Import shapefiles in Visual Analytics 8.5

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The goal of this training

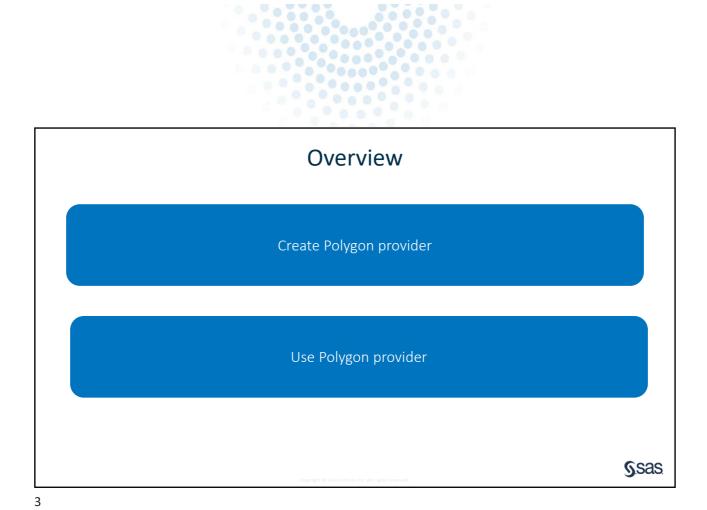MS_ACCT, MS_ACCT_WITH_DEAD_30_DAYS by CD_MUNTY_REFNIS

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Overview

Create Polygon provider

Use Polygon provider

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Examining the shape file content

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Shape file
Overview of content

Mandatory files
- `.shp` — shape format; the feature geometry itself
- `.shx` — shape index format; a positional index of the feature geometry to allow seeking forwards and backwards quickly
- `.dbf` — attribute format; columnar attributes for each shape, in dBase IV format
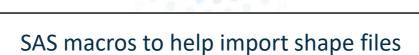
Other files
- `.prj` — projection description, using a well-known text representation of coordinate reference systems
- `.sbn` and `.sbx` — a spatial index of the features
- `.fbn` and `.fbx` — a spatial index of the features that are read-only
- `.ain` and `.aih` — an attribute index of the active fields in a table
- `.ixs` — a geocoding index for read-write datasets
- `.mxs` — a geocoding index for read-write datasets (ODB format)
- `.atx` — an attribute index for the `.dbf` file in the form of *shapefile.columnname*`.atx` (ArcGIS 8 and later)
- `.shp.xml` — geospatial metadata in XML format, such as ISO 19115 or other XML schema
- `.cpg` — used to specify the code page (only for `.dbf`) for identifying the character encoding to be used
- `.qix` — an alternative quadtree spatial index used by MapServer and GDAL/OGR software

Source: https://en.wikipedia.org/wiki/Shapefile

§sas

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Mapshaper.org
Nice tool to verify the content of a shapefile

§sas

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§sas

SAS macros to help import shape files

SAS provides two macros to help import shape files

- The **%SHPCNTNT** macro displays the contents of the specified shapefile. You can use the %SHPCNTNT macro to identify which variable in the shapefile should be used as an ID variable.

- The **%SHPIMPRT** macro converts the shapefile into a SAS data set and then loads it into CAS.
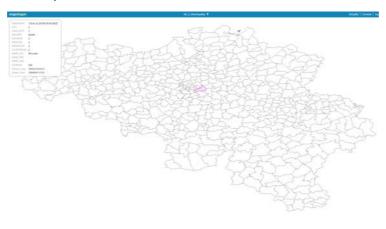
Link to documentation:
https://go.documentation.sas.com/?cdcId=calcdc&cdcVersion=3.5&docsetId=caldatamgmtcas&docsetTarget=p1dwawsidsczlpn121j0glleicxp.htm&locale=en
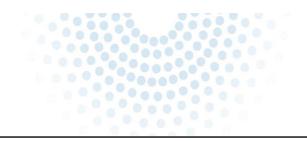
§sas.

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Exercise 1: Investigate shapefile

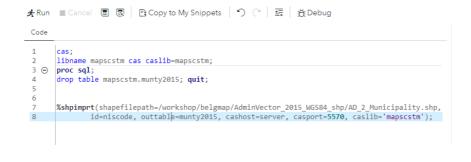In this exercise we use mapshaper.org and %SHPCNTNT to investigate the content of the shapefile.

§sas.

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Exercise 2: Import shapefile to Viya

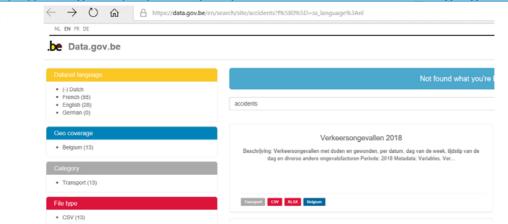In this exercise we use %SHPIMPRT to import the shapefile into a CAS dataset

```
Run    Cancel         Copy to My Snippets              Debug

Code

1    cas;
2    libname mapscstm cas caslib=mapscstm;
3 ⊖  proc sql;
4    drop table mapscstm.munty2015; quit;
5
6
7    %shpimprt(shapefilepath=/workshop/belgmap/AdminVector_2015_WGS84_shp/AD_2_Municipality.shp,
8            id=niscode, outtable=munty2015, cashost=server, casport=5570, caslib='mapscstm');
```

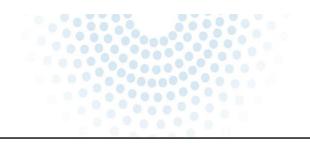Ssas.

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Exercise 3: Import Accident Data

To test the imported shapefile a set of testdata with belgian Traffic Accidents is imported.

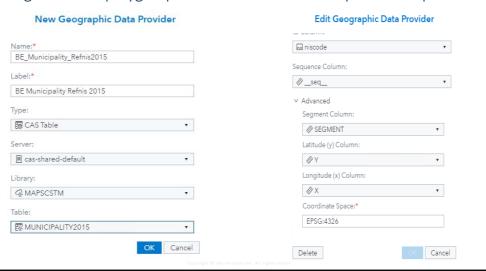https://data.gov.be/en/search/site/accidents?f%5B0%5D=ss_language%3Anl

Ssas.

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Ssas

Exercise 4: Create custom polygon provider

Defining a custom polygon provider based on the imported shapefile.

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Exercise 5: Reduce the density of shape data

To speed up the rendering of shapes on maps, the density of the shapedata can be reduced. In some instances (like the one we have), reducing the density is necessary to be able to show all shapes.

In this exercise we will use mapshaper.org to reduce the shapedata.

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