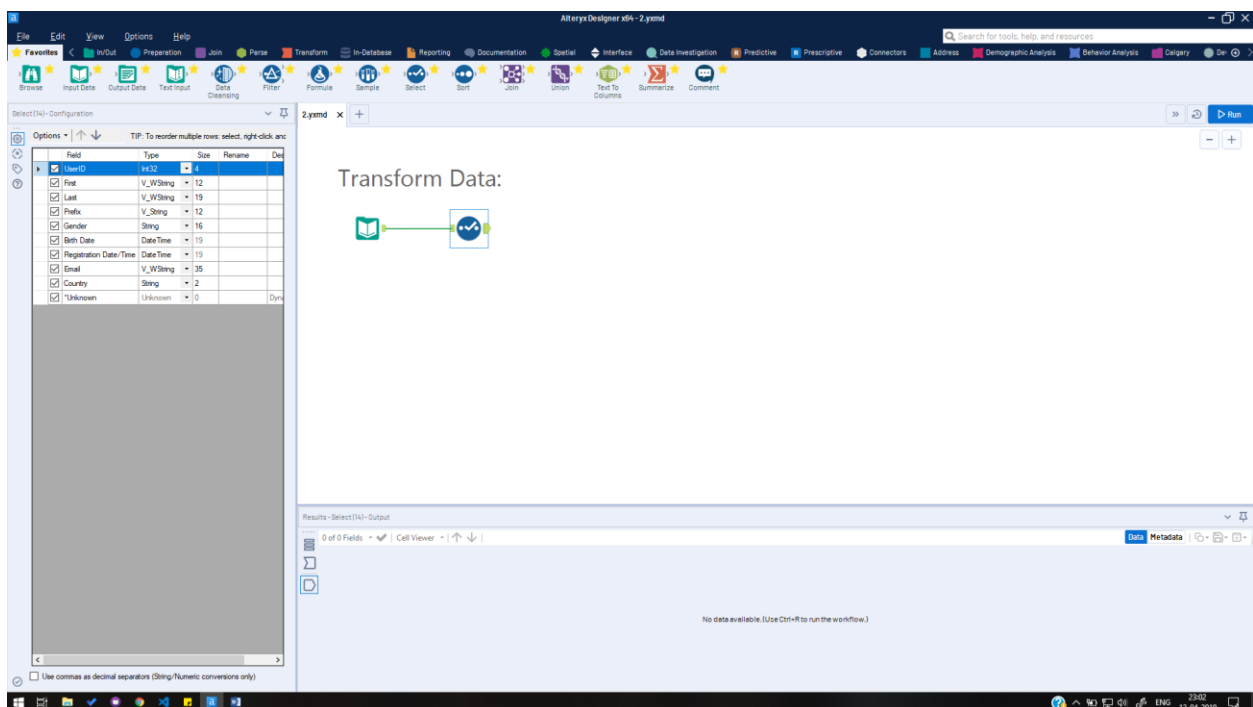


Experiment 2

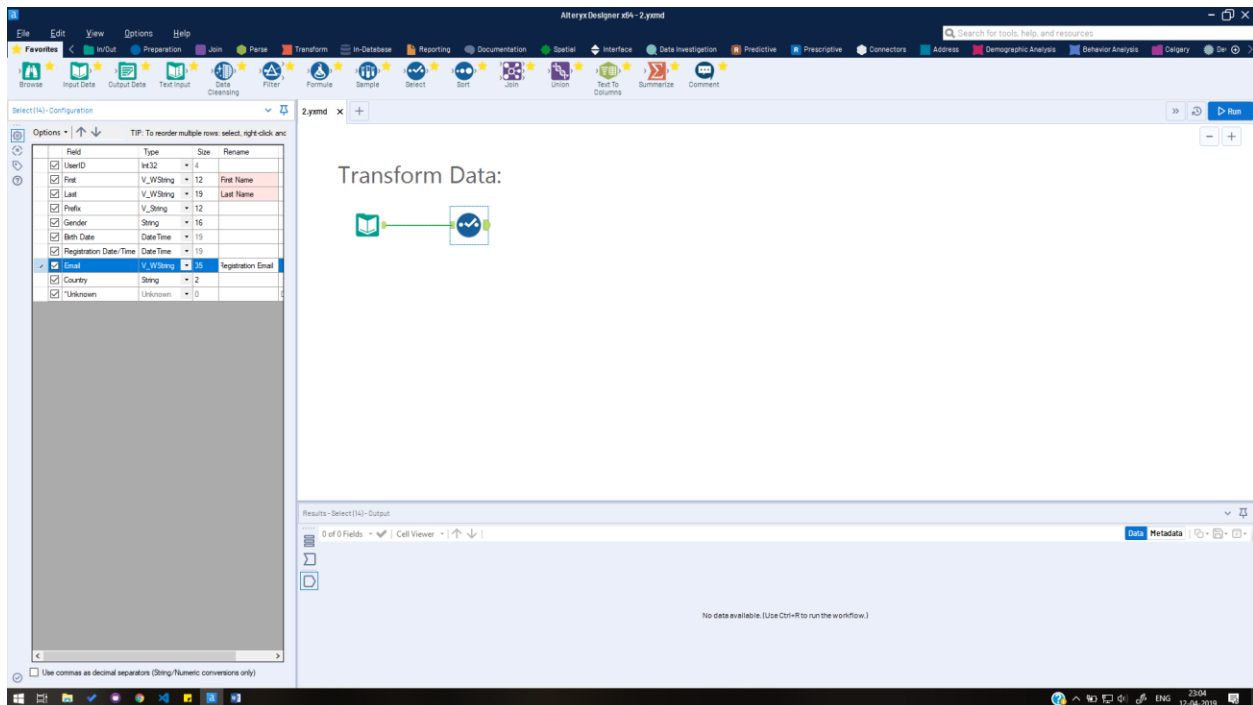
To understand how data is transformed in Alteryx i.e. modifying the column, cleansing data, adding a column and filtering of data.

Modifying Columns

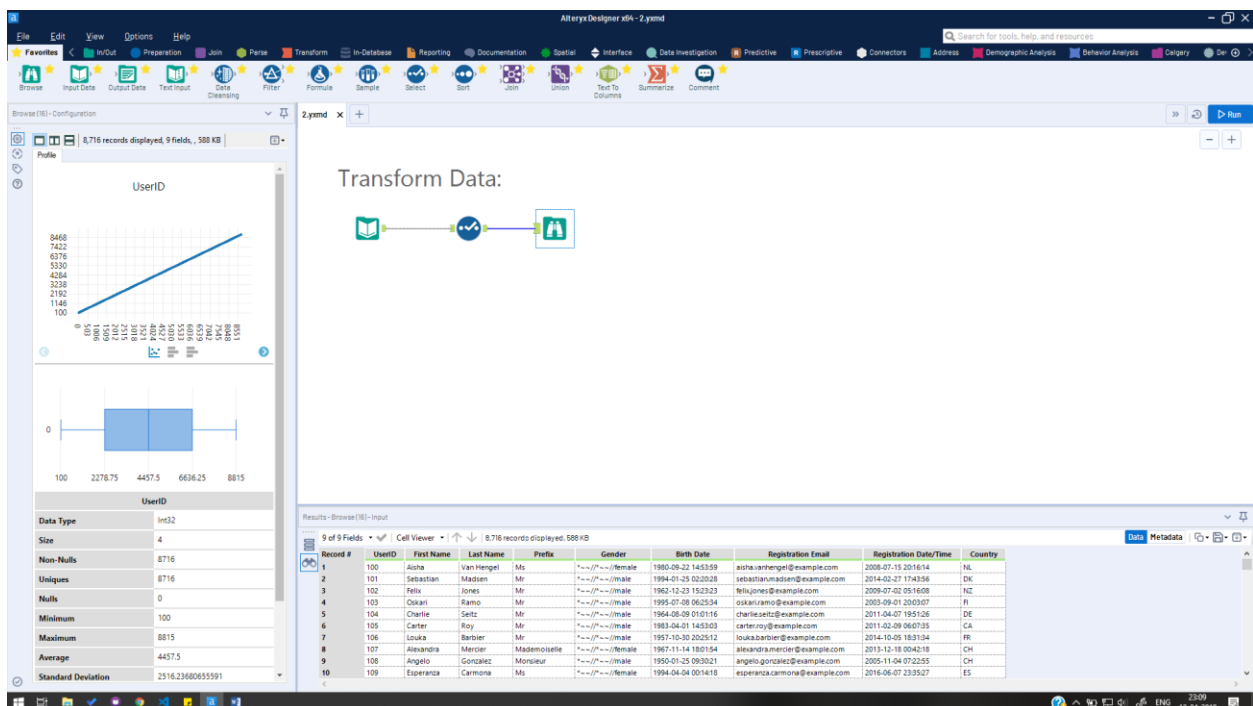
1. The data contains unclear column names and columns that are out of order.
2. Drag a Select tool onto the canvas from the toolbar and connect it to the Input Data tool.



3. In the Configuration window on the left, click the Rename text box for the "First" field. Type "First Name" to rename the field.
4. Rename these two additional fields:
Last - "Last Name"
Email - "Registration Email"

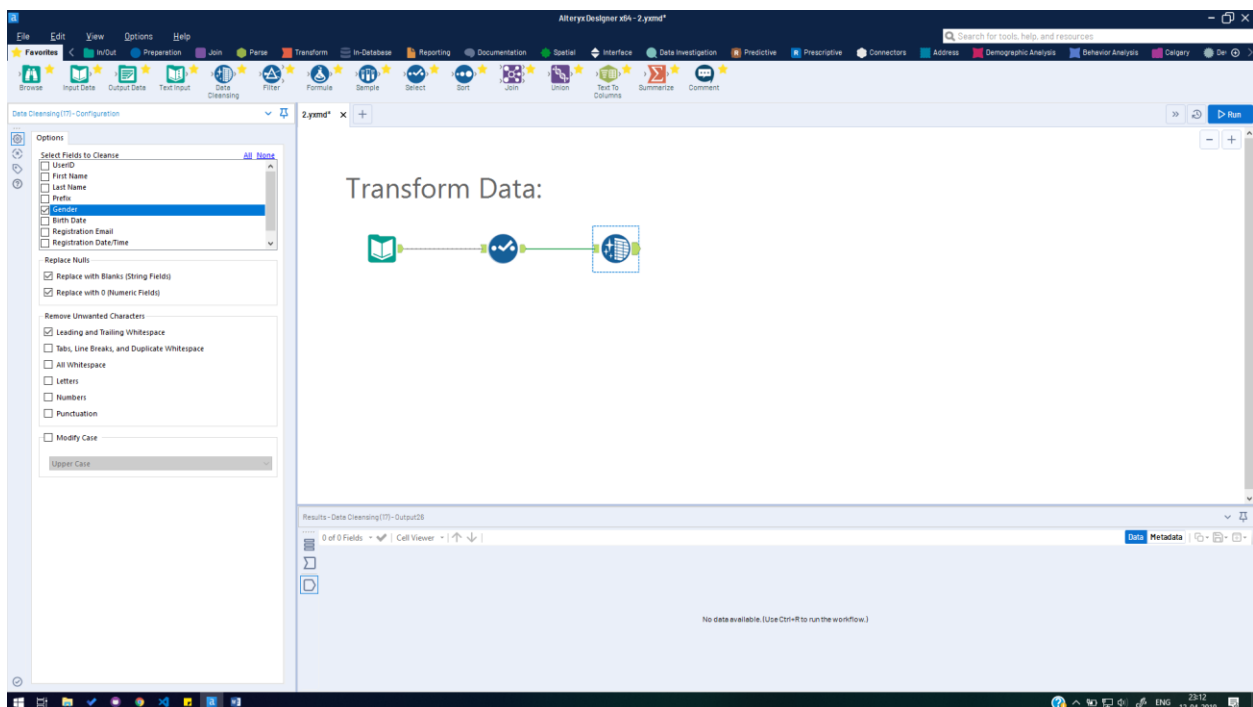


5. Locate Email. Right click and hold to drag Email above Registration Date/Time, or use the up arrow at the top of the configuration window.
6. Run the workflow. See the updated field names and order in the Results window.



Cleansing Data

1. The Gender column has unwanted characters ("*~//") and is formatted as lowercase text.
2. Drag a Data Cleanse tool onto the canvas from the toolbar and connect it to the Select tool.
3. In the Configuration window on the left, under "Select Fields to Cleanse", uncheck all columns except Gender.



4. Under Remove Unwanted Characters, select Punctuation. Select Modify Case and use the drop down to select Title Case.
5. Run the workflow. See the corrections to the Gender column in the Results window.

The screenshot shows the Alteryx Designer interface. On the left, the 'Data Cleansing (17)' tool is configured with the following options:

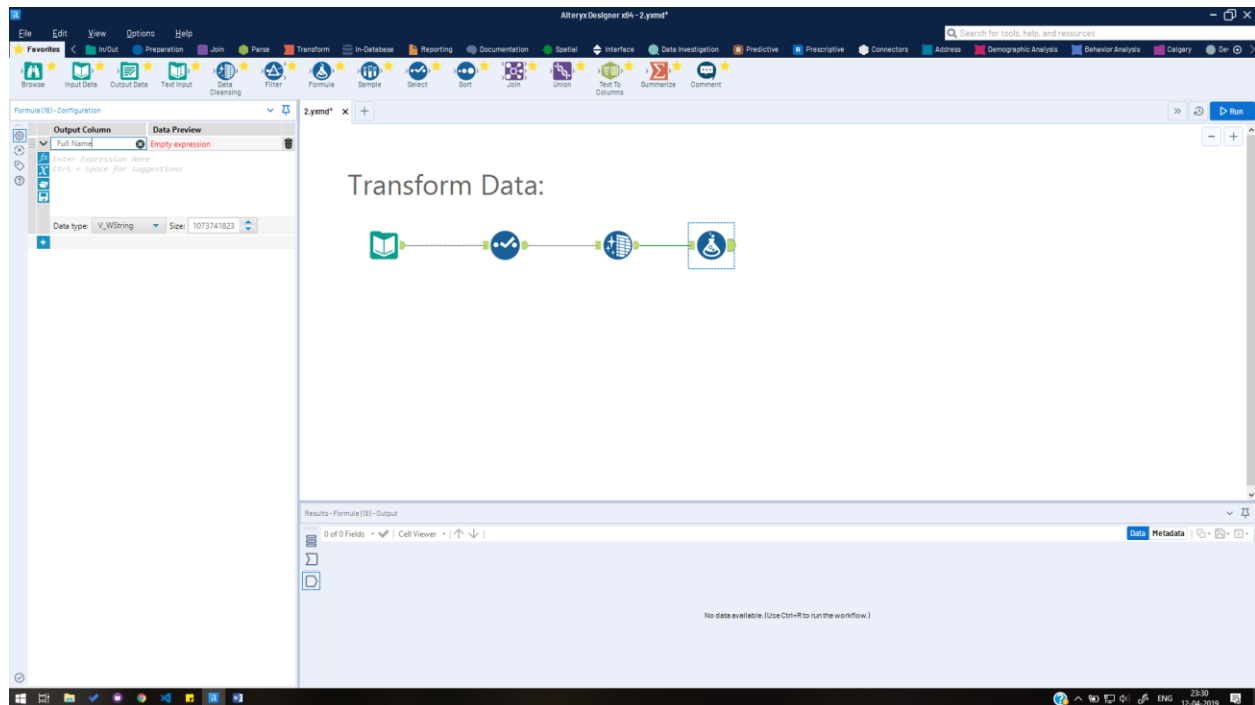
- Select Fields to Cleanse:** All fields are selected.
- Replace Nulls:**
 - ☒ Replace with Blanks (String Fields)
 - ☒ Replace with 0 (Numeric Fields)
- Remove Unwanted Characters:**
 - ☒ Leading and Trailing Whitespace
 - ☐ Tab, Line Break, and Duplicate Whitespace
 - ☐ All Whitespace
 - ☐ Letters
 - ☐ Numbers
 - ☒ Punctuation
- Modify Case:**
 - ☒ Title Case

The main canvas shows a workflow with three tools: 'Input Data', 'Data Cleansing', and 'Output Data'. The 'Output Data' tool is connected to the 'Data Cleansing' tool. The results are displayed in a table below the canvas:

Record #	UserID	First Name	Last Name	Prefix	Gender	Birth Date	Registration Email	Registration Date/Time	Country
1	100	Aisha	Van Hengel	Ms	Female	1980-09-22 14:53:59	aisha.vanhengel@example.com	2008-07-15 20:16:14	NL
2	101	Sebastian	Madsen	Mr	Male	1994-01-25 02:20:28	sebastianmadsen@example.com	2014-02-27 17:43:56	DK
3	102	Pella	Jones	Mr	Male	1962-12-23 15:23:23	pellajones@example.com	2009-07-02 05:16:08	NZ
4	103	Osairi	Ramo	Mr	Male	1993-07-08 06:25:34	osairiramo@example.com	2003-09-01 20:03:07	FR
5	104	Charlie	Seltz	Mr	Male	1964-08-09 01:01:16	charlie.seltz@example.com	2011-04-07 19:51:06	DE
6	105	Carter	Roy	Mr	Male	1983-04-01 14:53:03	carterroy@example.com	2011-02-09 06:07:35	CA
7	106	Louka	Barbier	Mr	Male	1957-10-30 20:25:12	louka.barbier@example.com	2014-10-09 18:31:34	FR
8	107	Alexandra	Mercier	Mademoiselle	Female	1965-11-14 18:01:54	alexandra.mercier@example.com	2013-10-18 00:40:18	CH
9	108	Angelo	Gonzalez	Monsieur	Male	1950-01-25 09:30:21	angelo.gonzalez@example.com	2005-11-04 07:22:55	CH
10	109	Esperanza	Carmona	Ms	Female	1994-04-04 00:14:18	esperanza.carmona@example.com	2016-06-07 23:35:27	ES

Adding a Column

1. A new column using existing data is needed.
2. Drag a Formula tool onto the canvas from the toolbar and connect it to the Data Cleanse tool.
3. In the Configuration window on the left, use the Select Column drop down to select "+ Add Column". Type "Full Name" as the name of the new column.



4. Data type and size can be adjusted under the Expression Editor. Keep the default Data type V_Wstring, and change Size to 35.
5. In the Expression Editor text box, which says Enter Expression Here, type the following expression: [First Name]+" "+[Last Name]
6. Run the workflow. See the new Full Name column in the Results window.

The screenshot shows the Alteryx Designer interface with the Formula tool selected. The 'Output Column' is 'Full Name' and the formula is '[First Name] + " " + [Last Name]'. The 'Data type' is 'V_String' and the 'Size' is '35'. The 'Results - Formula[18] - Output' pane shows a table with 10 records.

Record #	UserID	First Name	Last Name	Prefix	Gender	Birth Date	Registration Email	Registration Date/Time	Country	Full Name
1	100	Aisha	Van Hengel	Ms	Female	1980-09-22 14:53:59	aisha.vanhengel@example.com	2008-07-15 20:16:14	NL	Aisha Van Hengel
2	101	Sebastian	Madsen	Mr	Male	1994-01-25 02:20:28	sebastianmadsen@example.com	2014-02-27 17:43:56	DK	Sebastian Madsen
3	102	Felix	Jones	Mr	Male	1962-12-23 15:23:23	felixjones@example.com	2009-07-02 05:16:08	NZ	Felix Jones
4	103	Oskar	Rambo	Mr	Male	1995-07-08 06:25:34	oskar.rambo@example.com	2009-09-01 20:03:07	FR	Oskar Rambo
5	104	Charlie	Seltz	Mr	Male	1964-08-09 01:01:16	charlie.seltz@example.com	2011-04-07 19:51:26	DE	Charlie Seltz
6	105	Carter	Roy	Mr	Male	1983-04-01 14:53:03	carterroy@example.com	2011-02-09 06:07:35	CA	Carter Roy
7	106	Louka	Barbier	Mr	Male	1957-10-30 20:25:12	louka.barbier@example.com	2014-10-09 18:13:34	FR	Louka Barbier
8	107	Alexandra	Mercier	Mademoiselle	Female	1965-11-14 18:01:54	alexandra.mercier@example.com	2013-12-18 09:40:18	CH	Alexandra Mercier
9	108	Angelo	Gonzalez	Monsieur	Male	1950-01-25 09:30:21	angelo.gonzalez@example.com	2005-11-04 07:22:55	CH	Angelo Gonzalez
10	109	Esperanza	Carmona	Ms	Female	1994-04-04 00:14:15	esperanza.carmona@example.com	2016-06-07 23:55:27	ES	Esperanza Carmona

Filtering Data

1. Only data that meets a specific condition is needed.
2. Drag a Filter tool onto the canvas from the toolbar and connect it to the Formula tool.

The screenshot shows the Alteryx Designer interface with the Filter tool selected. The 'Select Basic or Custom Filter' pane shows the 'Basic filter' selected. The 'Filter' tool is connected to the 'Formula' tool. The 'Results - Filter[18] - Out - True' pane shows '0 of 0 Fields' and 'No data available. (Use Ctrl+R to run the workflow.)'.

3. In the Configuration window on the left, confirm that Basic Filter is selected. Use the Select column dropdown to select Country. In the next drop down, select the operator Equals. In the text box, type "US".
4. Run the workflow to see the results in the Results window. Click between the T (True) and F (False) results pages or corresponding tool anchors to see which records did and did not meet the conditions of the filter expression.

The screenshot shows the Alteryx Designer interface with the Filter tool configured to filter records where Country equals "US". The Results window displays 10 of 10 fields and 588 records.

Record #	UserID	First Name	Last Name	Prefix	Gender	Birth Date	Registration Email	Registration Date/Time	Country	Full Name
1	113	Cassandra	Murray	Mrs	Female	1961-08-16 22:00:04	cassandra.murray@example.com	2008-08-12 22:50:08	US	Cassandra Murray
2	117	Isaac	Fisher	Mr	Male	1989-12-27 18:58:20	isaac.fisher@example.com	2007-03-28 02:35:53	US	Isaac Fisher
3	130	Tomothy	Simpson	Mr	Male	1992-07-03 01:55:21	tomothy.simpson@example.com	2009-10-17 2:35:53	US	Tomothy Simpson
4	166	Linda	Pick	Mrs	Female	1993-04-14 14:54:43	lindapick@example.com	2015-10-12 09:38:29	US	Linda Pick
5	168	Noelle	Collins	Miss	Female	1989-06-08 05:50:35	noelle.collins@example.com	2011-08-12 09:35:17	US	Noelle Collins
6	189	Terry	Olson	Mr	Male	1956-06-07 22:36:15	terry.olson@example.com	2005-12-03 07:31:30	US	Terry Olson
7	173	Tom	Rogers	Mr	Male	1983-05-24 14:28:54	tom.rogers@example.com	2015-05-20 10:15:23	US	Tom Rogers
8	191	Mae	Carroll	Miss	Female	1956-04-19 09:50:25	mae.carroll@example.com	2004-11-19 03:50:11	US	Mae Carroll
9	216	Marcus	Howard	Mr	Male	1974-03-26 05:40:05	marcus.howard@example.com	2011-04-07 13:17:59	US	Marcus Howard
10	233	Ricardo	Simmons	Mr	Male	1993-06-17 18:19:21	ricardo.simmons@example.com	2006-05-08 20:52:09	US	Ricardo Simmons

The screenshot shows the Alteryx Designer interface with the Filter tool configured to filter records where Country equals "US". The Results window displays 10 of 10 fields and 5,368 of 8,127 records (partial results).

Record #	UserID	First Name	Last Name	Prefix	Gender	Birth Date	Registration Email	Registration Date/Time	Country	Full Name
1	100	Aisha	Van Hengel	Mrs	Female	1980-09-22 14:35:59	aisha.vanhengel@example.com	2008-07-15 20:14:14	NL	Aisha Van Hengel
2	101	Sebastian	Madsen	Mr	Male	1994-01-23 02:20:28	sebastian.madsen@example.com	2014-02-27 17:43:56	DK	Sebastian Madsen
3	102	Felix	Jones	Mr	Male	1962-12-23 15:23:23	felix.jones@example.com	2009-07-02 05:16:08	NZ	Felix Jones
4	103	Oskari	Ramo	Mr	Male	1995-07-08 06:25:34	oskariramo@example.com	2003-09-01 20:03:07	FI	Oskari Ramo
5	104	Charlie	Setz	Mr	Male	1964-08-09 01:01:16	charlie.setz@example.com	2011-04-07 19:51:26	DE	Charlie Setz
6	105	Carter	Roy	Mr	Male	1983-04-01 14:53:03	carterroy@example.com	2011-02-09 06:07:33	CA	Carter Roy
7	106	Louka	Barbier	Mr	Male	1957-10-30 20:25:12	louka.barbier@example.com	2014-10-05 18:31:34	FR	Louka Barbier
8	107	Alexandra	Mercier	Mademoiselle	Female	1967-11-14 18:01:54	alexandra.mercier@example.com	2013-12-18 00:42:18	CH	Alexandra Mercier
9	108	Angelo	Gonzalez	Monsieur	Male	1950-01-25 09:30:21	angelo.gonzalez@example.com	2005-11-04 07:22:55	CH	Angelo Gonzalez
10	109	Esperanza	Camrona	Mrs	Female	1994-04-04 00:14:15	esperanza.camrona@example.com	2016-08-07 23:55:27	ES	Esperanza Camrona