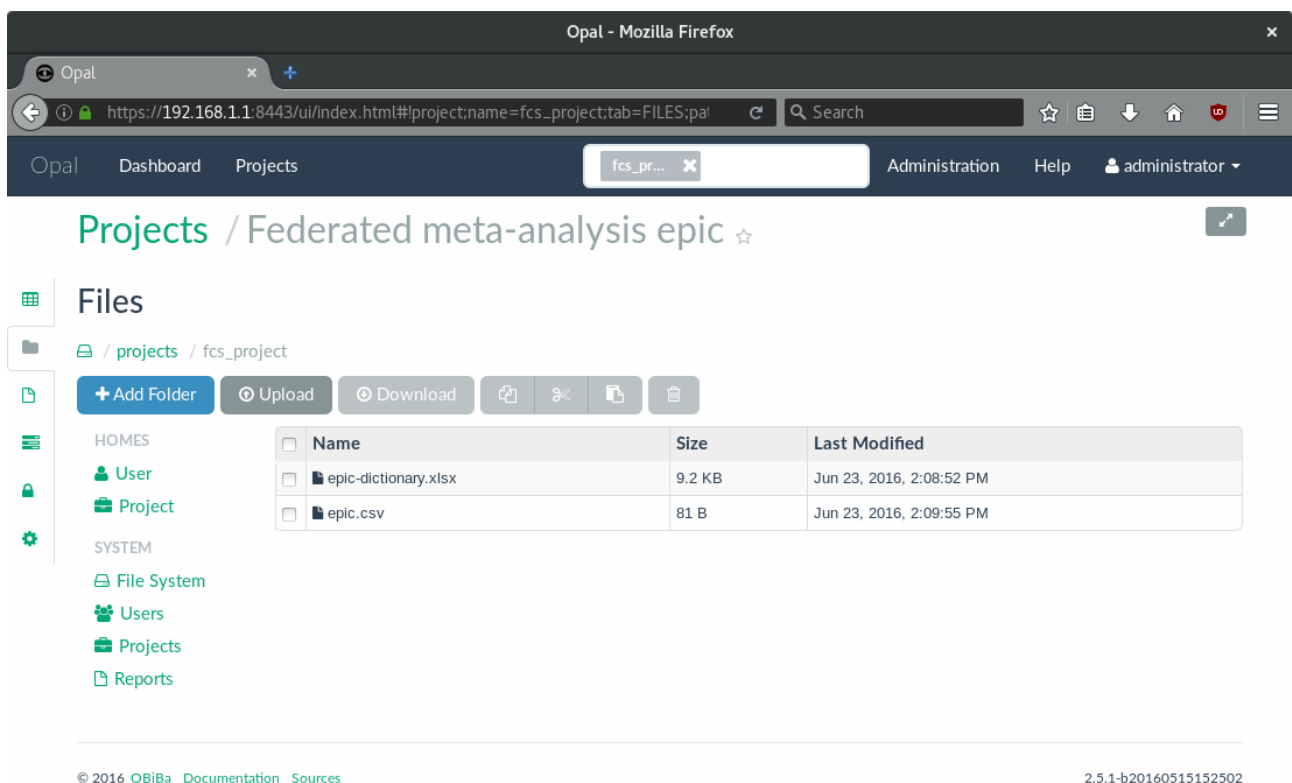
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2. Click on “Upload”.



3. In the “File Upload” popup window:
 - Click on “Browse...” and choose the data dictionary file.
 - Click on “Upload” to upload the file.
4. Do the steps above again for the data file

Both files are listed now in the project’s file section.



3.3 Importing Data

Importing data into project can be done by following the steps below:

1. Go to the project’s table section.

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Tables

D fcs_project

Dictionary Permissions

Download Import Export Copy

+ Add Table

Filter tables... Total 0

- Add table...
- Add/update tables from dictionary...
- Add view...

Variables	Entities	Last updated
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2. Click on “Add Table” and select “Add/update tables from dictionary...”.

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Projects / Federated meta-analysis epic

Tables

D fcs_project

Dictionary Permissions

Download Import Export Copy

+ Add Table

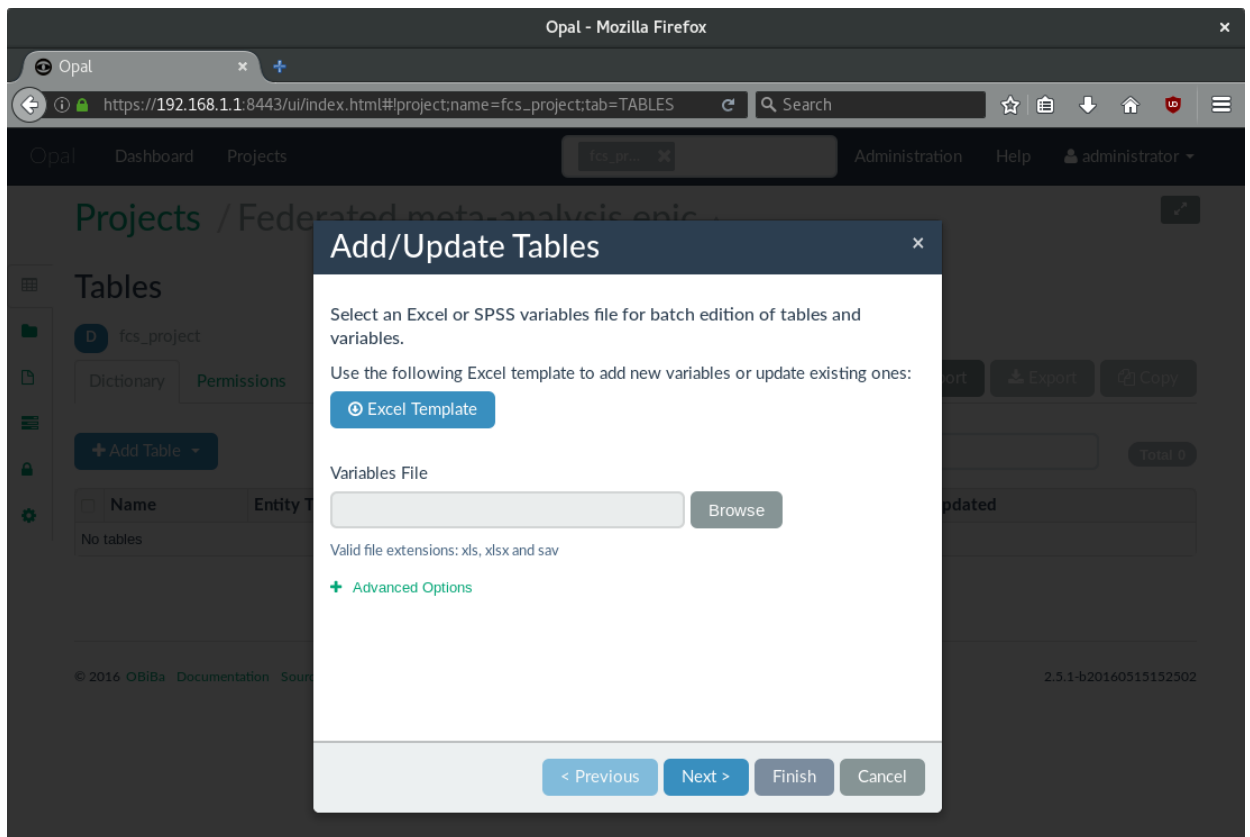
Filter tables... Total 0

- Add table...
- Add/update tables from dictionary...
- Add view...

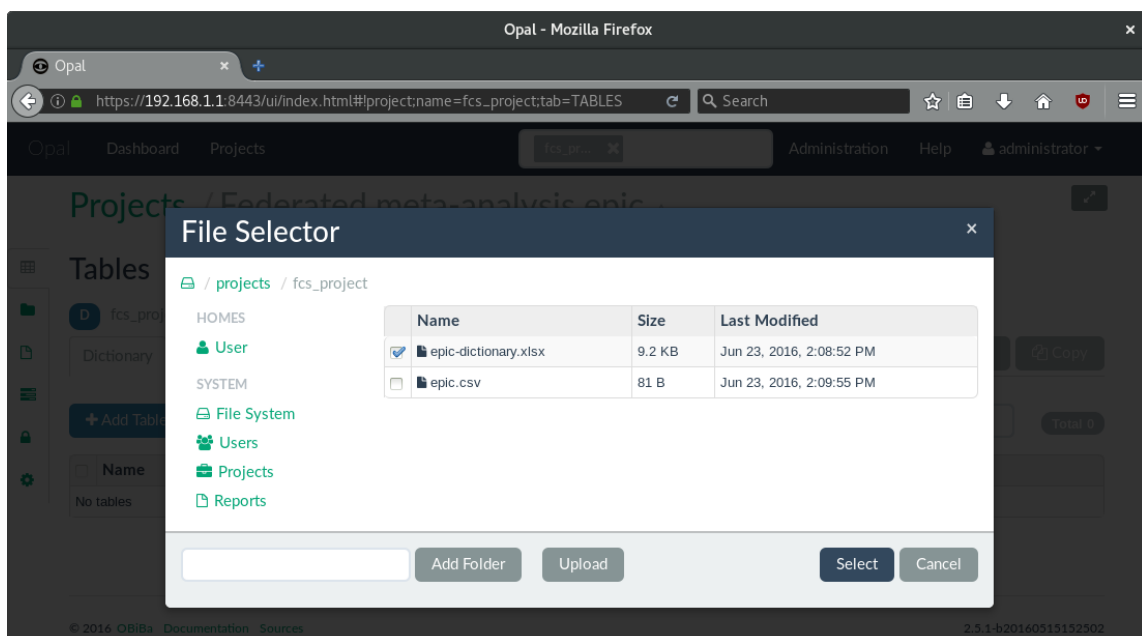
Variables	Entities	Last updated
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3. In the “Add/Update Tables” popup window:

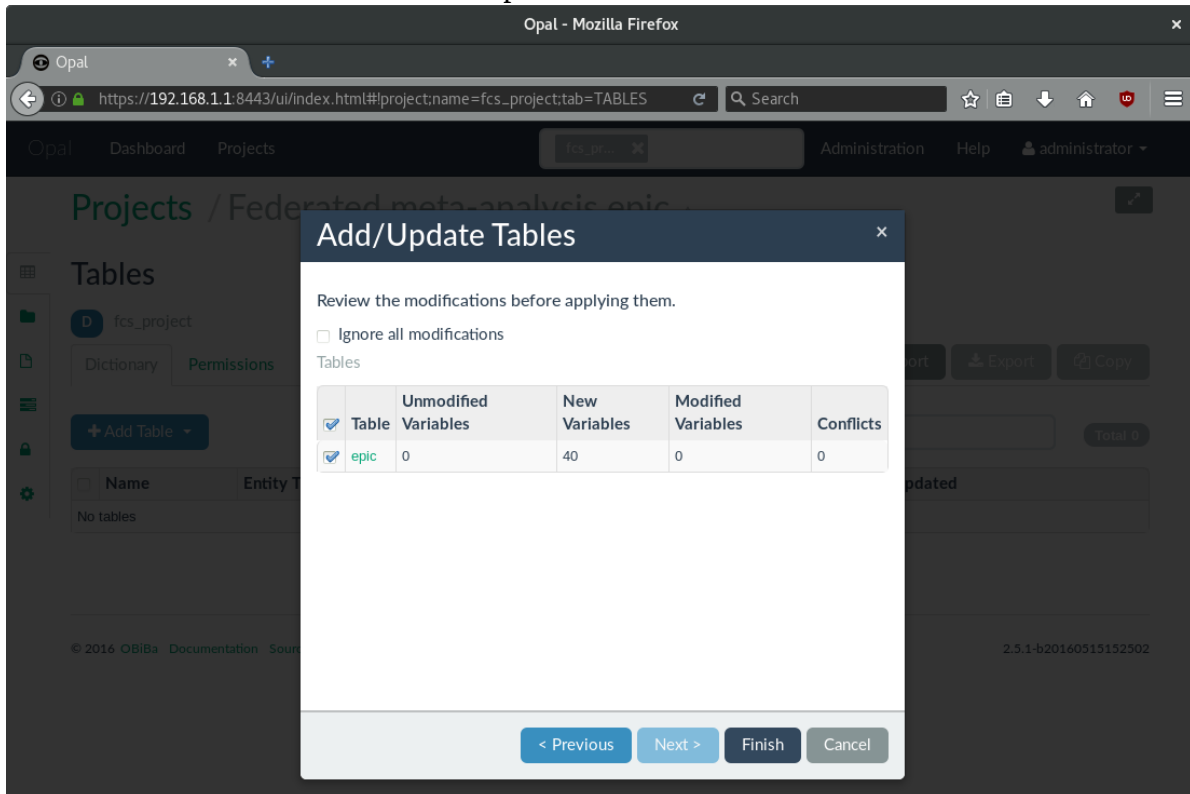


- Click on “Browse”.
- In the “File Selector” popup window:
 - Go to the projects section and click on the project name.

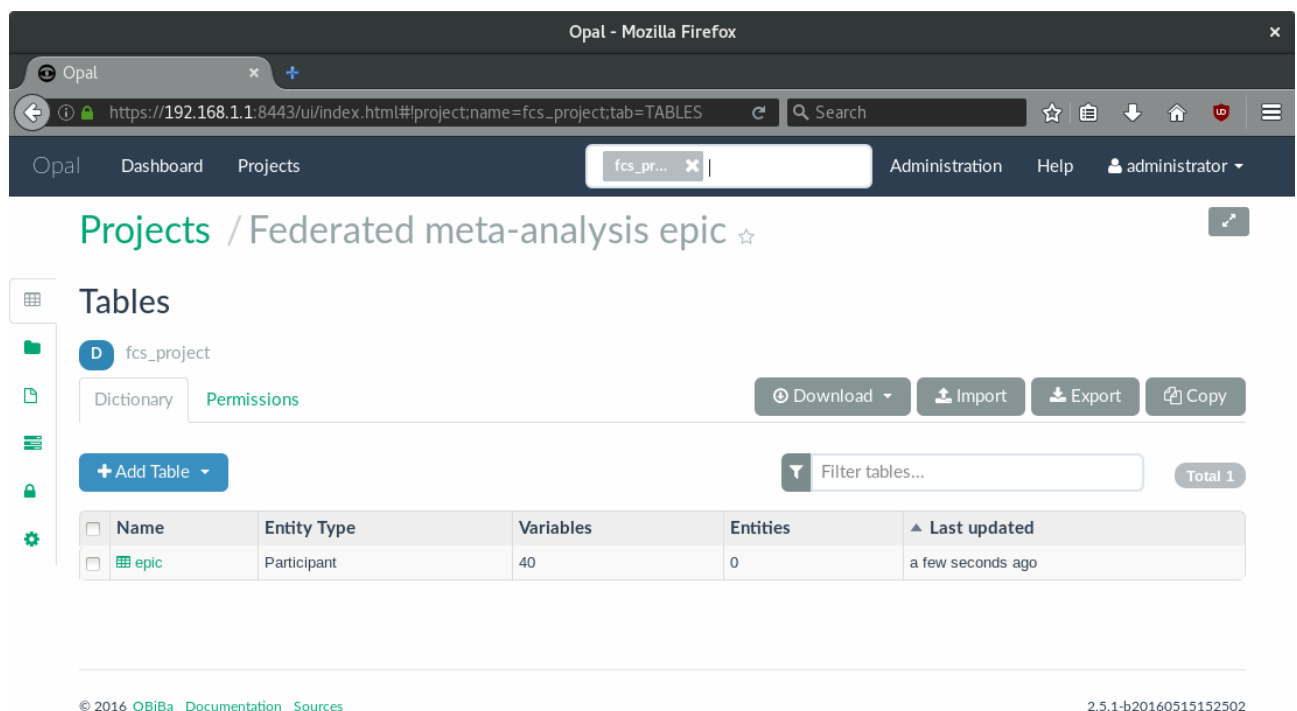


- Choose previously uploaded dictionary file *epic-dictionary.xlsx* by ticking checkbox to the left of the file name and click on “Select”.
- Click on “Next”.

4. In the next window choose the epic table and click on “Finish”.



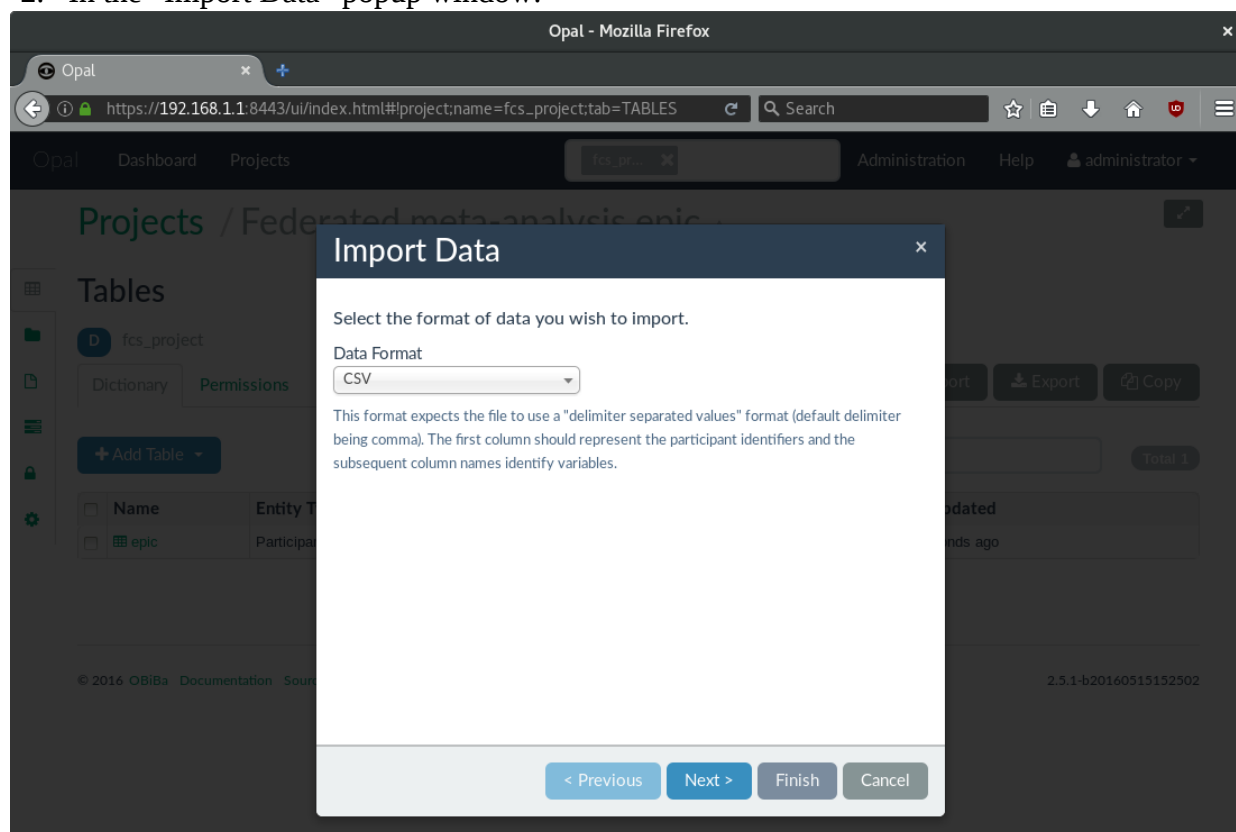
The imported epic table should appear now in the project's table section.



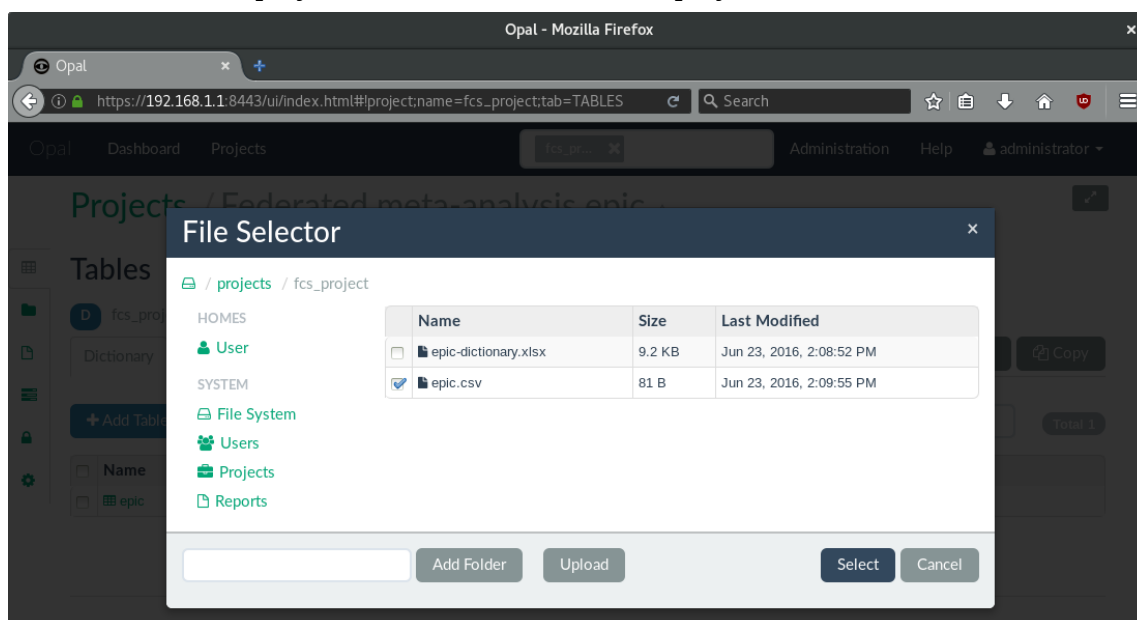
Followed steps describe importing data into the created table:

1. Click on “Import” (the second one in the button group on the right) in tables section.

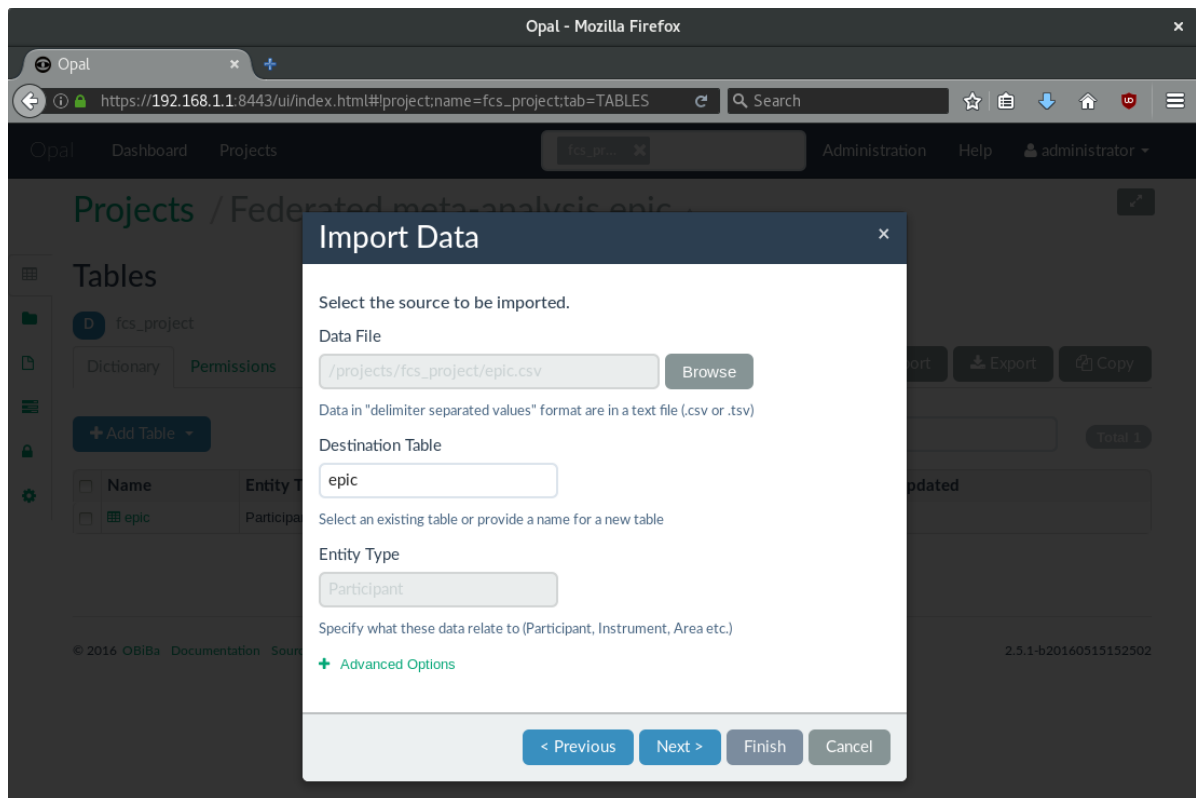
2. In the “Import Data” popup window:



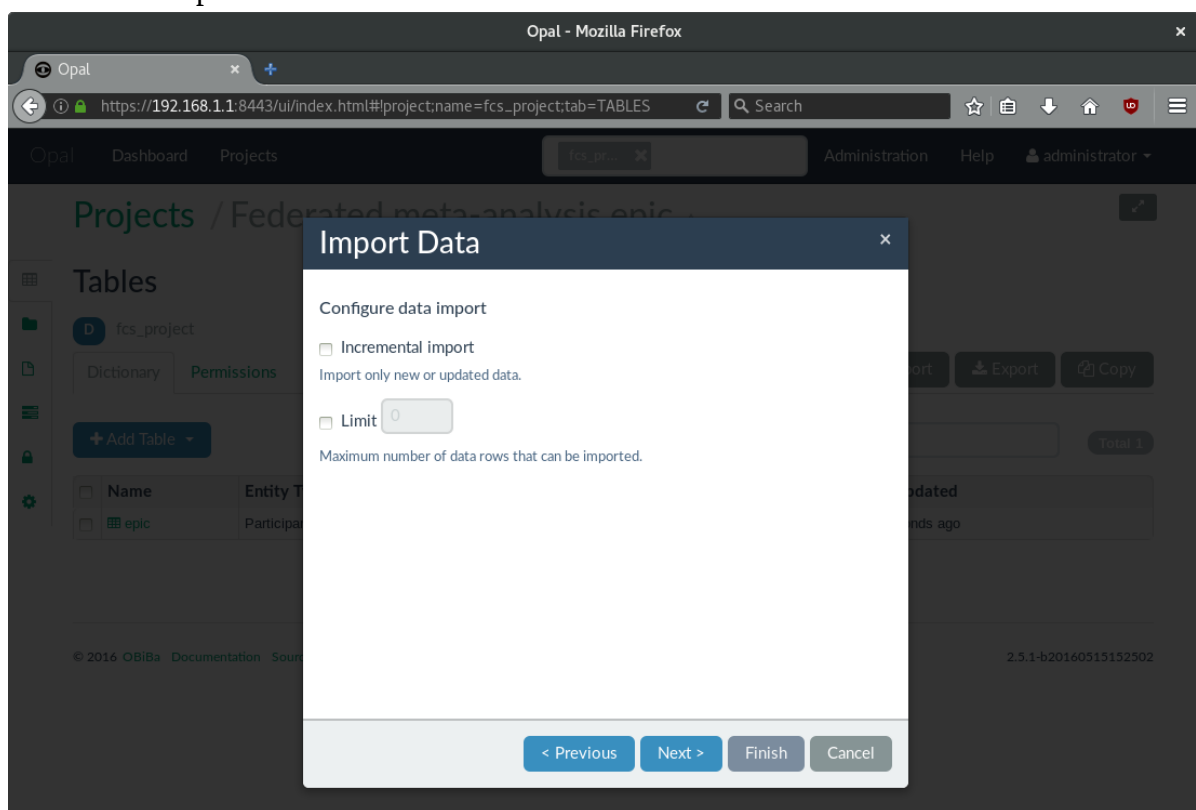
- Select CSV data format and click on “Next”.
- Click on “Browse”.
- In the “File Selector” popup window:
 - Go to the projects section and click on the project name.



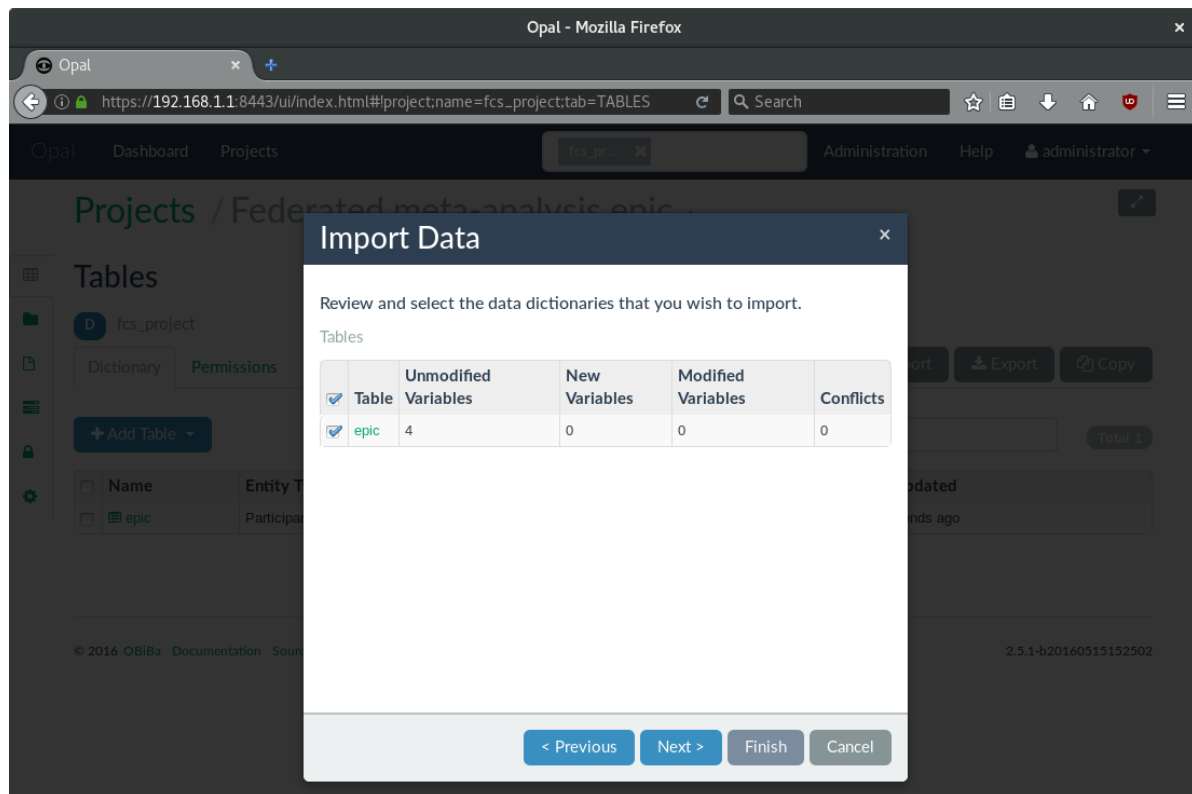
- Choose previously uploaded CSV data file by ticking checkbox to the left of the file name and click on “Select”.



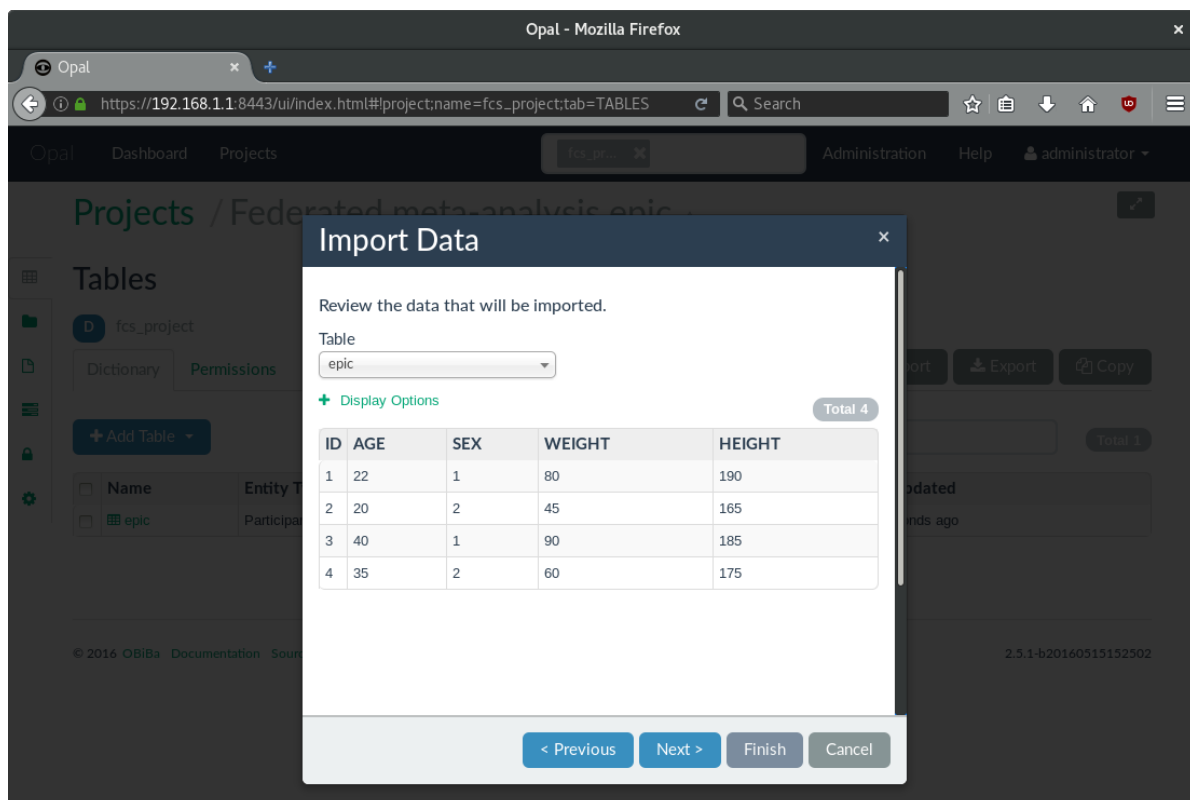
- Enter epic in destination table and click on “Next”.



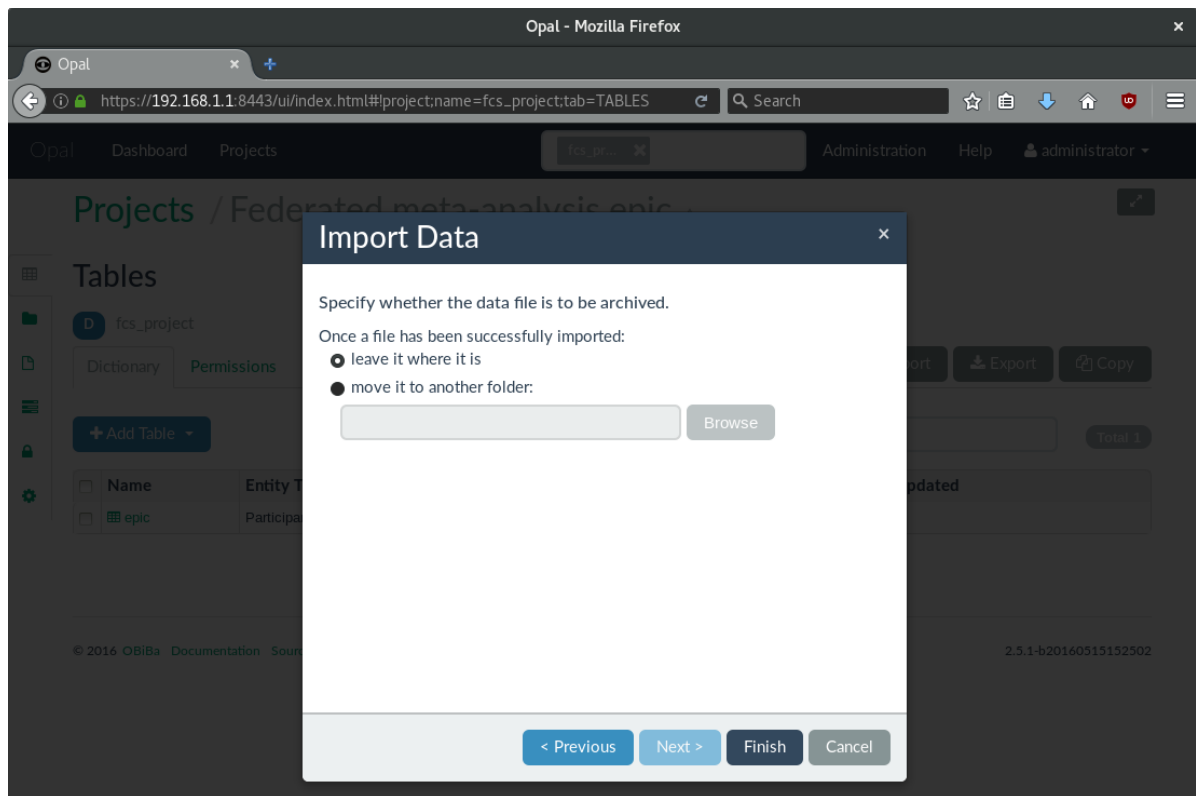
- Click on “Next” in the next window with default settings.



- Tick the checkbox to the left of the epic table and click on “Next”.



- You can review the data be imported, then click on the “Next”.



- Keep the default setting and click on “Finish”.

Data importation is completed. You can see the data by clicking on the table epic in the tables section of the project page.

The screenshot shows the 'Tables' section of the Opal web application for the 'epic' table. The 'Summary' tab is active, displaying the 'Properties' and 'Variables' sections. The 'Properties' section shows the table name 'epic' and its entity type 'Participant'. The 'Variables' section shows a list of variables with their labels, value types, and categories.

Name	Label	Value Type	Categories
ID	en Identification number	integer	
AGE	en Age	integer	
SEX	en Sex	integer	
WEIGHT	en Body weight	integer	
HEIGHT	en Height	integer	
Hip_C	en Hip circumference	integer	
Waist_C	en Waist circumference	integer	
SMOKE_ST	en Smoking status	integer	

Opal - Mozilla Firefox

Opal

DashboardProjects

fcs_pr...epic

AdministrationHelpadministrator

Projects / Federated meta-analysis epic

Tables

fcs_project / epic

DictionarySummaryValuesPermissions

DownloadExportCopy

search for an identifier...

Display Options

Total 4

ID	ID	AGE	SEX	WEIGHT	HEIGHT
1		22	1	80	190
2		20	2	45	165
3		40	1	90	185
4		35	2	60	175

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