

Import data from SQL database to Heurist

Export data from SQL database as CSV

- Make sure to begin to export first the tables in your database model that depend the least on other tables.

For example, if in our model, there is two tables, one for the manuscripts and one for the libraries in which they are curated, it is better to begin to import the library table, as it does not contain IDs from the manuscript table. Make sure to import the ID of the SQL database in Heurist to allow later content matching.

- In your database management system, go to the table you wish to export and click on the export button.



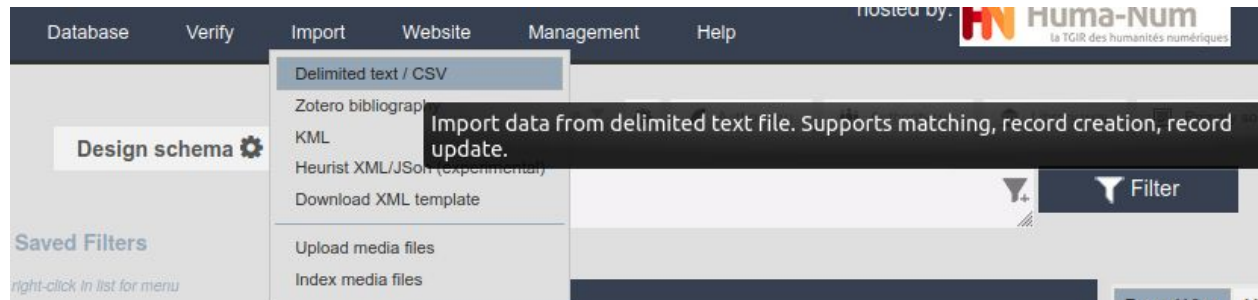
- Choose the CSV format and configure the export in order to show the column names.

You can avoid certain issues during the import by choosing a column separator that is less common, for example a tab ().

You may encounter problems if certain fields contain line breaks: it is preferable to remove them or convert them to linefeeds using Notepad++ or Sublime (See [documentation](#) for more information on how to format data).

Import CSV to Heurist (no dependencies)

- In the Heurist interface, click on the “Import” button in the navigation bar and choose “Delimited text / CSV”.



- Upload your file and set the parsing of the file according to your file configuration then click on “Analyse data”.

Import > Records from CSV/TSV

Back to start

Encoding: UTF-8
Field separator: dollar sign \$
Fields enclosed in: "
Line separator: Unix
Multivalue separator: pipe |
Date format: dd/mm/yyyy

Also supports ISO yyyy-mm-dd (and optional hh:mm:ss) and human friendly dates such as 1827, 1st Sept 1827, 1 sep 1827

Analyse data

Specify Identifier and date columns

Identifier columns are those that contain a Heurist record ID. They MUST contain "H-ID" somewhere in the column name.

Column	Heurist Identifier	Date
1	Integer	<input type="checkbox"/>
Bibliothèque nationale de France	Text	<input type="checkbox"/>
Paris	Text	<input type="checkbox"/>

Continue

Parse results. First 100 rows

1	Bibliothèque nationale de France	Paris
2	University Library	Aberdeen
3	Stiftsbibliothek	Admont
4	Vrije Universiteit	Amsterdam
5	Univ. Bib.	Basel
6	Staatsbib.	Berlin
7	Staatsbib.	Bern
8	Cusanusstift	Bernkastel
9	Bib. Com.	Bologna
10	Univ. Bib.	Bonn
11	Stedelijke Openbare Bib.	Bruges
12	Bib. Roy.	Brussels
13	NSL	Budapest
14	Gonville & Catus Coll	Cambridge
15	Magdalene college	Cambridge
16	Peterhouse	Cambridge
17	St John's college	Cambridge
18	Trinity college	Cambridge
19	Univ. Lib.	Cambridge

- If certain fields contain dates or heurist identifiers¹ (i.e. containing “H-ID” in their field title), check the corresponding boxes in the upper left corner and click on “Continue”.
- Select the record type (i.e. the table name) in which to import the data: in case of dependencies, see next chapter.

Step 1: Matching

- Check all boxes corresponding to the fields in the CSV file that you want to match with fields of the record type.
- In the dropdowns that appeared, select the corresponding fields in the record type.

The heurist identifiers will be automatically generated with every new record detected.

New identification field will be created. Matching sets this ID field for existing records and allows the creation of new records for unmatched rows.

Use value	Unique values	Column	Column to Field mapping (record match)	⏪ ⏩ Values in row 1 ⏪ ⏩
Heurist ID				
	0	Library H-ID	New column to hold Heurist record IDs	
Matching - not yet used				
<input checked="" type="checkbox"/>	119	id	ID DISHAS [Numeric] ▼	1
<input checked="" type="checkbox"/>	96	name	Library [Text (single line)] ▼	Bibliothèque nationale de France
<input checked="" type="checkbox"/>	91	city	City [Text (single line)] ▼	Paris

- Click on “Match against existing records”.

Step 2: Prepare

- Check if you want to create new records, update existing records or both.

step 1: Match Again **step 2: FIELDS TO IMPORT** **Prepare** **Start Insert/Update**

☒ Create new records ☒ Update existing records

Existing: 117 New: 2	Existing:	rows:	117	show	download
	New:	rows:	2	show	download
	Blank match fields:				

- Click on prepare : a dialog box will warn you might add incomplete records : click on “Proceed”.

¹ More on managing database relation in the next chapter

Step 3: Insert

- Check everything is ok then click on "Start insert".
- If everything went well, a dialog box with a summary of the new data inserted in Heurist will appear. You can close it and click on "Clear uploaded file" before going to consult the newly inserted data.

Import CSV to Heurist (with dependencies)

Prepare CSV

- Export the data from the table you wish to import in Heurist as a CSV file.
- In Heurist, click on the record types on with the table you wish to insert relies on
In our previous example, if you want to import the manuscript table that contains in its fields a library ID, go to the Library record type.
- Click on “Export” in the menu on the left and choose CSV.

Entities by usage ▼

filter Filter

Filtered Result

n = 118

Selected Collect:2 Recode Share Reorder

Save Filter

ID	Library
ID 566	:Paris, Bibliothèque nationale de France
ID 567	:Bonn, Univ. Bib.
ID 568	:Durham, Univ. of North Carolina at chapel hill
ID 569	:Düsseldorf, Universitäts und Landesbibliothek
ID 570	:London, Royal Astron. Society
ID 571	:Lübeck, Stadtbib.

File export

CSV Comma or tab-separated text file

XML feed XML (HML schema - Heurist Markup Language)

JSON feed JSON ☒ Include concept codes and names

XML and JSON exported from a registered Heurist database can be imported directly into any other Heurist database even if the

- Select ID and ID from your previous database as fields to export in the CSV file.

Select fields to export:

- ☒ Library
- ☒ ID (Integer)
- ☐ RecTitle (Constructed text)
- ☐ Modified (Date)
- ☐ URL (freetext)
- ☐ Tags (freetext)
- ☐ Library (Text (single line))
- ☐ City (Text (single line))
- ☒ ID DISHAS (Numeric)
- ☐ Parent entity

- Open the CSV file you exported from the SQL database in a text editor as well as the CSV file containing the IDs from Heurist.

- Copy the content of the ID file somewhere in the export file from the SQL database like so.

	A	B	C	D	E	F	G	H	I	J	
1	id	library_id	shelfmark	title					Library H-ID	ID DISHAS	
2	1	2	123	NULL					566	1	
3	2	3	2° 461	NULL					567	10	
4	3	4	1334	NULL					568	100	
5	4	98	214	NULL					569	101	
6	5	5	F II 7	NULL					570	102	
7	6	6	Lat. F. 246	NULL					571	103	
8	7	6	Lat. 4° 175	NULL					572	104	
9	8	6	Lat. 8° 438	NULL					573	105	
10	9	6	Lat. 4° 23	NULL					574	106	
11	10	7	545	NULL					575	107	
12	11	8	211	NULL					576	108	
13	12	8	212	NULL					577	109	
14	13	8	213	NULL					578	11	
15	14	9	1601	NULL					579	110	
16	15	9	2284	NULL					580	111	
17	16	10	2° 497	NULL					581	112	
18	17	10	2° 498	NULL					582	113	
19	18	11	466	NULL					583	114	
20	19	12	0926-40	NULL					584	115	
21	20	12	1022-47	NULL					585	116	
22	21	12	1086-1115	NULL					586	117	

- Insert a column to the right of the column ID you wish to match; name it with a string containing "H-ID".
- Rename your columns in order to match (see example).
- Inverse the order of the ID columns, in order to make the previous SQL id to appear on the right.

	A	B	C	D	E	F	G	H	I	J	
1	id	library_id	Library H-ID	shelfmark	title				library_id	Library H-ID	
2	1	2		123	NULL				1	566	
3	2	3		2° 461	NULL				10	567	
4	3	4		1334	NULL				100	568	
5	4	98		214	NULL				101	569	
6	5	5		F II 7	NULL				102	570	
7	6	6		Lat. F. 246	NULL				103	571	
8	7	6		Lat. 4° 175	NULL				104	572	
9	8	6		Lat. 8° 438	NULL				105	573	
10	9	6		Lat. 4° 23	NULL				106	574	
11	10	7		545	NULL				107	575	
12	11	8		211	NULL				108	576	
13	12	8		212	NULL				109	577	
14	13	8		213	NULL				11	578	
15	14	9		1601	NULL				110	579	
16	15	9		2284	NULL				111	580	
17	16	10		2° 497	NULL				112	581	
18	17	10		2° 498	NULL				113	582	
19	18	11		466	NULL				114	583	

- In the first cell of the column you wish to fill with Heurist IDs, click to enter a formula

	A	B	C	D	E	
1	id	library_id	Library H-ID	shelfmark	title	
2	1	2		123	NULL	
3	2	3		2° 461	NULL	
4	3	4		1334	NULL	
5	4	98		214	NULL	
6	5	5		F II 7	NULL	

- Use the formula [VLOOKUP](#) with parameter like so :
<first cell of the column with SQL id>;

	A	B	C	D	E
1	id	library_id	Library H-ID	shelfmark	title
2	1	2		123	NULL
3	2	3		2° 461	NULL
4	3	4		1334	NULL
5	4	98		214	NULL
6	5	5		F II 7	NULL

<coordinates of the table with IDs from Heurist and SQL database preceded by dollar signs>;

	A	B	C	D	E	F	G	H	I	J
1	id	library_id	Library H-ID	shelfmark	title				library_id	Library H-ID
2	1	2		123	NULL				1	566
3	2	3		2° 461	NULL				10	567
4	3	4		1334	NULL				100	568
5	4	98		214	NULL				101	569
6	5	5		F II 7	NULL				102	570
7	6	6		Lat. F. 246	NULL				103	571
8	7	6		Lat. 4° 175	NULL				104	572
9	8	6		Lat. 8° 438	NULL				105	573
10	9	6		Lat. 4° 23	NULL				106	574
11	10	7		545	NULL				107	575
12	11	8		211	NULL				108	576
13	12	8		212	NULL				109	577
14	13	8		213	NULL				11	578

2;0

In our example case, the formula looked like that:

=VLOOKUP(B2;\$I\$2:\$J\$119;2;0)

- Draw the lower left corner of the cell in order to apply the formula to every cell of the column.

	A	B	C	D	E
1	id	library_id	Library H-ID	shelfmark	title
2	1	2	597	123	NULL
3	2	3	608	2° 461	NULL
4	3	4	619	1334	NULL
5	4	98	683	214	NULL
6	5	5	630	F II 7	NULL
7	6	6	641	Lat. F. 246	NULL
8	7	6	641	Lat. 4° 175	NULL
9	8	6		Lat. 8° 438	NULL

- Select the newly generated column (CTRL+C) then do a “Special paste” (right click > “Special paste”) in order to paste the result value of the formula and not the formula: select everything except “Formula”.

- Remove the ID table and the column with the SQL IDs.

	A	B	C	D	E	F	G	H	I	J
1	id	Library H-ID	shelfmark	title						
2	1	597	123	NULL						
3	2	608 2° 461	NULL							
4	3	619	1334	NULL						
5	4	683	214	NULL						
6	5	630 F II 7	NULL							
7	6	641 Lat. F. 246	NULL							
8	7	641 Lat. 4° 175	NULL							
9	8	641 Lat. 8° 438	NULL							
10	9	641 Lat. 4° 23	NULL							
11	10	652	545	NULL						
12	11	663	211	NULL						
13	12	663	212	NULL						

- The CSV file is now ready to be imported in Heurist. Save it and go to Heurist backoffice.

CSV import in Heurist

- Click on “**Import**” in the navigation bar and select the CSV file you just made. Configure import and analyse data.
- Heurist will automatically spot that certain column names contain “H-ID”: select in the dropdown to which record type it refers to.

Specify Identifier and date columns

Identifier columns are those that contain a Heurist record ID.
They MUST contain "H-ID" somewhere in the column name.

Column	Heurist Identifier	Date	IDs for which record type?
id	Integer	<input type="checkbox"/>	
Library H-ID	Integer	<input checked="" type="checkbox"/>	Library
collection	Text	<input type="checkbox"/>	
shelf	Text	<input type="checkbox"/>	
title	Text	<input type="checkbox"/>	
extend	Text	<input type="checkbox"/>	

- Select the record type in which to import the data: check all the dependencies that are indicated.

Select record type: **Primary source**

The primary record type is the one represented by each row of the input file. Additional record types may be imported from selected columns prior to import of the primary, as determined by the dependencies below.

The creation of the primary record type from rows in the input file depends on the prior identification of other entities which will be connected via pointer fields or relationships. The tree below shows the dependencies of the primary record type determined from its pointer and relationship marker fields. Where an input entity matches an existing record, its ID value will be recorded in an ID field which can be used subsequently as a pointer field value; where no existing record is matched a new record is created and the new ID recorded

Check record types to be imported. Red indicates required pointer field

☒ Primary source (primary record type)

Place of production → Place

Library → Library

Click to rename suggested column name

Primary source H-ID

Place H-ID

Library H-ID

Dependencies:

☒ Place of production → Place

No pointer fields defined

☒ Library → Library

No pointer fields defined

- For each dependency, select/click on “Use <record type> H-ID”

Target entity type: **Primary source** [change target](#)

Library [Matched=4] → Place [New=9] → Primary source

Library H-ID → Place H-ID → Primary source H-ID

Importing: (roller for details) → **step 1: MATCHING** [Use Library H-ID](#) [Click on list of record types to skip steps](#)

☐ Match on column(s) ☒ Use Library H-ID

The existing identification field "Library H-ID" will be used.

- When you arrive at the target record type corresponding (in our example case : Primary source), select all checkboxes and math to the corresponding fields in the record type.

Library [Matched=4] → Place [New=9] → Primary source

Library H-ID → Place H-ID → Primary source H-ID

Importing: (roller for details) → **step 1: MATCHING** [Match against existing records](#)

☒ Match on column(s)

Please select one or more columns on which to match **Primary source** in the Incoming data against records already in the database.
Note: do not use columns containing multiple values for matching, as this will generate multiple records per input line.

New identification field will be created. Matching sets this ID field for existing records and allows the creation of new records for unmatched rows.

Use value	Unique values	Column	Column to Field mapping (record match)
Heurist ID			
	0	Primary source H-ID	New column to hold Heurist record IDs
Heurist identifiers (record pointers)			
<input checked="" type="checkbox"/>	27	Library H-ID	Library [Record pointer] ▼
<input checked="" type="checkbox"/>	27	Place H-ID	Place of production [Record pointer] ▼
Matching - not yet used			
<input checked="" type="checkbox"/>	27	id	ID DISHAS [Numeric] ▼
<input checked="" type="checkbox"/>	3	collection	Collection [Memo (multi-line)] ▼
<input checked="" type="checkbox"/>	27	shelf	Shelfmark [Text (single line)] ▼
<input checked="" type="checkbox"/>	1	title	Title [Memo (multi-line)] ▼
<input checked="" type="checkbox"/>	22	extend	Extend [Memo (multi-line)] ▼

- Then click on “Match against existing records” and follow the procedure as for regular CSV file (see previously)