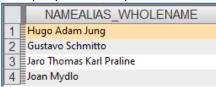
Finding matches in 2 databases based on a name

The macro is supposed to be used for finding matches between 2 databases:

• (1) A sanction list of subjects regularly being updated by EU and sent to our company An excel file

Example (fictive data):



(2) A database of vendor master data (suppliers) from our company's system
 An export from SAP table LFA1
 Example (fictive data):



There is only 1 possible match key for identifying the identical subjects from the databases → the name.

The name in both databases can consists of several words and the words can theoretically be in different order. The sanction list database (1) can contain even a name up to 31 words, the database of vendor's names from the company's system (2) usually have up to 13 words in some names.

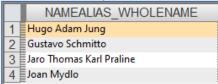
When preparing the macro my basic idea was to re-order the words of each name in alphabetical order (in both databases) in a new virtual field, and then to find the matches based on this new field (common key for join).

I had a problem with finding a simple way how to add a new field in both databases with a function that would reorder the words of each subject name in alphabetical order (to be able to reliably compare the databases). It is complicated by the fact, that based on the database statistics — there can be up to 31 words in the name field.

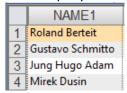
So for now I have found another way how to reorder the words in the name field and finally can compare the databases, but it is quite a lot complicated procedure. I use the following 3 macros:

Macro 1:

1.1 Imports of the source data and creating the 2 databases (sanction list, company's vendor data). The sanction list (test example):



The company's vendor master data (test example):

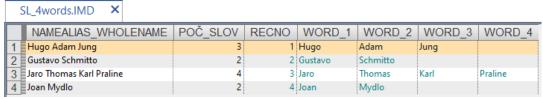


In a dialog menu of the macro I enter a number – max. number of words that the macro will work with (in this test case 4).

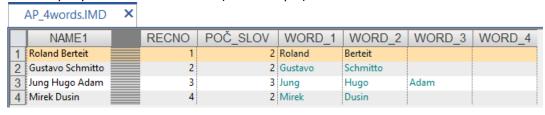
In both databases the macro creates a new field that counts number of words for each name (after removing possible redundancy spaces).

Based on the number of words the macro creates new fields for each word position (word_1, word_2, word_3, word_4):

The sanction list (test example):

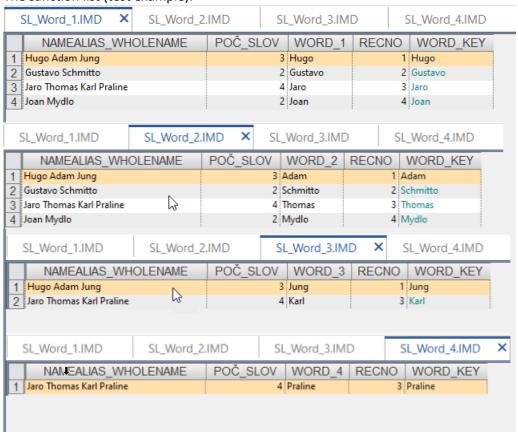


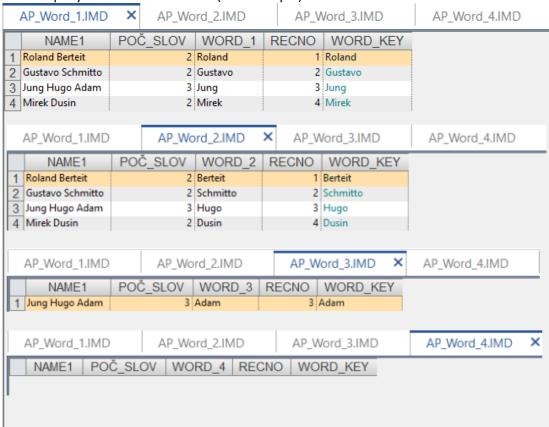
The company's vendor master data (test example):



1.2 For each word position a separate database is created, and a new field "Word_key" (for reordering purposes later on).

The sanction list (test example):





1.3 Append above separate database to a common database and the common field ("word_key").

The sanction list (test example):



AP_Common_Word.IMD X

	NAME1	RECNO	WORD_1	WORD_2	WORD_3	WORD_4	WORD_KEY
1	Roland Berteit	1	Roland				Roland
2	Gustavo Schmitto	2	Gustavo				Gustavo
3	Jung Hugo Adam	3	Jung				Jung
4	Mirek Dusin	4	Mirek				Mirek
5	Roland Berteit	1		Berteit			Berteit
6	Gustavo Schmitto	2		Schmitto			Schmitto
7	Jung Hugo Adam	3		Hugo			Hugo
8	Mirek Dusin	4		Dusin			Dusin
9	Jung Hugo Adam	3			Adam		Adam

1.4 Sort the items in the alphabetical order based on the fields "Recno", and "Word_key" → for each subject (recno) the items (words) are ordered alphabetically.

The sanction list (test example):

SI	_Common_Word_Sorted.IMD ×						
	NAMEALIAS_WHOLENAME	RECNO	WORD_1	WORD_2	WORD_3	WORD_4	WORD_KEY
1	Hugo Adam Jung	1		Adam			Adam
2	Hugo Adam Jung	1	Hugo				Hugo
3	Hugo Adam Jung	1			Jung		Jung
4	Gustavo Schmitto	2	Gustavo				Gustavo
5	Gustavo Schmitto	2		Schmitto			Schmitto
6	Jaro Thomas Karl Praline	3	Jaro				Jaro
7	7 Jaro Thomas Karl Praline				Karl		Karl
8	Jaro Thomas Karl Praline	3				Praline	Praline
9	Jaro Thomas Karl Praline	3		Thomas			Thomas
10	10 Joan Mydlo		Joan		2		Joan
11	11 Joan Mydlo			Mydlo			Mydlo

The company's vendor master data (test example):

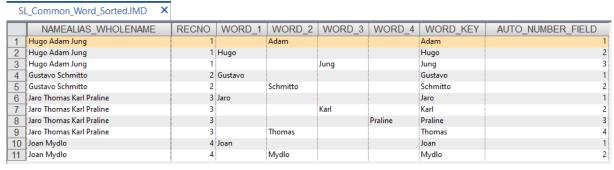
	AP_Common_Word_Sorted.IMD X							
	NAME1	RECNO	WORD_1	WORD_2	WORD_3	WORD_4	WORD_KEY	
1	Roland Berteit	1		Berteit			Berteit	
2	Roland Berteit	1	Roland				Roland	
3	Gustavo Schmitto	2	Gustavo				Gustavo	
4	Gustavo Schmitto	2		Schmitto			Schmitto	
5	Jung Hugo Adam	3			Adam		Adam	
6	Jung Hugo Adam	3		Hugo			Hugo	
7	Jung Hugo Adam	3	Jung				Jung	
8	Mirek Dusin	4		Dusin			Dusin	
9	Mirek Dusin	4	Mirek				Mirek	

Macro 2:

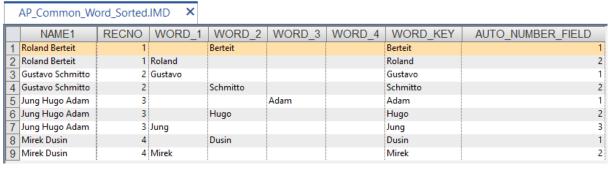
1.1 "Auto generate number" downloaded from your web.

The macro creates a new field "Auto_number_field" and for each subject (recno) it adds numbering from the beginning. E.g. in the sanction list the recno 1 is the first subject, and the auto_number_field 1,2,3 is the order of words in the name of the subject 1 (alphabetically ordered).

The sanction list (test example):



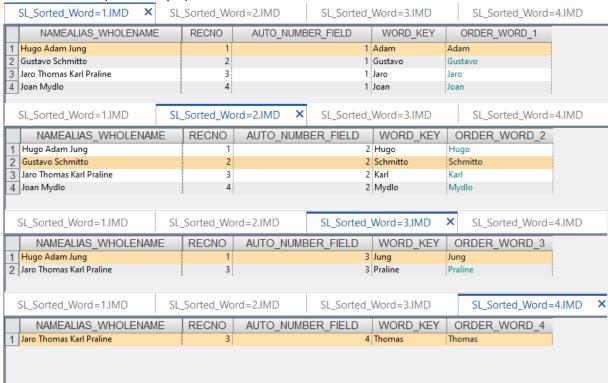
The company's vendor master data (test example):

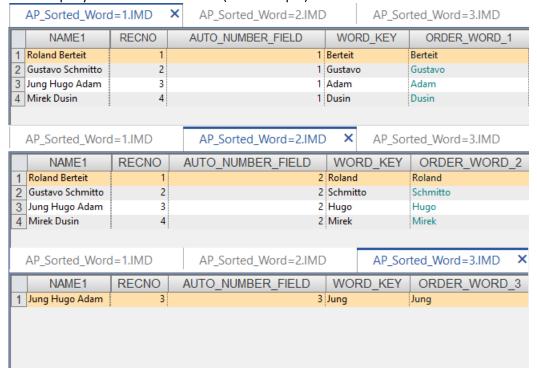


Macro 3:

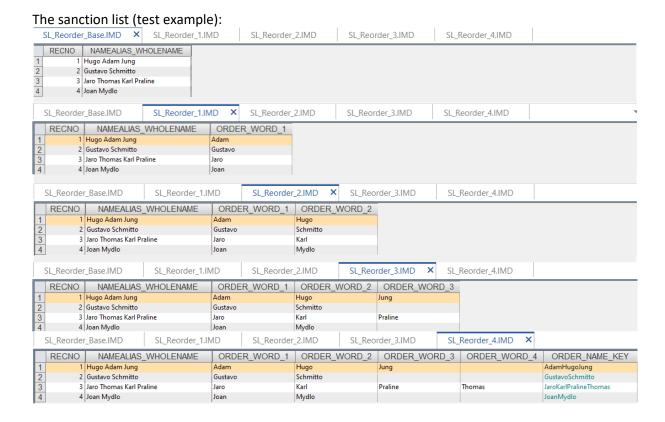
3.1 It creates separate databases for each "auto_number_field" value (alfabetically re-ordered words for each subject), and new field "order_word_value". Later on alfabetically re-ordered items will be gradually joined to a final database.

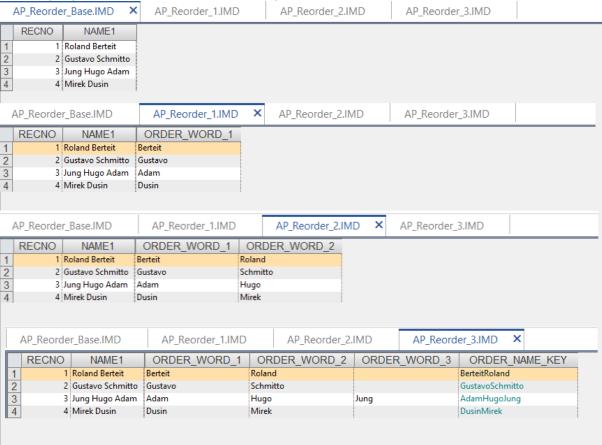
The sanction list (test example):





3.2 Gradually joining the separate databases with alphabetically ordered words to the final database. In the final database created a new field "Order_name_key" which merge all alphabetically ordered words (fields) together. → This will be the match key (field) for searching matches between the sanction database and company's vendor database.





3.3 Searching for matches between the Sanction database and Company's vendor database based on the key "Order_name_key".

SL_AP_test.IMD X

