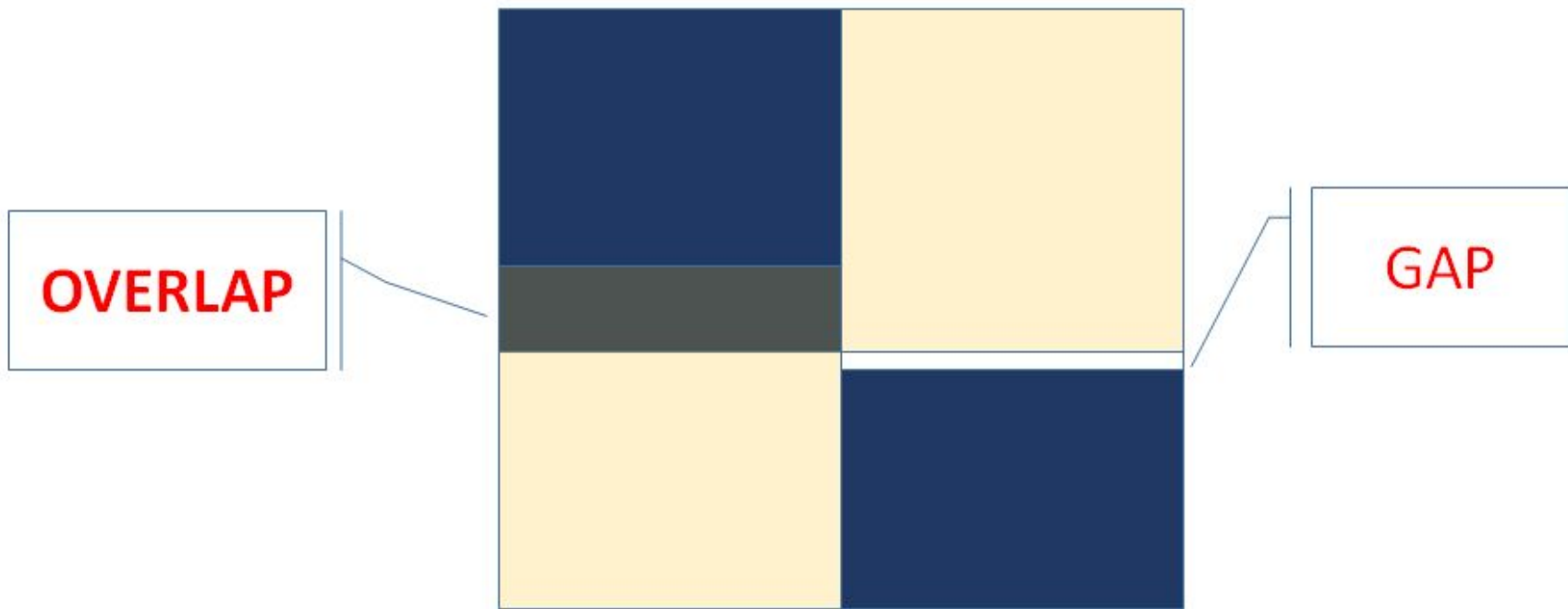


Kiosk: Topology

Sample data from Lebanon

Reminder:

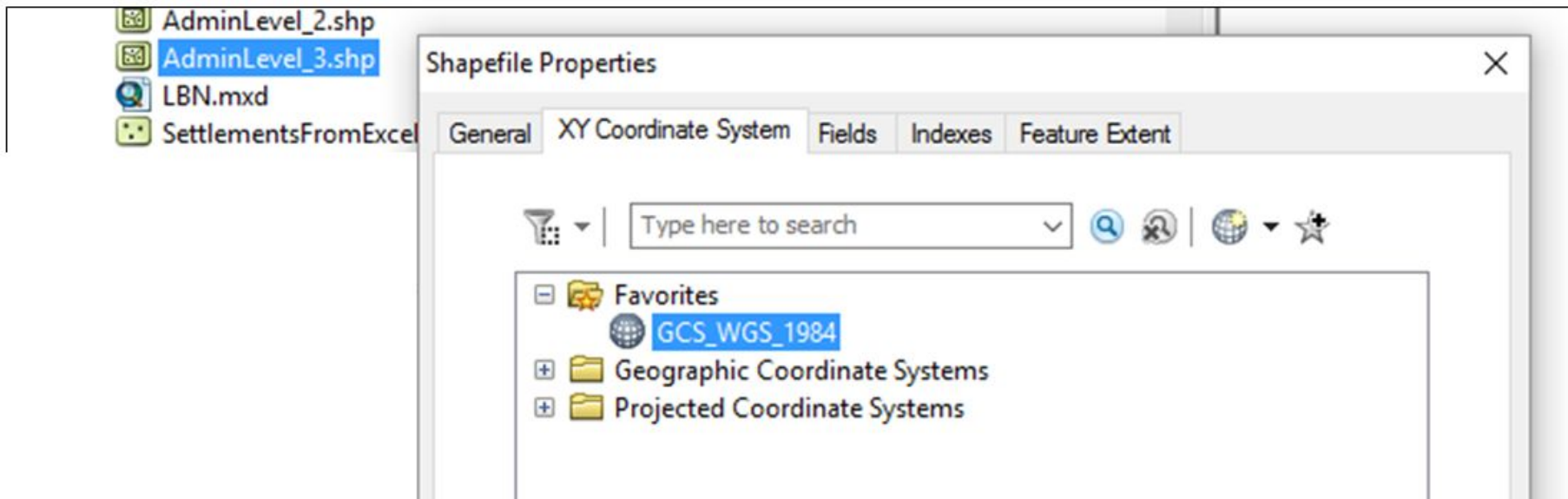
Topology: refers to errors within a SINGLE dataset. Generally overlapping boundaries, or gaps between shared boundaries



1. Look at data properties in ArcCatalog

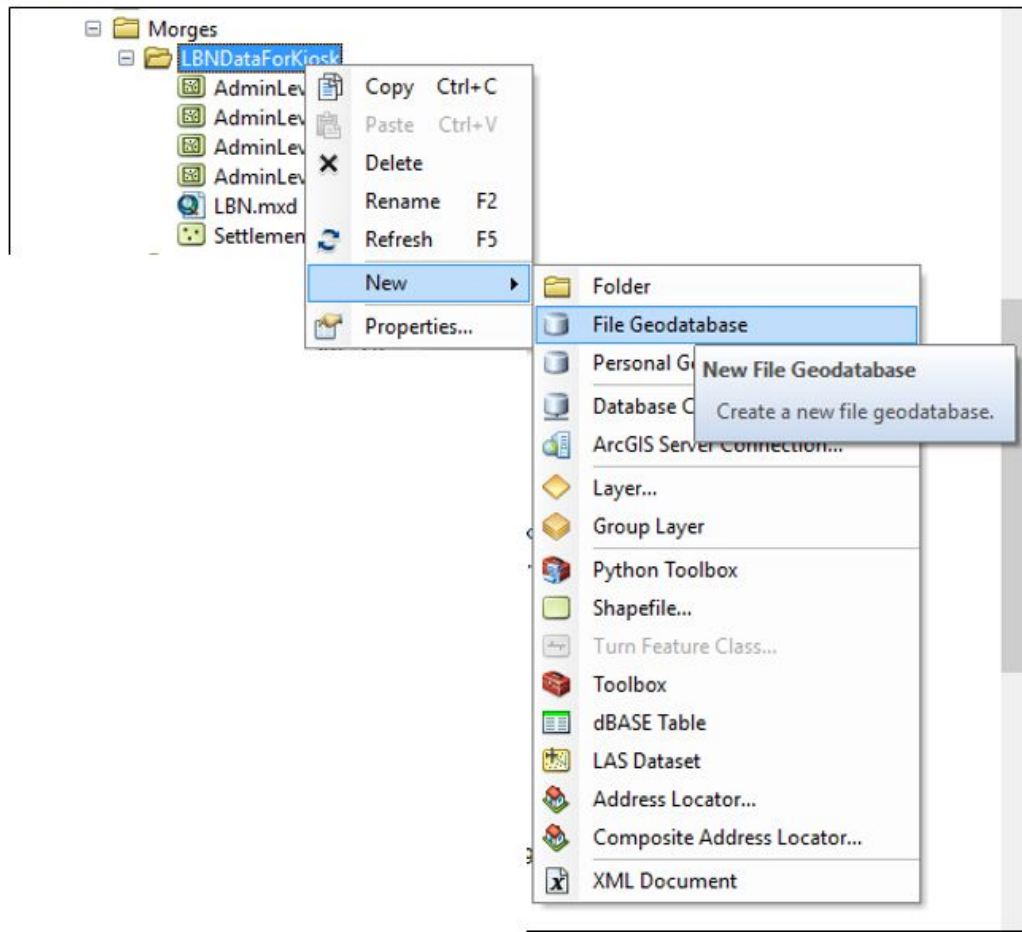
Make sure projection is defined

Undefined projections will cause issues in cluster tolerances
and lead to negative results



2. Create GDB

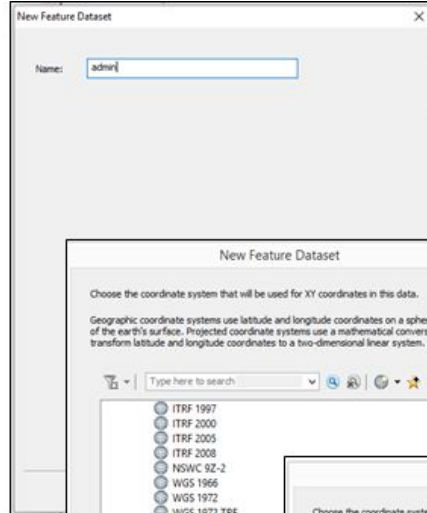
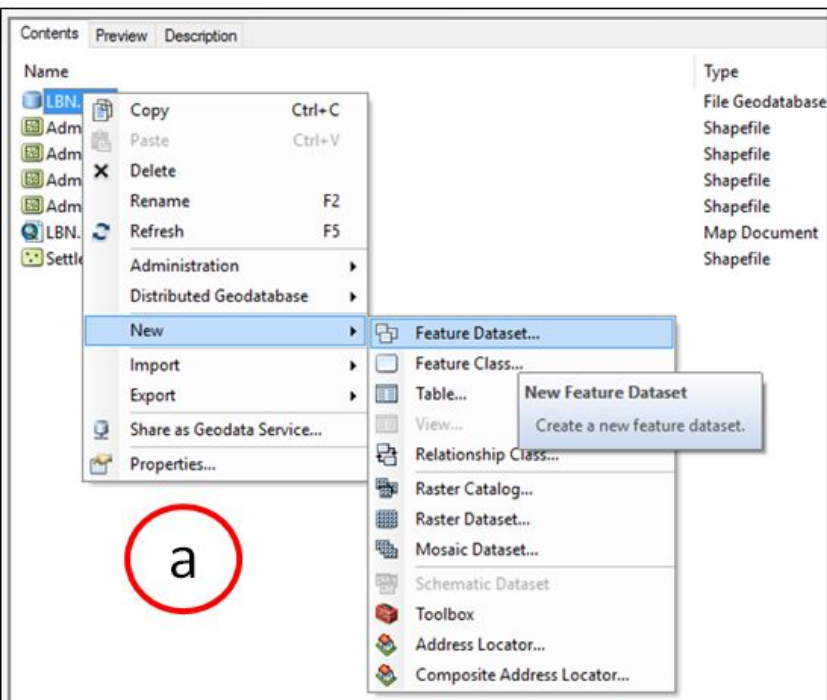
Create a new file geodatabase



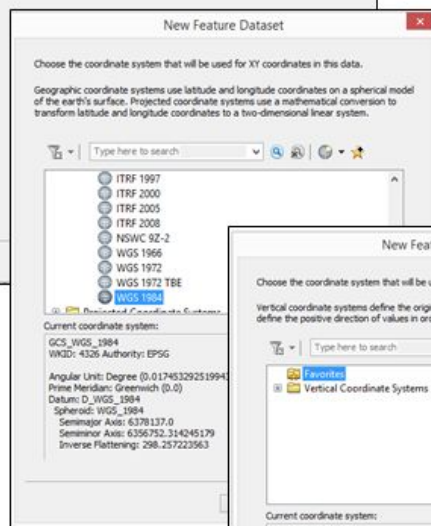
Contents	Preview	Description
Name		
LBN.gdb		
AdminLevel_0.shp		
AdminLevel_1.shp		
AdminLevel_2.shp		
AdminLevel_3.shp		
LBN.mxd		
SettlementsFromExcel.shp		

4. Create FD

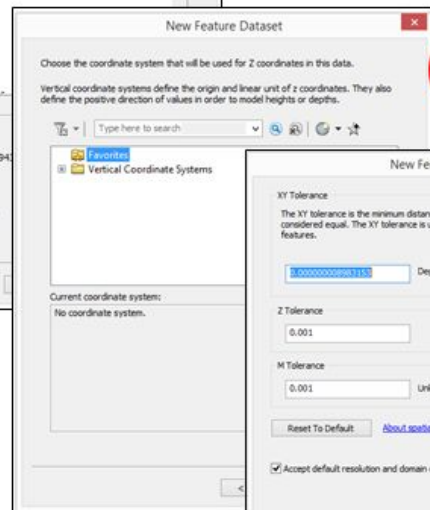
Create a new Feature Dataset



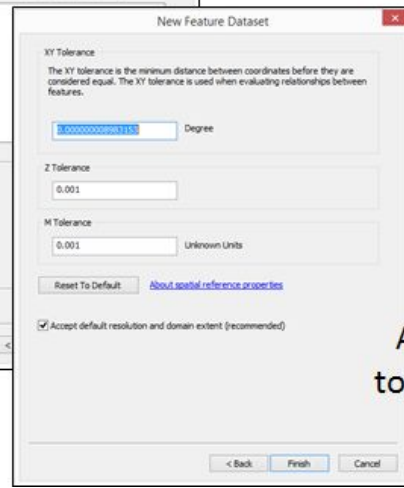
Name FD



Same projection as input data



Z values are not an issue



Accept tolerance

4. Import data to FD

Import shapefile into new Feature Dataset

The screenshot shows the 'Contents' pane in ArcGIS Desktop. The 'admin' folder is selected, and a context menu is open. The 'Import' option is highlighted, and a sub-menu is visible with 'Feature Class (single)...' selected. A callout box points to this option with the text: 'Import Feature Class (single) Import a feature class into this geodatabase.'

Name	Type
admin	File Geodatabase Feature Dataset

- Copy Ctrl+C
- Paste Ctrl+V
- Delete
- Rename F2
- Refresh F5
- Manage
- New
- Import**
 - Feature Class (single)...**
 - Feature Class (multiple)...
- Export
- Properties...

The screenshot shows the 'Feature Class to Feature Class' dialog box. The 'Input Features' field is set to a file path. The 'Output Location' field is also set to a file path. The 'Output Feature Class' field is set to 'admin3'. The 'Field Map (optional)' section is expanded, showing a list of fields: AREA (Float), ACS_CODE (Double), Name (Text), ACS_CODE_1 (Double), CAD_CODE_1 (Text), MOH_CODE (Text), MOH_NA1 (Text), Kadaa_Code (Text), KADA_NA (Text), and UN_ID (Double). The 'Geodatabase Settings (optional)' section is collapsed. The 'Output Feature Class' section on the right contains the text: 'The name of the output feature class.'

Feature Class to Feature Class

Input Features
[Path]

Output Location
[Path]

Output Feature Class
admin3

Expression (optional)

Field Map (optional)

- (F) AREA (Float)
- (D) ACS_CODE (Double)
- (T) Name (Text)
- (D) ACS_CODE_1 (Double)
- (T) CAD_CODE_1 (Text)
- (T) MOH_CODE (Text)
- (T) MOH_NA1 (Text)
- (T) Kadaa_Code (Text)
- (T) KADA_NA (Text)
- (D) UN_ID (Double)

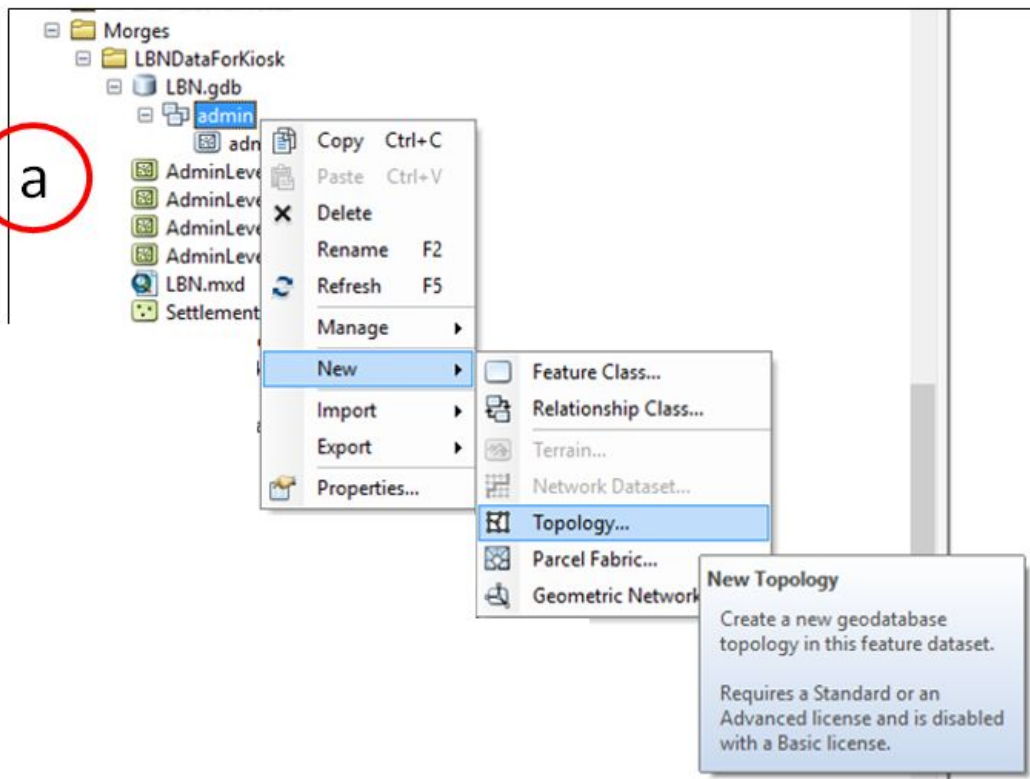
Geodatabase Settings (optional)

Output Feature Class
The name of the output feature class.

OK Cancel Environments... << Hide Help Tool Help

5. Create topology layer in FD

a



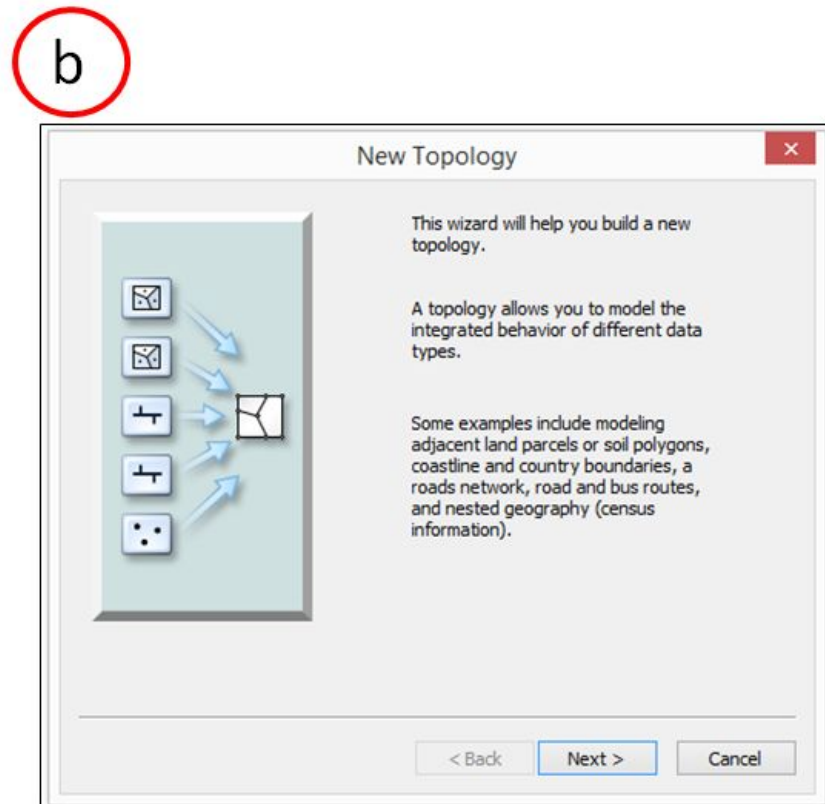
The screenshot shows the ArcGIS Desktop interface. In the left-hand pane, a folder tree is visible with the following structure:

- Morges
 - LBNDDataForKiosk
 - LBN.gdb
 - admin (selected)
 - adr
 - AdminLevel
 - AdminLevel
 - AdminLevel
 - AdminLevel
 - LBN.mxd
 - Settlement

A context menu is open over the 'admin' folder, with the 'New' option selected. The 'New' submenu is also open, and 'Topology...' is highlighted. A tooltip for 'New Topology' is displayed, containing the following text:

New Topology
Create a new geodatabase topology in this feature dataset.
Requires a Standard or an Advanced license and is disabled with a Basic license.

b



The screenshot shows the 'New Topology' wizard dialog box. The title bar reads 'New Topology'. The dialog contains the following text:

This wizard will help you build a new topology.

A topology allows you to model the integrated behavior of different data types.

Some examples include modeling adjacent land parcels or soil polygons, coastline and country boundaries, a roads network, road and bus routes, and nested geography (census information).

At the bottom of the dialog, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted.

Set tolerances, select layers

If projection is defined you can accept tolerances

New Topology


Enter a name for your topology:

Enter a cluster tolerance:
 Decimal Degrees

The cluster tolerance is a distance range in which all vertices and boundaries are considered identical, or coincident. Vertices and endpoints falling within the cluster tolerance are snapped together.


The default value is based on the XY tolerance of the feature dataset. You cannot set the cluster tolerance smaller than the XY tolerance.

< Back **Next >** Cancel



New Topology


Select the feature classes that will participate in the topology:

 admin3

Select All
Clear All

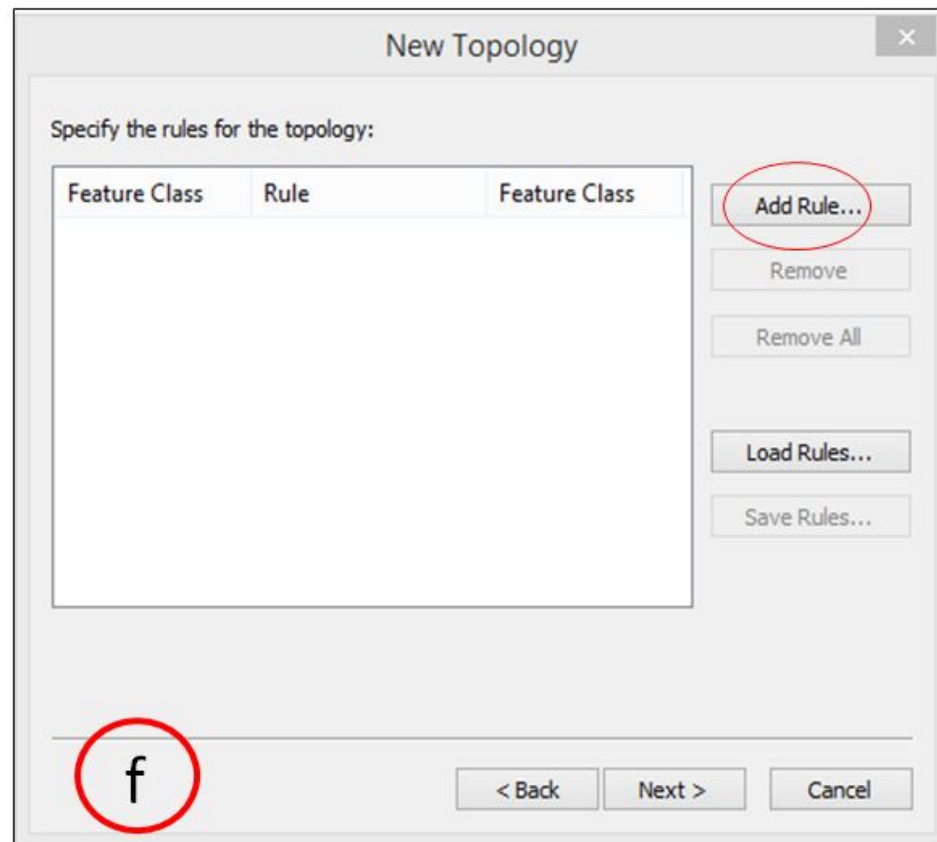
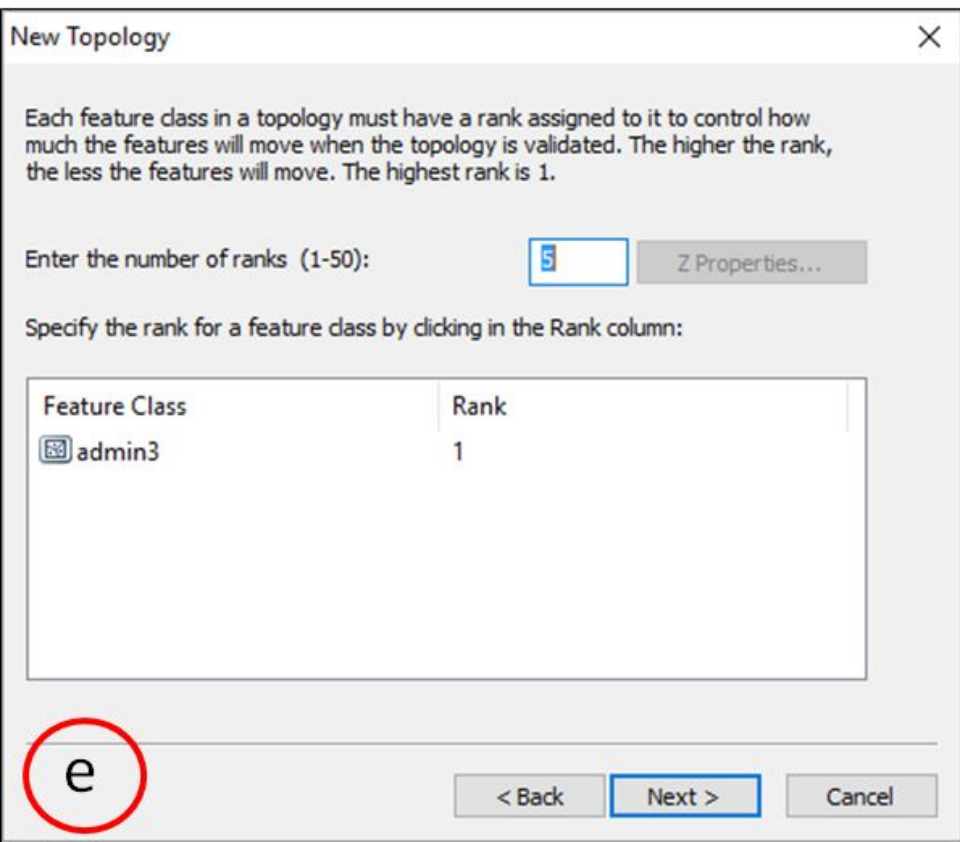
d

< Back **Next >** Cancel



Rank data, add rules

You don't need to rank data if you are only working with a single layer



Add 2 rules: must not overlap or gap

New Topology

Specify the rules for the topology:


Add Rule

Features of feature class:
admin3


Rule:
Must Not Overlap

Feature class:


Rule Description



An area must not overlap another area from the same layer.



Any area where features overlap is an error.



Show Errors

OK Cancel

g

< Back Next > Cancel

New Topology


Specify the rules for the topology:

Add Rule


Features of feature class:
admin3

Rule:
Must Not Overlap
Must Not Overlap
Must Not Have Gaps
Must Not Overlap With
Must Be Covered By Feature Class Of
Must Cover Each Other
Must Be Covered By
Boundary Must Be Covered By
Area Boundary Must Be Covered By Boundar
Contains Point
Contains One Point


Rule Description



A void can not exist between areas in the same layer.



The boundary of any void that does exist is an error.



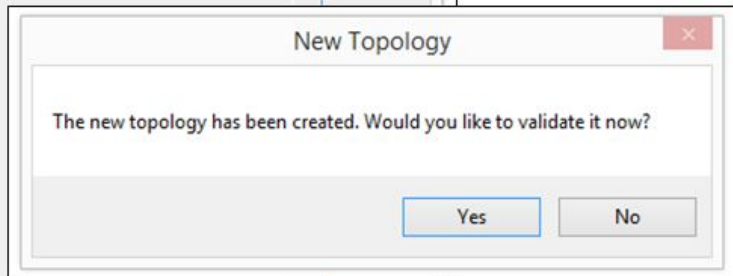
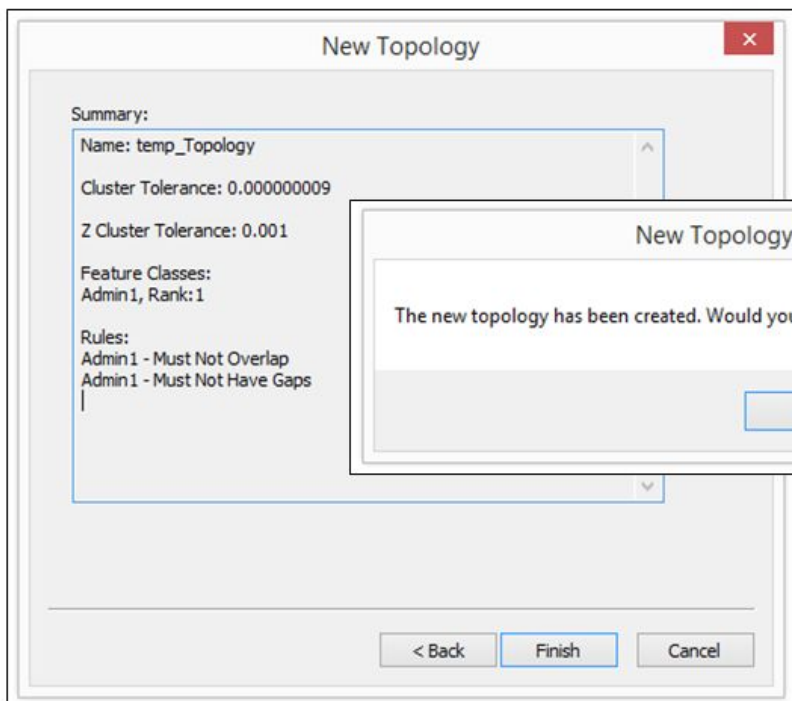
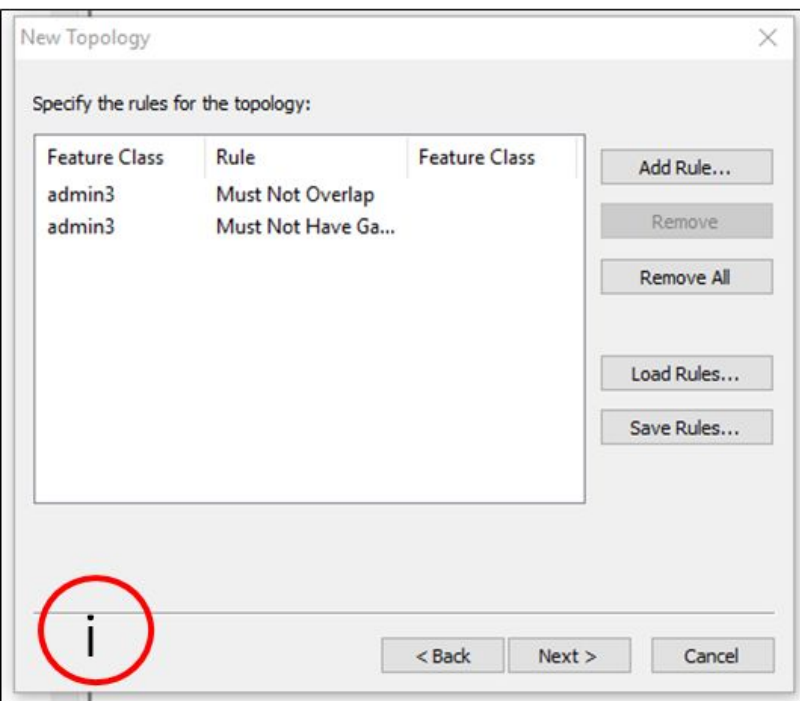
Show Errors

OK Cancel

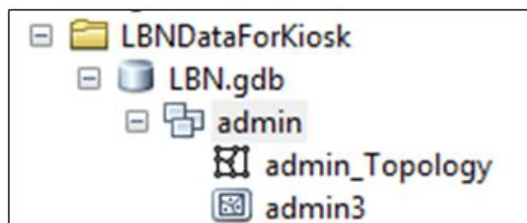
h

< Back Next > Cancel

Review rules, validate

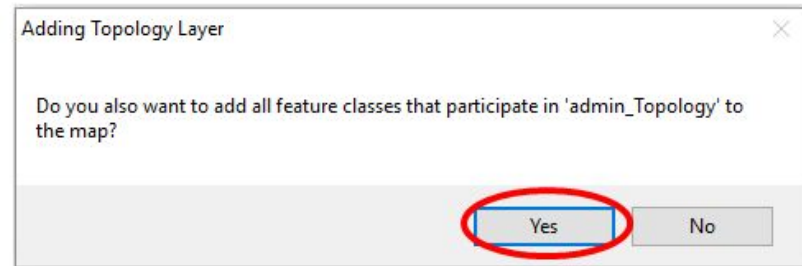
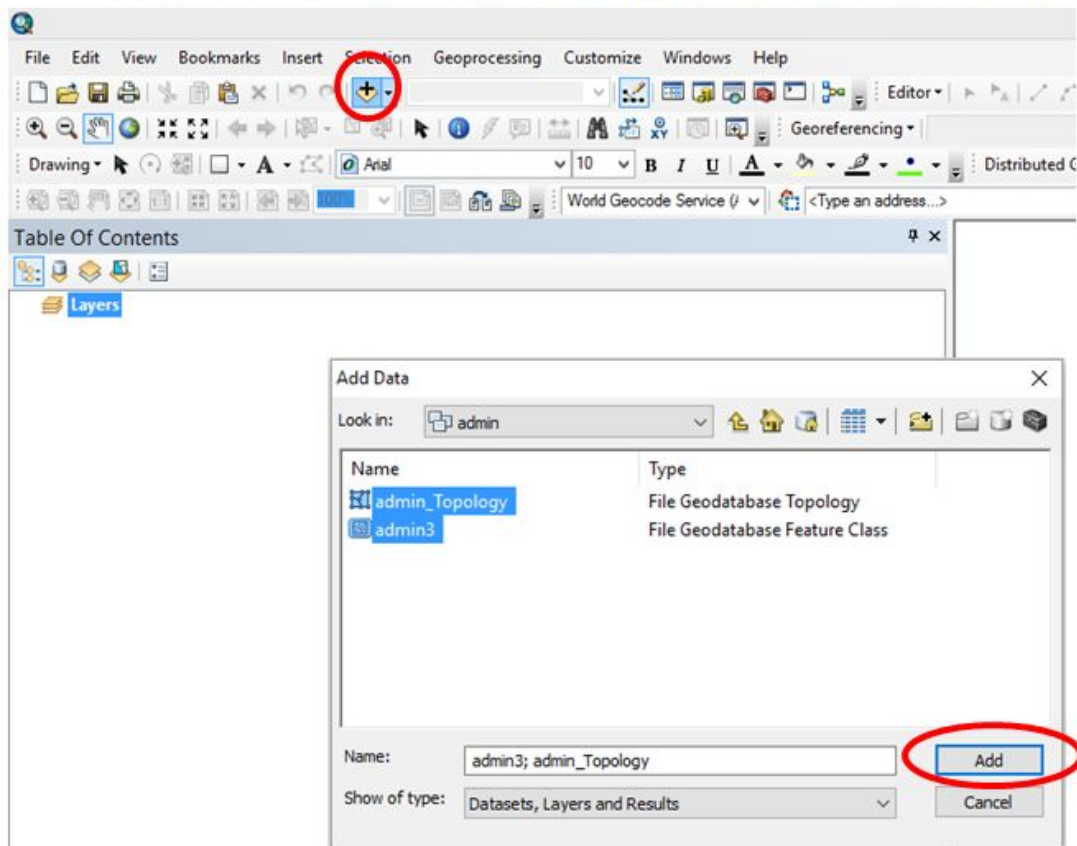


Result

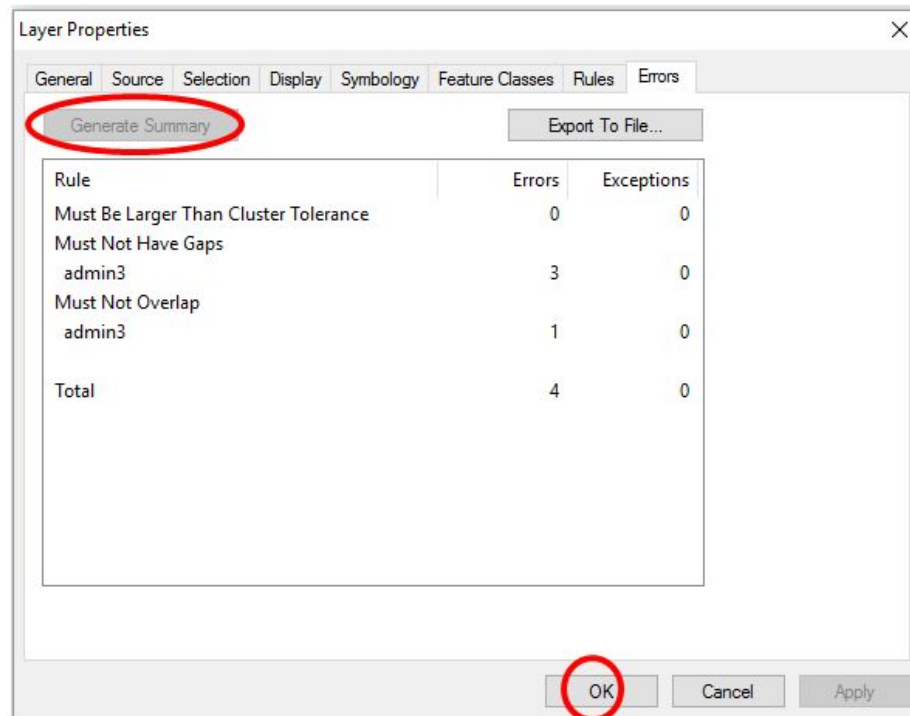
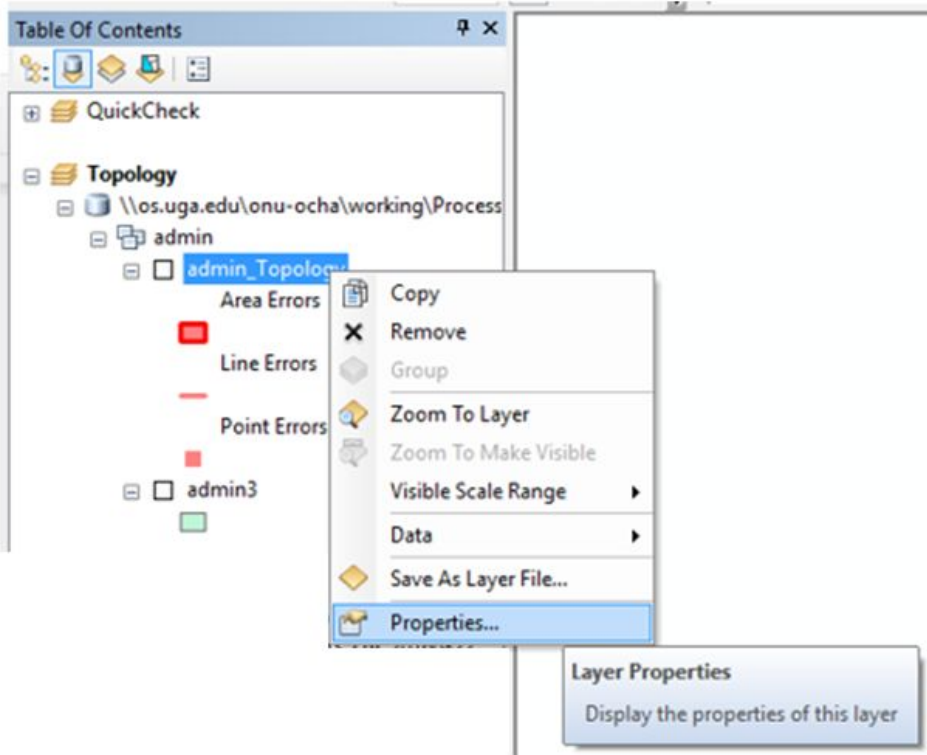


6. Open Desktop and add FC and topology to data frame

If you are asked to add other layers that participate in topology say yes

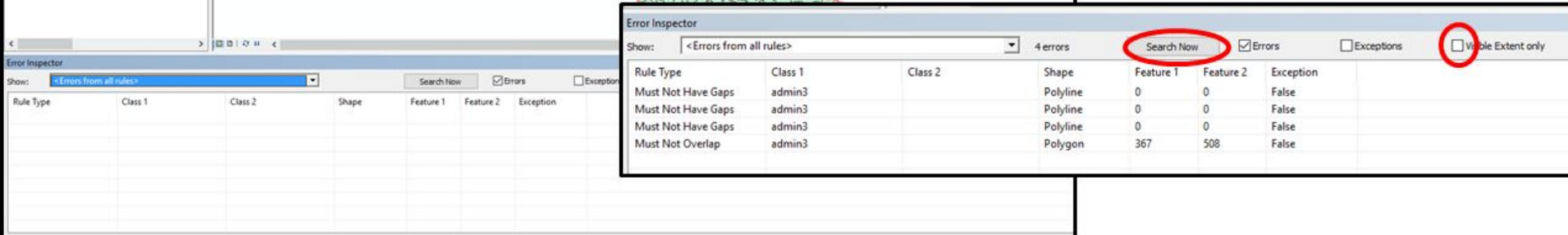
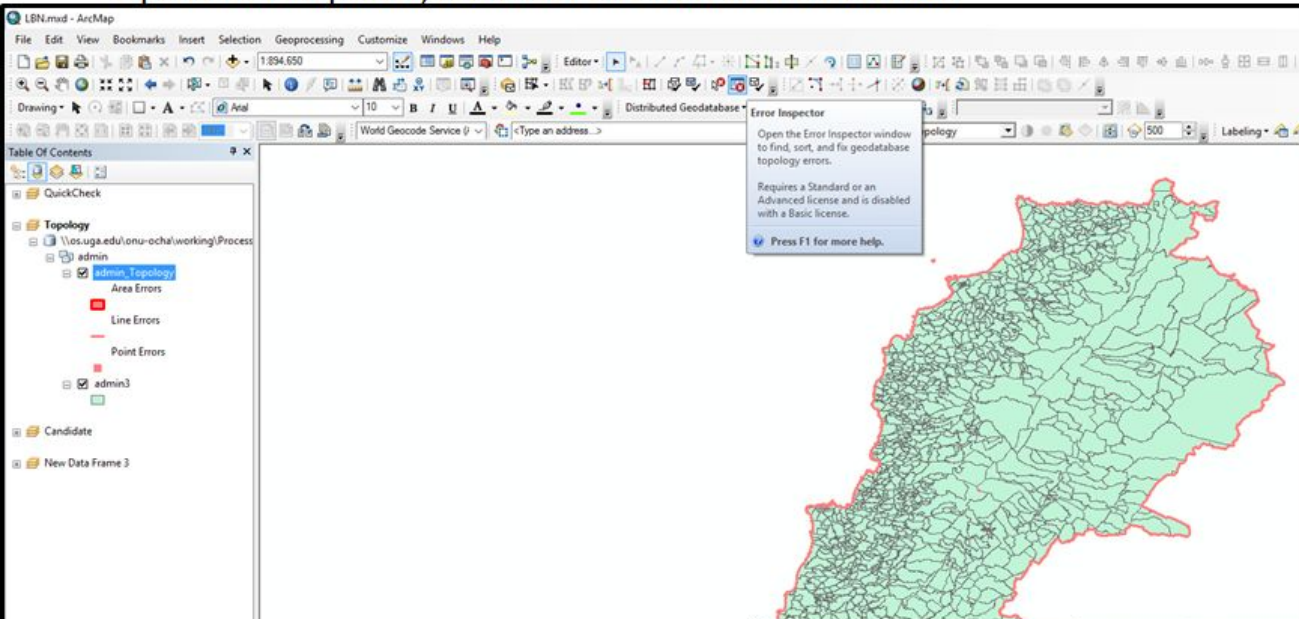


7. Summarize topology errors



9. Inspect the errors

Open Error Inspector, search for all errors in the database



10. Mark national boundary as exception



Using 'Fix Topology Error Tool' Select the error on the national boundary so that it turns black

The screenshot shows the ArcMap interface with the 'Fix Topology Error Tool' dialog box open. The dialog box contains the following text:

Fix Topology Error Tool
Select and fix topology errors in the current geodatabase topology. Right-click an error to apply an automatic fix, if available. To view errors in a table format, open the Error Inspector window.
Requires a Standard or an Advanced license and is disabled with a Basic license.

The Error Inspector window at the bottom shows a table of errors:

Rule Type	Class 1	Class 2	Shape	Feature 1	Feature 2	Exception
Must Not Have Gaps	admin3		Polyline	0	0	False
Must Not Have Gaps	admin3		Polyline	0	0	False
Must Not Have Gaps	admin3		Polyline	0	0	False
Must Not Overlap	admin3		Polygon	367	508	False

- Every polygon layer will always have at least 1 gap error because the outermost boundary does not share a boundary with another polygon.
- ArcGIS will report this as a gap error - it is a false positive and not a true error
- There will also be gap errors around any existing offshore islands
- Right click to mark as exception

The screenshot shows a context menu for a topology error. The menu items are:

- Zoom To
- Pan To
- Select Features
- Show Rule Description...
- Create Feature
- Mark as Exception**
- Mark as Error

A tooltip for the 'Mark as Exception' option reads:

Mark as Exception
Mark an error as an exception, which is a valid case of a topology rule violation. Use the topology Layer Properties dialog box to specify symbology and which rules, errors, and exceptions can be selected.

11. Fill gaps

Error Inspector

Show: <Errors from all rules> 3 errors Search Now [x] Errors [x] Exc

Rule Type	Class 1	Class 2	Shape	Feature 1	Feature 2	Exception
Must Not Have Gaps	admin3		Polyline	0	0	False
Must Not Have Gaps	admin3		Polyline	0	0	False
Must Not Overlap	admin3			367	508	False

Context menu options:

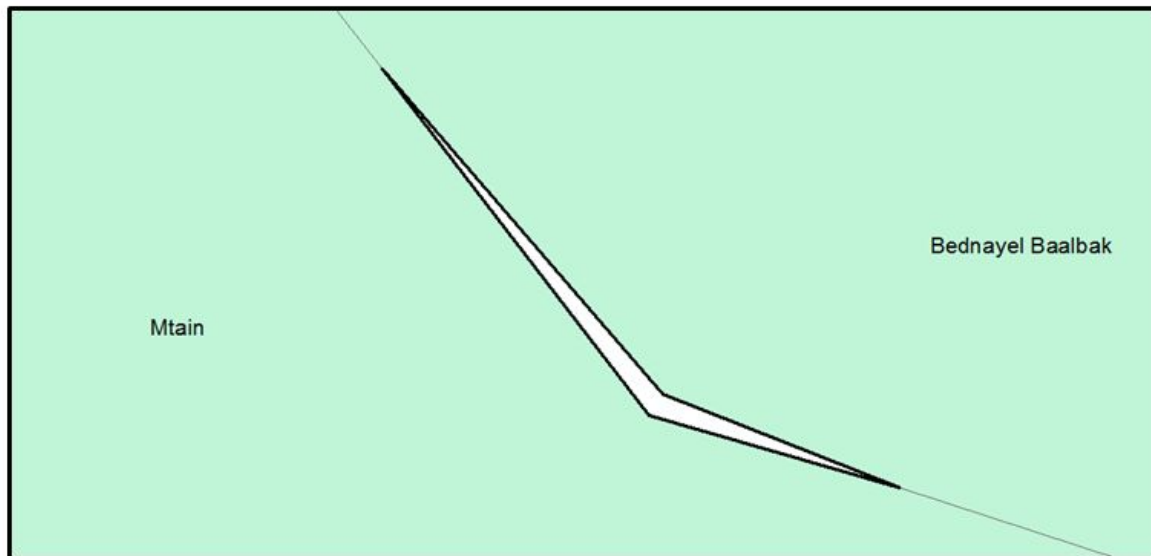
- Zoom To
- Pan To
- Select Features
- Show Rule Description
- Create Feature
- Mark as Exception
- Mark as Error

Sub-menu for Zoom To:

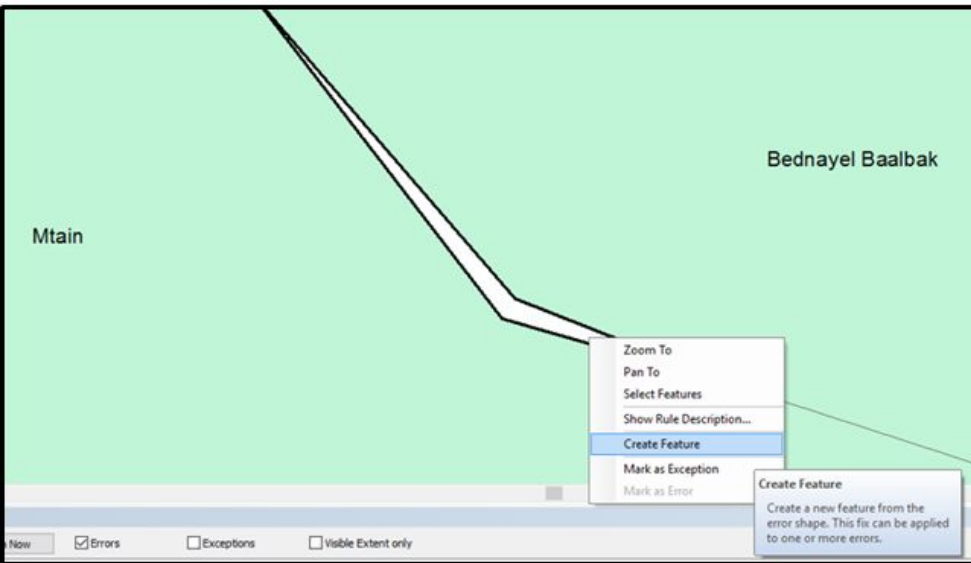
- Zoom to the active error.

This is a gap error – there is a space between neighboring admin units (Mtain and Bednayel Baalbak)

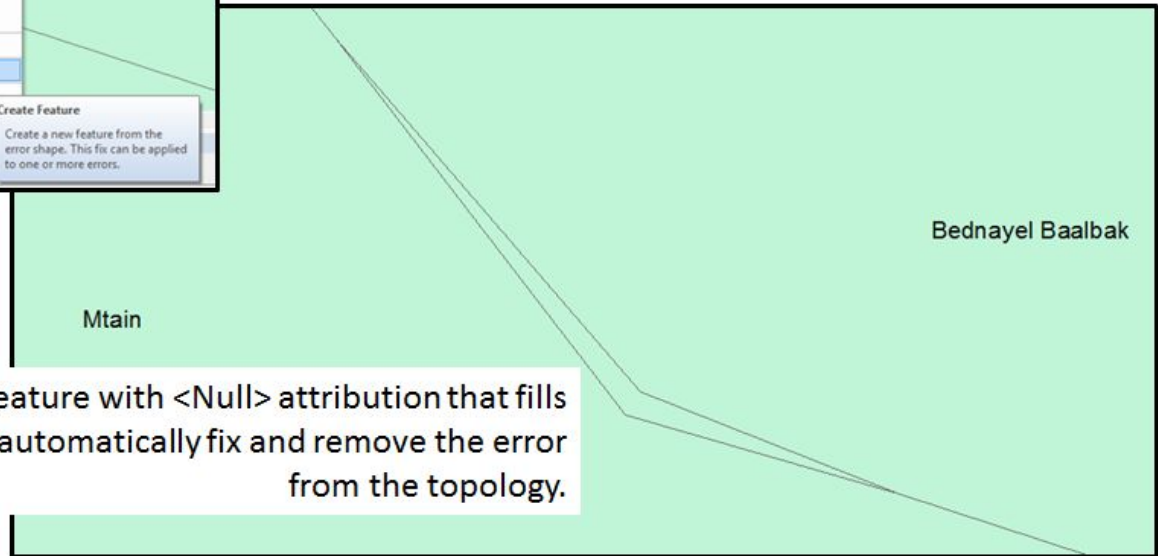
Step through and zoom to each error in the table



Fill gaps



- Using the 'Fix Topology Error Tool',
- right click and create a feature in the space



- This creates a new feature with <Null> attribution that fills in the gap. This will automatically fix and remove the error from the topology.

LBN.mxd - ArcMap

File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help

1:3.427

World Geocode Service (/ <Type an e

admin_Topology

Table Of Contents

QuickCheck

Topology

- \\os.uga.edu\onu-ocha\working\Process
 - admin
 - admin_Topology
 - Area Errors
 - Line Errors
 - Point Errors
 - admin3

Candidate

New Data Frame 3

Editor

- Start Editing
- Stop Editing
- Save Edits
- Move...
- Split...
- Construct Points...
- Copy Parallel...
- Merge...
- Buffer...
- Union...
- Clip...
- Validate Features
- Snapping
- More Editing Tools
- Editing Windows
- Options...

Merge

Merge two or more selected features from the same layer into one feature.

Press F1 for more help.

Mtain


BednayeI Baalbak

- Merge the newly created feature to one of the two polygons that had the original gap between them.
- For this example we will merge it to Mtain

Error Inspector

Show: <Errors from all rules> 2 errors Search Now Errors Exceptions Visible Extent only


Rule Type	Class 1	Class 2	Shape	Feature 1	Feature 2	Exception
Must Not Have Gaps	admin3		Polyline	0	0	False
Must Not Overlap	admin3		Polygon	367	508	False

- Using ArcMap's standard select tool  select both the new feature and the feature you are merging to
- With both features selected choose 'Merge' from editor drop down list

Fill gaps

The screenshot shows the ArcMap interface with a Merge dialog box open. The dialog box contains a list of features to merge, with 'Mtain (admin3)' selected. The 'OK' button is circled in red. Below the dialog box, the map shows a green polygon labeled 'Mtain'. At the bottom, the Error Inspector table shows two errors related to the 'Must Not Have Gaps' and 'Must Not Overlap' rules.

Rule Type	Class 1	Class 2	Shape	Feature 1	Feature 2	Exception
Must Not Have Gaps	admin3		Polyline	0	0	False
Must Not Overlap	admin3		Polygon	367	508	False

- In the 'Merge' dialog box make sure to choose the original attributed feature and not the newly created feature and then click 'OK'.
- The new feature will be merged to the original and the gap will have been successfully removed.
- When the merge is completed the feature that you merged to will automatically be selected, so it is a good idea to go ahead and clear your selection now before proceeding. 

The screenshot shows the ArcMap interface after the merge operation. The map shows a green polygon labeled 'Mtain' and a cyan line labeled 'Bedhayel Baaha'. The Error Inspector table is no longer visible.

12. Step through error list

The screenshot shows the ArcMap interface with a map of a green polygon labeled "Palm Islands Nature Reserve". A context menu is open over the polygon, and the "Mark as Exception" option is selected. A tooltip explains that marking an error as an exception is a valid case of a topology rule violation. The Error Inspector at the bottom shows 2 errors for the "Must Not Overlap" rule.

Rule Type	Class 1	Class 2	Shape	Feature 1	Feature 2	Exception
Must Not Have Gaps	admin3		Polyline	0	0	False
Must Not Overlap	admin3		Polygon	367	508	False

13. Fix overlaps

This is an overlap error – a portion of Nabha Ed-Damdoum overlays on top of Qarha Baalbek


The screenshot shows the ArcMap interface with a topology error. The main map area displays two polygons: a light green polygon labeled "Nabha Ed-Damdoum" and a light green polygon labeled "Qarha Baalbek". A red-shaded area at the bottom right indicates an overlap between the two polygons. A black arrow points from the text above to this red area. The Table of Contents on the left shows the following structure:

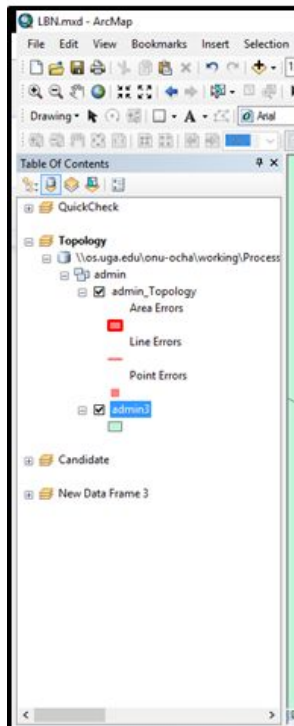
- QuickCheck
- Topology
 - \\os.uga.edu\onu-ocha\working\Process
 - admin
 - admin_Topology
 - Area Errors
 - Line Errors
 - Point Errors
 - admin3
- Candidate
- New Data Frame 3

The Error Inspector at the bottom shows the following error details:

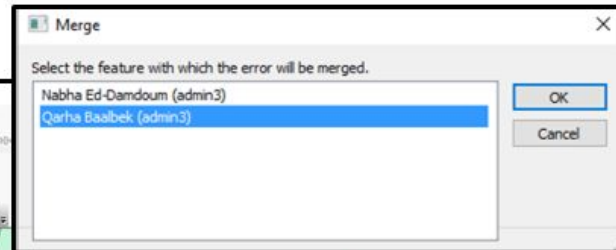
Rule Type	Class 1	Class 2	Shape	Feature 1	Feature 2	Exception
Must Not Overlap	admin3		Polygon	367	508	False

13. Fix overlaps

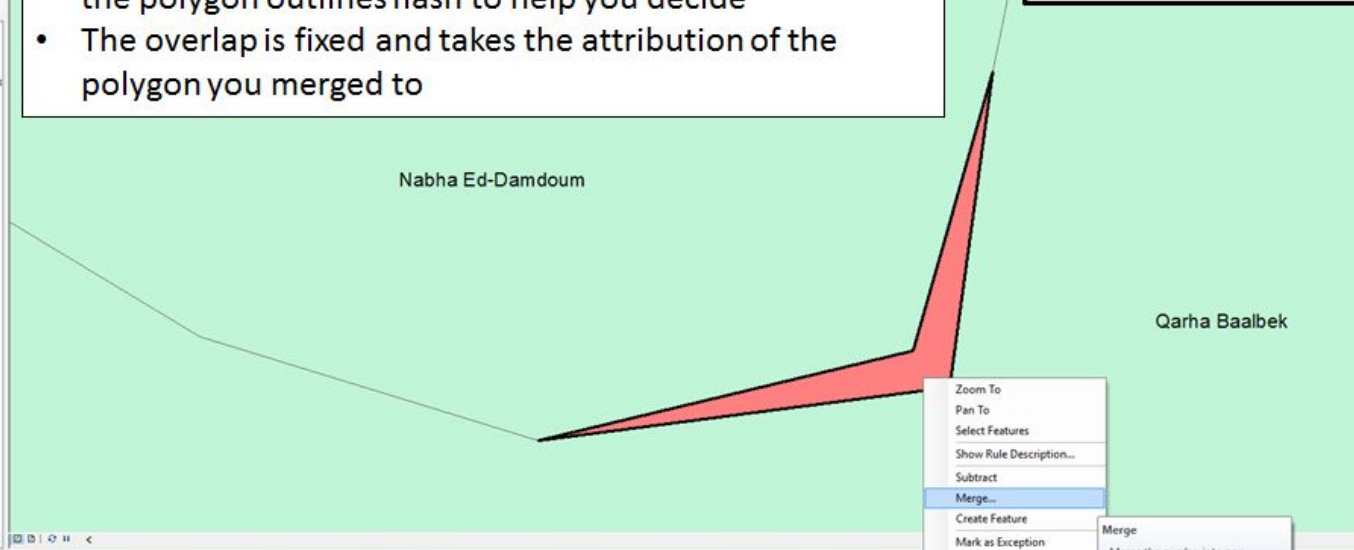
- Using the 'Fix Topology Error Tool'  select the overlap error
- Right click on the selected error and choose 'Merge'.
- Select the polygon you want to merge to; you will see the polygon outlines flash to help you decide
- The overlap is fixed and takes the attribution of the polygon you merged to



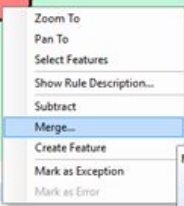
The screenshot shows the ArcMap interface. On the left, the 'Table of Contents' panel is visible, showing a tree view of the project structure. Under 'Topology', there is a sub-entry for 'admin' with a red square icon next to it. Below that, there are 'Line Errors' and 'Point Errors' sections. The 'admin' entry is selected. At the bottom of the interface, the 'Error Inspector' panel is open, showing a table of errors.



The screenshot shows the 'Merge' dialog box. It has a title bar with 'Merge' and a close button. The main text says 'Select the feature with which the error will be merged.' Below this, there is a list of features: 'Nabha Ed-Damdoum (admin3)' and 'Qarha Baalbek (admin3)'. The 'Qarha Baalbek (admin3)' feature is selected. There are 'OK' and 'Cancel' buttons on the right side of the dialog.



The screenshot shows a map with two overlapping polygons. The larger polygon is light green and labeled 'Nabha Ed-Damdoum'. The smaller polygon is light blue and labeled 'Qarha Baalbek'. The overlapping area is highlighted in red. A context menu is open over the red area, with 'Merge...' selected. A tooltip for the 'Merge' action is also visible, explaining the process.



The screenshot shows a context menu with the following options: 'Zoom To', 'Pan To', 'Select Features', 'Show Rule Description...', 'Subtract', 'Merge...', 'Create Feature', 'Mark as Exception', and 'Mark as Error'. The 'Merge...' option is highlighted in blue.



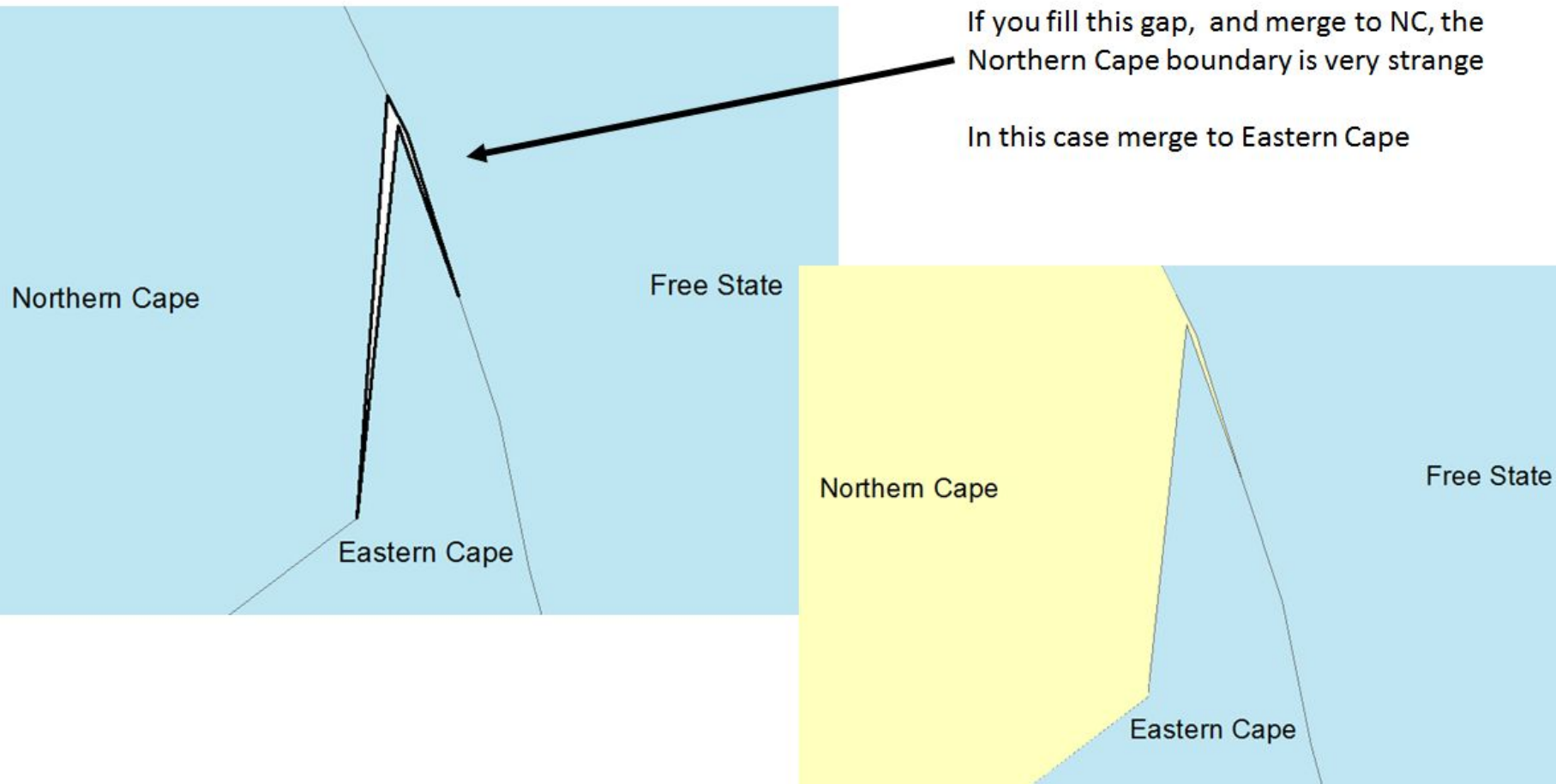
The screenshot shows a tooltip for the 'Merge' action. The text reads: 'Merge the overlap into one feature and remove it from the others. Choose which feature receives the overlapping portion on the dialog box that appears. This fix can be applied to one error only.'

Error Inspector


Show: <Errors from all rules> 1 error Search Now Errors Exceptions Visible Extent only

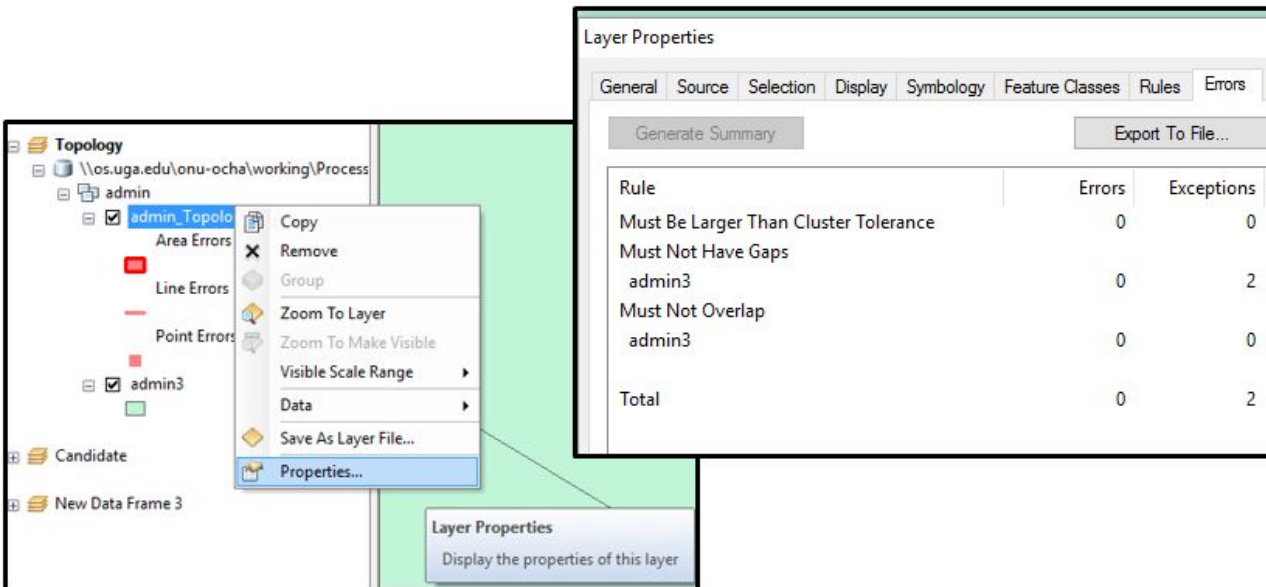
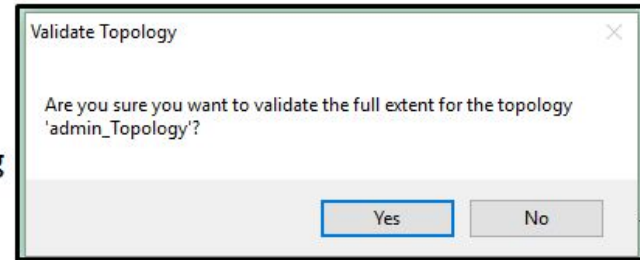
Rule Type	Class 1	Class 2	Shape	Feature 1	Feature 2	Exception
Must Not Overlap	admin3		Polygon	367	508	False

Caution - Examples from ZA



14. Generate Final Report

- After fixing all the topology errors and marking the necessary exceptions, revalidate the topology for the entire extent to make sure none of your editing created new errors, and you haven't missed any errors
- Use the 'Validate Entire Topology' button to do this 



Layer Properties

General Source Selection Display Symbology Feature Classes Rules Errors

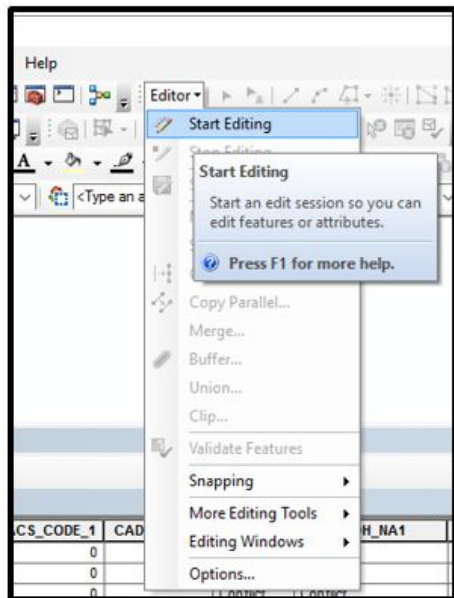
Generate Summary Export To File...

Rule	Errors	Exceptions
Must Be Larger Than Cluster Tolerance	0	0
Must Not Have Gaps		
admin3	0	2
Must Not Overlap		
admin3	0	0
Total	0	2

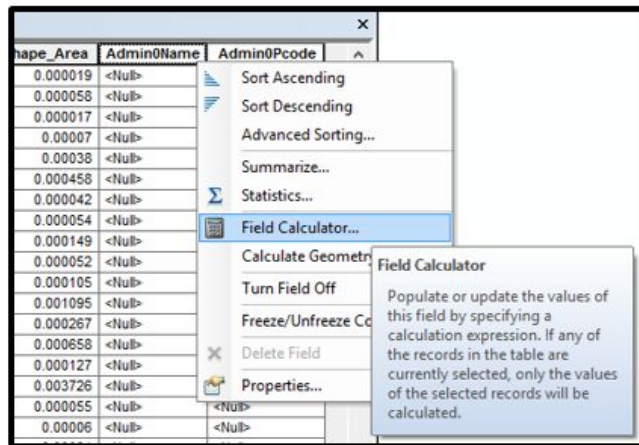
Layer Properties
Display the properties of this layer

- After validating, generate a new error report (right click on the topology layer > properties > Errors tab > Generate Summary)
- If all the topology has been successfully fixed the report should look something like this, with zero reported errors and all of the exceptions reported
- Save Edits; stop editing

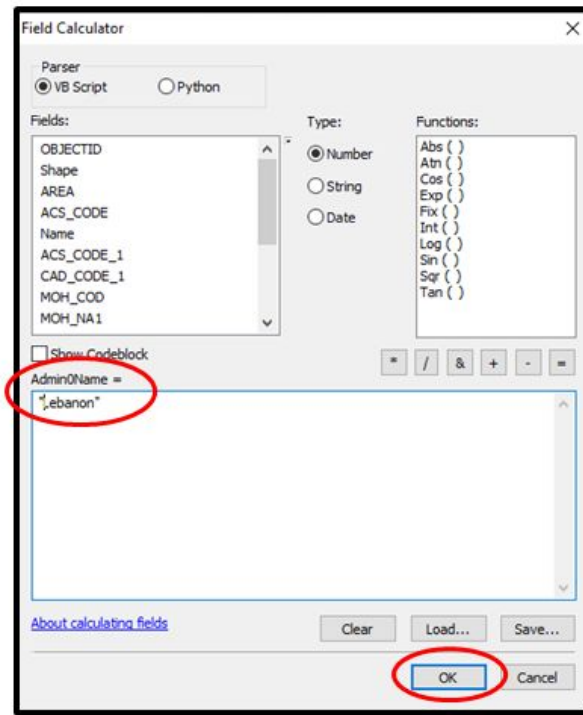
Start Edit Session



Choose field, open calculator



Populate value



Populate Admin0 Pcodes

Shape_Area	Admin0Name	Admin0Pcode
0.000019	Lebanon	<Null>
0.000058	Lebanon	<Null>
0.000017	Lebanon	<Null>
0.000007	Lebanon	<Null>
0.000038	Lebanon	<Null>
0.000458	Lebanon	<Null>

Field Calculator

Parser: VB Script Python

Type: Number String Date

Fields: OBJECTID, Shape, AREA, ACS_CODE, Name, ACS_CODE_1, CAD_CODE_1, MOH_COD, MOH_NA1

Functions: Abs (), Atn (), Cos (), Exp (), Fix (), Int (), Log (), Sin (), Sqr (), Tan ()

Show Codeblock:

Admin0Pcode = 'LBN'

Save edits

Editor

Start Editing

Stop Editing

Save Edits

Save Edits

Save all edits made since the last save. After saving, you cannot undo previous editing operations.

Move...

Split...

Construct P...

Copy Paralle...

Merge...

Buffer...

Union...

Clip...

Validate Features

Snapping

More Editing Tools

Editing Windows

Options...

Stop Edit Session

Start Editing

Stop Editing

Save E...

Move...

Split...

Const...

Copy Paralle...

Merge...

Buffer...

Union...

Clip...

Validate Features

Snapping

More Editing Tools

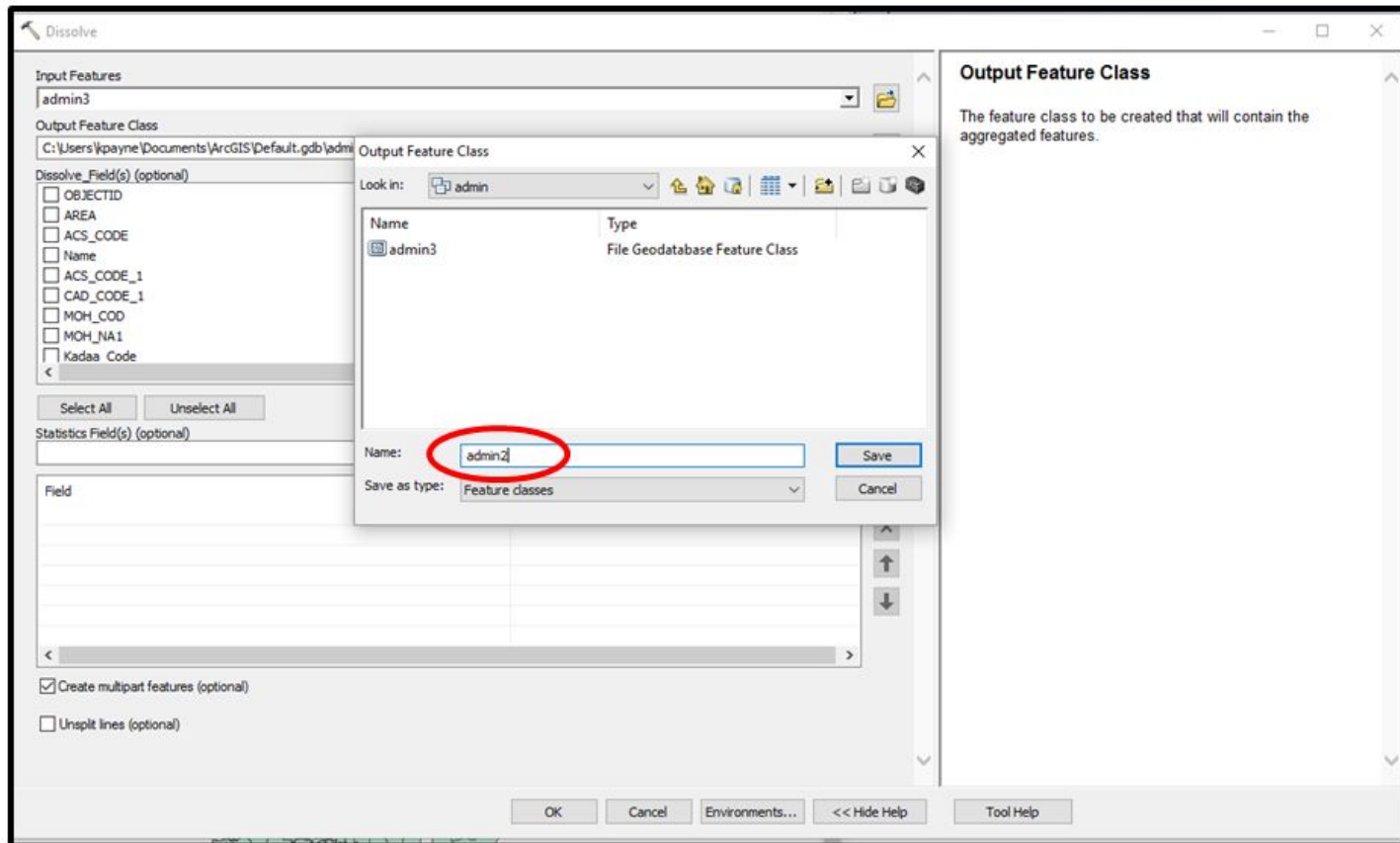
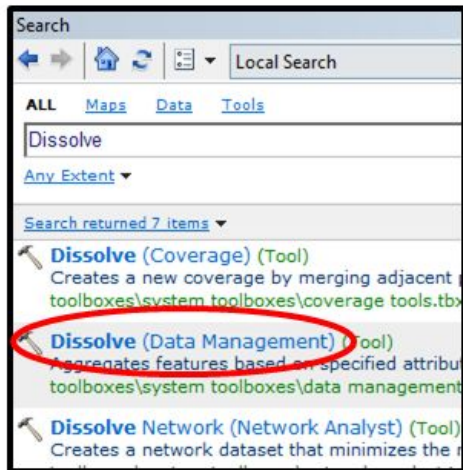
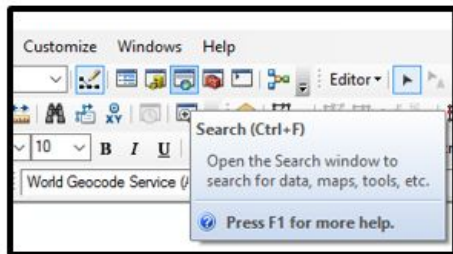
Editing Windows

Options...

Stop Editing

Stop the edit session. If you have any unsaved edits, you are prompted to save them.

Find Dissolve tool (Data Management) – choose output dataset



Dissolve on ALL Lower admin unit names and pcodes

Dissolve

Input Features
admin3

Output Feature Class
\\ps.uga.edu\onu-ocha\working\Process_Files\CODServices\Documentation\Presentations\ITOS_IMPACT\trainingMaterial\Morges\LBDataForK

Dissolve_Field(s) (optional)

- MOH_COD
- MOH_NA1
- Kadaa_Code
- KADA_NA
- UN_ID
- Shape_Length
- Shape_Area
- Admin0Pcode
- Admin0Name

Select All Unselect All Add Field

Statistics Field(s) (optional)

Field	Statistic Type

Create multipart features (optional)

Unsplit lines (optional)

OK Cancel Environments... << Hide Help Tool Help

Dissolve_Field(s) (optional)

The field or fields on which to aggregate

The Add Field button, which is used to add expected fields so you can continue to build your

Create multipart polygons

Repeat for all Admin layers

Dissolve

Input Features
admin2

Output Feature Class
king\Process_Files\CODServices\Documentation\Presentation\TOS_IMPACT\TrainingMaterial\Morges\LBNDDataForKosk\LBN.gdb\admin\admin1

Dissolve_Field(s) (optional)

- OBJECTID
- MOH_COD
- MOH_NA1
- Kadaa_Code
- KADA_NA
- Admin0Pcode
- Admin0Name
- Shape_Length
- Shape_Area

Select All Unselect All Add Field

Statistics Field(s) (optional)

Field	Statistic Type

Create multipart features (optional)

Unsplit lines (optional)

OK Cancel Environments... << Hide Help

Dissolve

Input Features
admin1

Output Feature Class
king\Process_Files\CODServices\Documentation\Presentation\TOS_IMPACT\TrainingMaterial\Morges\LBNDDataForKosk\LBN.gdb\admin\admin0

Dissolve_Field(s) (optional)

- OBJECTID
- MOH_COD
- MOH_NA1
- Admin0Pcode
- Admin0Name
- Shape_Length
- Shape_Area

Select All Unselect All Add Field

Statistics Field(s) (optional)

Field	Statistic Type

Create multipart features (optional)

Unsplit lines (optional)

OK Cancel Environments... << Hide Help

Original Admin1 units

Gov_New	MOH_code_n
Akkar	LBN7
Baalbek-EI Hermel	LBN8
Beirut	LBN1
Bekaa	LBN2
El Nabatieh	LBN4
Mount Lebanon	LBN3
North	LBN5
North	LBN5
South	LBN6

New, dissolved units

MOH_COD	MOH_NA1
LBN7	Akkar
LBN8	Baalbek-EI Hermel
LBN1	Beirut
LBN2	Bekaa
Conflict	Conflict
LBN3	Mount Lebanon
LBN4	Nabatiye
LBN5	North
LBN6	South

- Both contain 9 units
- New unit 'Conflict'
- Old unit El Nabatieh (LBN4) is now called Nabatiye
- 2 North Units existed in old data, one for the island and one for the mainland

Original Admin2 units

New, dissolved units

Kadaa_Code	Name_AR	Name_EN
LBN51	عكار	Akkar
LBN31	عاليه	Aley
LBN32	بعبدا	Baabda
LBN21	بعلبك	Baalbek
LBN53	بشري	Bcharre
LBN11	بيروت	Beirut
LBN41	بنت جبيل	Bent Jbeil
LBN33	الشوف	Chouf
LBN52	البترون	El Batroun
LBN22	الهرمل	El Hermel
LBN54	الكورة	El Koura
LBN36	المتن	El Meten
LBN55	المدية الضخمة	El Minieh-Dennie
LBN44	النبطية	El Nabatieh
LBN42	حاصبيا	Hasbaya
LBN34	جبيل	Jbeil
LBN62	جزين	Jezzine
LBN35	كسروان	Kesrwane
LBN43	مرجعيون	Marjaayoun
LBN23	راشيا	Rachaya
LBN61	صيدا	Saida
LBN63	صور	Sour
LBN56	طرابلس	Tripoli
LBN56	طرابلس	Tripoli
LBN24	البقاع الغربي	West Bekaa
LBN25	رحلة	Zahle
LBN57	زغرتا	Zgharta

Kadaa_Code	KADA_NA
LBN51	Akkar
LBN31	Aley
LBN32	Baabda
LBN21	Baalbek
LBN52	Batroun
LBN53	Bcharre
LBN11	Beirut
LBN41	Bint Jubail
LBN33	Chouf
Conflict	Conflict
LBN36	El Metn
LBN42	Hasbaya
LBN22	Hermel
LBN62	Jezzine
LBN34	Jubail
LBN35	Kasrouane
LBN54	Koura
LBN43	Marjaayoun
LBN55	Minieh-Danieh
LBN44	Nabatiye
LBN23	Rachiaya
LBN61	Saida
LBN63	Sour
LBN56	Tripoli
LBN24	West Bekaa
LBN25	Zahle
LBN57	Zgharta

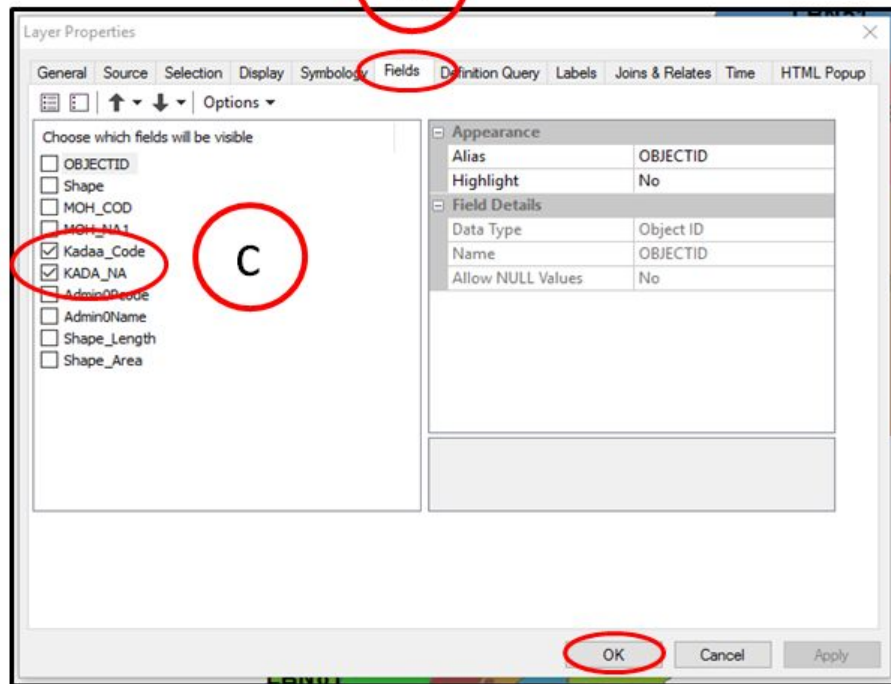
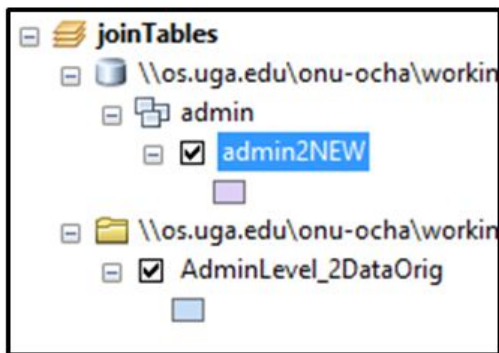
- Both contain 27 units
- New unit 'Conflict' existed in old data,
- 2 Tripoli Units one for the island and one multipart for the mainland
- Many small name changes El Ermel=Hermel; Jbeil=Jubail
- Pcodes are entirely consistent!! 😊

Original Admin2 units labelled in **BLACK**



New, dissolved units labelled in **RED**





Table

admin2NEW

Kadaa_Code	KADA_NA
Conflict	Conflict
LBN11	Beirut
LBN21	Baalbek
LBN22	Hermel
LBN23	Rachiaya
LBN24	West Bekaa
LBN25	Zahle
LBN31	Aley
LBN32	Baabda
LBN33	Chouf
LBN34	Jubail
LBN35	Kasrouane
LBN36	El Metn
LBN41	Bint Jubail
LBN42	Hasbaiya
LBN43	Marjaayoun
LBN44	Nabatiye
LBN51	Akkar
LBN52	Batroun
LBN53	Bcharre
LBN54	Koura
LBN55	Minieh-Danieh
LBN56	Tripoli
LBN57	Zgharta
LBN61	Saida
LBN62	Jezzine
LBN63	Sour

(0 out of 27 Selected)

AdminLevel_2DataOrig admin2NEW

Perform Join to regain Arabic names in new admin2 layer – clean workspace

joinTables

- \\os.uga.edu\onu-ocha\workin
 - admin
 - admin2NEW
 - \\os.uga.edu\onu-ocha\workin
 - AdminLevel_2DataOrig

a

Layer Properties

General Source Selection Display Symbology **Fields** Definition Query Labels Joins & Relates Time HTML Popu

Options

Choose which fields will be visible

- FID
- Shape
- AREA
- Kadaa_Code
- Admn1_N
- Admin1_C
- Name_AR
- Name_EN

Appearance

- Alias: FID
- Highlight: No

Field Details

- Data Type: Object ID
- Name: FID
- Allow NULL Values: No

OK Cancel Apply

b

c

d

Table

AdminLevel_2DataOrig

Kadaa_Code	Name_AR	Name_EN
LBN11	بيروت	Beirut
LBN21	بعلبك	Baalbek
LBN22	الهرمل	El Hermel
LBN23	راشيا	Rachaya
LBN24	البقاع الغربي	West Bekaa
LBN25	رحلة	Zahle
LBN31	عاليه	Aley
LBN32	بعبدا	Baabda
LBN33	الشوف	Chouf
LBN34	جبيل	Jbeil
LBN35	كسروان	Kesrwane
LBN36	المتن	El Meten
LBN41	بنت جبيل	Bent Jbeil
LBN42	حاصبيا	Hasbaya
LBN43	مرجعيون	Marjaayoun
LBN44	النبطية	El Nabatieh
LBN51	عكار	Akkar
LBN52	البيثرون	El Batroun
LBN53	بشري	Bcharre
LBN54	الكورة	El Koura
LBN55	العينة العسنية	El Minieh-Dennie
LBN56	طرابلس	Tripoli
LBN56	طرابلس	Tripoli
LBN57	زعرتا	Zgharta
LBN61	صيدا	Saida
LBN62	جزين	Jezzine
LBN63	صور	Sour

(0 out of 27 Selected)

AdminLevel_2DataOrig admin2NEW

e

LBN.mxd - ArcMap

File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help

1:894,650

Search (Ctrl+F)
Open the Search window to search for data, maps, tools, etc.
Press F1 for more help.

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- QuickCheck
- Topology
 - \\os.uga.edu\onu-ocha\work\...
 - admin
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- KDNCandidate
- JoinTables
 - \\os.uga.edu\onu-ocha\work\...
 - admin
 - admin2NEW
 - \\os.uga.edu\onu-ocha\work\...
 - AdminLevel_2DataOrig
- duplicateAdmin3pcode
 - \\os.uga.edu\onu-ocha\work\...
 - AdminLevel_3

Join Field

Input Table: admin2NEW

Input Join Field: Kadaa_Code

Join Table: AdminLevel_2DataOrig

Output Join Field: Kadaa_Code

Join Fields (optional)

- Kadaa_Code
- Name_AR
- Name_EN

Select All Unselect All Add Field

Search

Local Search

ALL Maps Data Tools

join

Any Extent

Search returned 23 items

- Joins (Toolset)
Summary: not available.
toolboxes\system\toolboxes\data management tools.tbx\joins
- Joins (Toolset)
Summary: not available.
toolboxes\system\toolboxes\coverage tools.tbx\data management\joins
- Remove Join (Data Management) (Tool)
Removes a join from a feature layer or table view.
toolboxes\system\toolboxes\data management tools.tbx\joins\remove join
- Spatial Join (Analysis) (Tool)
Joins attributes from one feature to another based on the spatial relationship. The target fea...
toolboxes\system\toolboxes\analysis tools.tbx\overlay\spatial join
- Add Join (Data Management) (Tool)
Joins a layer to another layer or table (where layer is a feature layer, table view, or raster lay...
toolboxes\system\toolboxes\data management tools.tbx\joins\add join
- Join Info Tables (Coverage) (Tool)
Joins the item definitions and values of two tables based on a shared item. Joining involves a...
toolboxes\system\toolboxes\coverage tools.tbx\data management\joins\join info tables
- Join Field (Data Management) (Tool)
Joins the contents of a table to another table based on a common attribute field. The input tabl...
toolboxes\system\toolboxes\data management tools.tbx\joins\join field
- Make Query Table (Data Management) (Tool)
This tool applies an SQL query to a database and the results are represented in a layer or tabl...
toolboxes\system\toolboxes\data management tools.tbx\layers and table views\make query ta...
- Unsplit Line (Data Management) (Tool)
Merges lines that have coincident endpoints and, optionally, common attribute values.
toolboxes\system\toolboxes\data management tools.tbx/features\unsplit line
- Create Database View (Data Management) (Tool)
Creates a view in an enterprise database based on an SQL expression.
toolboxes\system\toolboxes\data management tools.tbx\general\create database view
- Identity (Analysis) (Tool)
Computes a geometric intersection of the input features and identity features. The input featur...
toolboxes\system\toolboxes\analysis tools.tbx\overlay\identity
- Intersect (Analysis) (Tool)
Computes a geometric intersection of the input features. Features or portions of features which...
toolboxes\system\toolboxes\analysis tools.tbx\overlay\intersect
- Update (Analysis) (Tool)
Computes a geometric intersection of the Input Features and Update Features. The attributes a...

35,187 34,774 Decimal Degrees

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- QuickCheck
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- KDNCandidate
- joinTables
 - \\os.uga.edu\onu-ocha\workin
 - admin
 - admin2NEW
 - AdminLevel_2DataOrig
 - duplicateAdmin3pcode
 - \\os.uga.edu\onu-ocha\workin
 - AdminLevel_3

Select By Attributes

Layer: admin2NEW
 Only show selectable layers in this list
 Method: Create a new selection

"Kadaa_Code"
 "KADA_NA"
 "Kadaa_Code_1"
 "Name_AR"
 "Name_EN"

= <> Like
 > >= And
 < <= Or
 _ % () Not

Is Get Unique Values Go To:

SELECT * FROM admin2 WHERE:
 "KADA_NA" NOT LIKE "Name_EN"

Clear Verify Help Load... Save...
 OK Apply Close

"KADA_NA" NOT LIKE "Name_EN"

Table

admin2NEW

Kadaa_Code	KADA_NA	Kadaa_Code_1	Name_AR	Name_EN
Conflict	Conflict	<Null>	<Null>	<Null>
LBN11	Beirut	LBN11	بيروت	Beirut
LBN21	Baalbek	LBN21	بعلبك	Baalbek
LBN22	Hermel	LBN22	الهرمل	Ei Hermel
LBN23	Rachaya	LBN23	راشيا	Rachaya
LBN24	West Bekaa	LBN24	البقاع الغربي	West Bekaa
LBN25	Zahle	LBN25	زحلة	Zahle
LBN31	Aley	LBN31	دالية	Aley
LBN32	Baabda	LBN32	بينا	Baabda
LBN33	Chouf	LBN33	الشوف	Chouf
LBN34	Jubail	LBN34	جبيل	Jbeil
LBN35	Kasrouane	LBN35	كسروان	Kesrwane
LBN36	El Metn	LBN36	المتن	Ei Meten
LBN41	Bint Jubail	LBN41	بنت جبيل	Bent Jbeil
LBN42	Hasbaya	LBN42	حاصبيا	Hasbaya
LBN43	Marjaayoun	LBN43	مرجعيون	Marjaayoun
LBN44	Nabatieh	LBN44	النبطية	Ei Nabatieh
LBN51	Akkar	LBN51	عكار	Akkar
LBN52	Batroun	LBN52	البترون	Ei Batroun
LBN53	Bcharre	LBN53	بشري	Bcharre
LBN54	Koura	LBN54	الكورة	Ei Koura
LBN55	Minieh-Danieh	LBN55	المنية الدنية	Ei Minieh-Dennie
LBN56	Tripoli	LBN56	طرابلس	Tripoli
LBN57	Zgharta	LBN57	زعرتا	Zgharta
LBN61	Saida	LBN61	صيدا	Saida
LBN62	Jezzine	LBN62	جزين	Jezzine
LBN63	Sour	LBN63	سور	Sour

14 0 (11 out of 27 Selected)
 admin2NEW

Start Editing

This map contains data from more than one database or folder. Please choose the layer or workspace to edit.

- admin2NEW
- AdminLevel_2DataOrig

a

Table

admin2NEW

Kadaa_Code	KADA_NA	Kadaa_Code_1	Name_AR	Name_EN
Conflict	Conflict	<Null>	<Null>	<Null>
LBN11	Beirut	LBN11	بيروت	Beirut
LBN21	Baalbek	LBN21	بعلبك	Baalbek
LBN22	Hermel	LBN22	الهرمل	El Hermel
LBN23	Rachaya	LBN23	راشيا	Rachaya
LBN24	West Bekaa	LBN24	البيقاع الغربي	West Bekaa
LBN25	Zahle	LBN25	زحلة	Zahle
LBN31	Aley	LBN31	عاليه	Aley
LBN32	Baabda	LBN32	بعبدان	Baabda
LBN33	Chouf	LBN33	الشوف	Chouf
LBN34	Jubail	LBN34	جبيل	Jbeil
LBN35	Kesrouane	LBN35	كسروان	Kesrwane
LBN36	El Metn	LBN36	المتن	El Meten
LBN41	Bint Jubail	LBN41	بنت جبيل	Bent Jbeil
LBN42	Hasbaya	LBN42	حاصبيا	Hasbaya
LBN43	Marjaayoun	LBN43	مرجعيون	Marjaayoun
LBN44	Nabatieh	LBN44	النبطية	El Nabatieh
LBN51	Akkar	LBN51	عكار	Akkar
LBN52	Batroun	LBN52	البترون	El Batroun
LBN53	Bcharre	LBN53	بشري	Bcharre
LBN54	Koura	LBN54	الكورة	El Koura
LBN55	Minieh-Danieh	LBN55	المنية الدنية	El Minieh-Dennie
LBN56	Tripoli	LBN56	طرابلس	Tripoli
LBN57	Zgharta	LBN57	زغرنا	Zgharta
LBN61	Saida	LBN61	صيدا	Saida
LBN62	Jezzine	LBN62	جزين	Jezzine
LBN63	Sour	LBN63	صور	Sour

Field Calculator...

Field Calculator

Populate or update the values of this field by specifying a calculation expression for the records in the table currently selected, or of the selected records calculated.

b

Field Calculator

Parser

VB Script Python

Fields:

- Kadaa_Code
- KADA_NA
- Kadaa_Code_1
- Name_AR
- Name_EN

Type:

Number String Date

Functions:

- Abs ()
- Atn ()
- Cap ()

Show Codeblock

KADA_NA =

[Name_EN]

c

[About calculating fields](#)

Table

admin2NEW

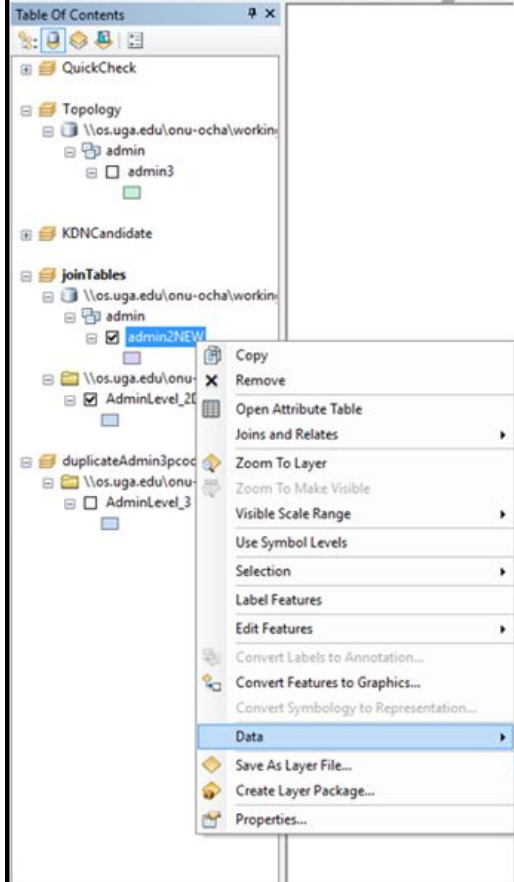
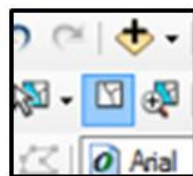
Kadaa_Code	KADA_NA	Kadaa_Code_1	Name_AR	Name_EN
Conflict	Conflict	<Null>	<Null>	<Null>
LBN11	Beirut	LBN11	بيروت	Beirut
LBN21	Baalbek	LBN21	بعلبك	Baalbek
LBN22	El Hermel	LBN22	الهرمل	El Hermel
LBN23	Rachaya	LBN23	راشيا	Rachaya
LBN24	West Bekaa	LBN24	البيقاع الغربي	West Bekaa
LBN25	Zahle	LBN25	زحلة	Zahle
LBN31	Aley	LBN31	عاليه	Aley
LBN32	Baabda	LBN32	بعبدان	Baabda
LBN33	Chouf	LBN33	الشوف	Chouf
LBN34	Jbeil	LBN34	جبيل	Jbeil
LBN35	Kesrwane	LBN35	كسروان	Kesrwane
LBN36	El Meten	LBN36	المتن	El Meten
LBN41	Bent Jbeil	LBN41	بنت جبيل	Bent Jbeil
LBN42	Hasbaya	LBN42	حاصبيا	Hasbaya
LBN43	Marjaayoun	LBN43	مرجعيون	Marjaayoun
LBN44	El Nabatieh	LBN44	النبطية	El Nabatieh
LBN51	Akkar	LBN51	عكار	Akkar
LBN52	El Batroun	LBN52	البترون	El Batroun
LBN53	Bcharre	LBN53	بشري	Bcharre
LBN54	El Koura	LBN54	الكورة	El Koura
LBN55	El Minieh-Dennie	LBN55	المنية الدنية	El Minieh-Dennie
LBN56	Tripoli	LBN56	طرابلس	Tripoli
LBN57	Zgharta	LBN57	زغرنا	Zgharta
LBN61	Saida	LBN61	صيدا	Saida
LBN62	Jezzine	LBN62	جزين	Jezzine
LBN63	Sour	LBN63	صور	Sour

d



BEFORE EXPORTING:

- Clear selected set
- Removed unwanted fields (or make them invisible)
- Make desired fields visible again



Kadaa_Code	KADA_NA	Kadaa_Code_1	Name_AR	Name_EN
Conflict	Conflict	<Null>	<Null>	<Null>
LBN11	Beirut	LBN11	بيروت	Beirut
LBN21	Baalbek	LBN21	بعلبك	Baalbek
LBN22	Ei Hermel	LBN22	الهرمل	Ei Hermel
LBN23	Rachaya	LBN23	رachel	Rachaya
LBN24	West Bekaa	LBN24	البلدع الغربي	West Bekaa
LBN25	Zahle	LBN25	زحلة	Zahle
LBN31	Aley	LBN31	دالية	Aley
LBN32	Baabda	LBN32	بابدا	Baabda
LBN33	Chouf	LBN33	الشوف	Chouf
LBN34	Jbel	LBN34	جبل	Jbel
LBN35	Kesrwane	LBN35	كسروان	Kesrwane
LBN36	Ei Meten	LBN36	المتن	Ei Meten
LBN41	Bent Jbel	LBN41	بيت جبل	Bent Jbel
LBN42	Hasbaya	LBN42	حاصبيا	Hasbaya
LBN43	Marjayoun	LBN43	مرجعيون	Marjayoun
LBN44	Ei Nabatieh	LBN44	النبطية	Ei Nabatieh
LBN51	Akkar	LBN51	اكار	Akkar
LBN52	Ei Batroun	LBN52	البترون	Ei Batroun
LBN53	Bcharre	LBN53	بشري	Bcharre
LBN54	Ei Koura	LBN54	الكورة	Ei Koura
LBN55	Ei Minieh-Dennie	LBN55	المنية المنية	Ei Minieh-Dennie
LBN56	Tripoli	LBN56	طرابلس	Tripoli
LBN57	Zgharta	LBN57	زغرتا	Zgharta
LBN61	Saida	LBN61	صيدا	Saida
LBN62	Jezzine	LBN62	جزين	Jezzine
LBN63	Sour	LBN63	سور	Sour

