Adding and removing columns in attribute tables

"Underlying each vector layer in QGIS is a flat table - the columns of which can be removed or added."

Behind every vector layer in QGIS you will find a data table (attribute table). The data in this table describe the attributes of each feature. Depending on the origin of this data, the table can be a relational database table or view, a file-based table (e.g. .dbf or .csv) or remote data (e.g. a WFS layer). When QGIS has the needed permissions to edit the actual structure of that table, you can use its field management functions to do so. In this exercise we will take a look how.
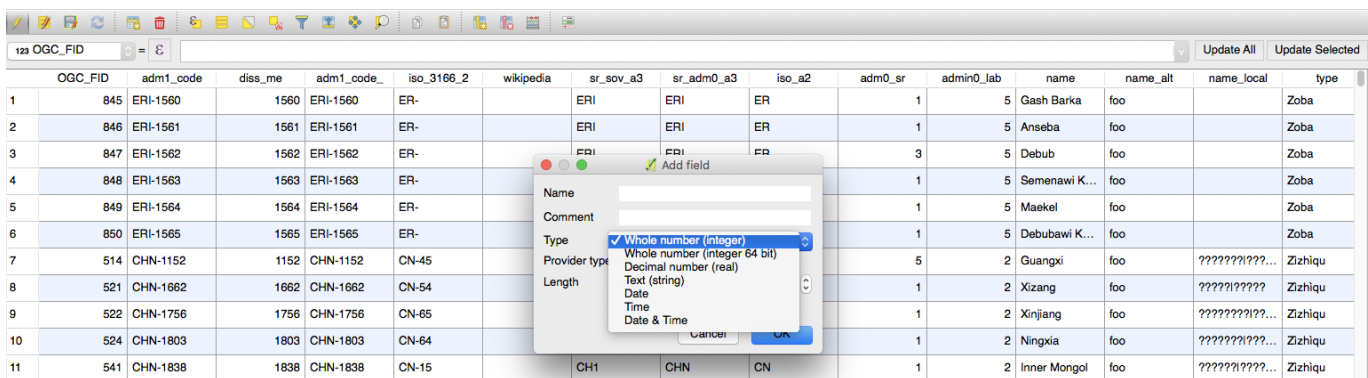
You try:

Goal: To add and remove columns from a layer's data table

- Load the Countries layer from ne.sqlite provided in the exercise data.
- Open the attribute table for the layer
- Enable the editing mode
- Use the delete fields function to remove the columns listed in the specification table below
- Use the new field column to add a new column called 'visited' giving it the options listed in the specification table below
- Save your table edits

Check your results

Scroll across to the right of the table - do you see your newly added column?

Name	Expectation
Countries layer	ne_10m_admin_0_countries in the ne.sqlite database provided in exercise data
Fields to delete	name_alt, name_local

Field to add	
• name	visited
• comment	Have I visited this country
• type	text
• length	3

ℹ️ More about

- You can also manage the columns for the data table in the layer properties dialogue.
- Some formats (e.g. shapefile) place limits on the number of columns you can have and on the length of the field names you can use - in particular, shapefiles limit you to 10 characters
- You need to ensure you have the needed permissions to add and remove columns - especially if the data source is a relational database.
- Think carefully before you delete a column - once the data is gone there is no 'undo' option to get it back!
- You should choose an appropriate type for new columns when you add them - the following are supported:

Type	Notes
Whole number (integer and 64-bit integer)	Use 64 bit when you need to store large whole numbers
Decimal	Use when storing floating point numbers
Text	Use for free-form text - be sure to choose an appropriate length
Date	Use for storing dates (without time)
Time	Use for storing times (without dates)
Date & time	Use when you need to store both date and time

✅ Check your knowledge:

1. After removing a column and saving your edits, you can press undo to get it back again:
    a. *True*
    b. *False*

2. Indicate which statements are correct:
    a. *there is no limit to the number of columns you can have*
    b. *when creating a column some column types require that you set the field length*
    c. *the only place to manage fields / columns is the table view*

📋 Further reading:

- Attribute_table: https://docs.qgis.org/2.18/en/docs/user_manual/working_with_vector/attribute_table.html

Download the sample data for the lesson from http://changelog.kartoza.com/media/images/lesson/worksheet/external_data/69439f4c83a5f7412332f844145c471407639029.zip.