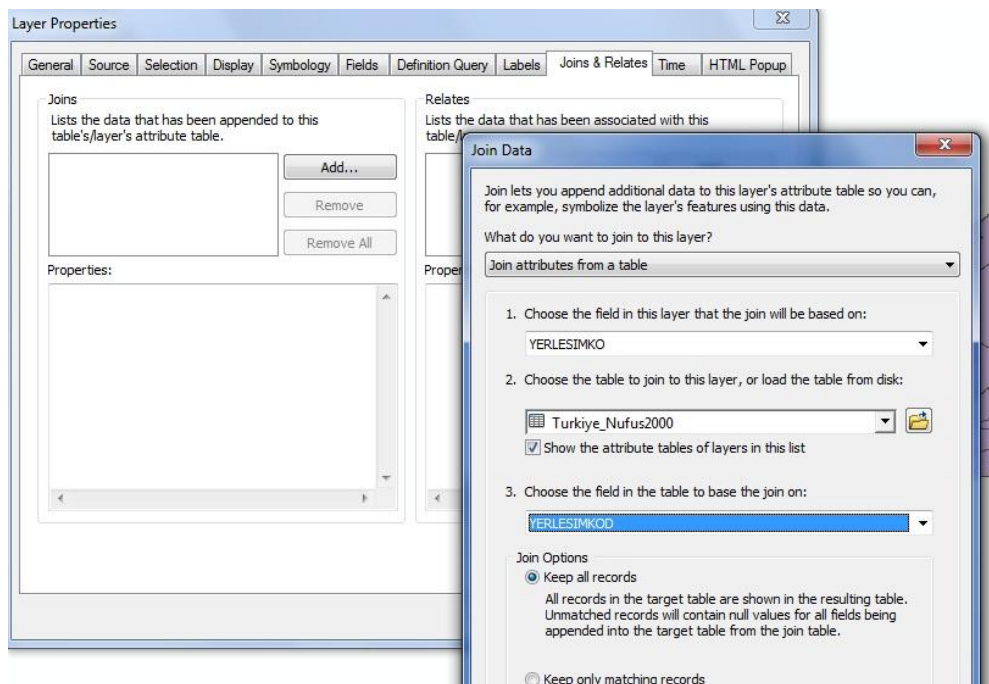


### Exercise 3:

#### Joining Tables

- Open a blank map in ArcMap.
- Click Add Data and select Turkey\_cities (feature class), Turkey\_pop\_2000 (table), and Turkey\_health (table) data files from Turkey\_pop.mdb (personal geodatabase). Then explore the attribute tables.
- Right click on Turkey\_cities, then click Joins&Relates > Join. Choose “YERLESIMKO” field for the first item, then select the same field for the 3. item.



Create Index? YES...

Check new attribute table of cities layer...

Follow the same procedure to join the other tables...

#### Topology

ArcGIS topology defines the spatial relationships between geometries. A complete list of topology rules in ArcGIS go to [here](#).

In order to understand what topology is, you need to create new rules, then inspect errors and fix those errors.

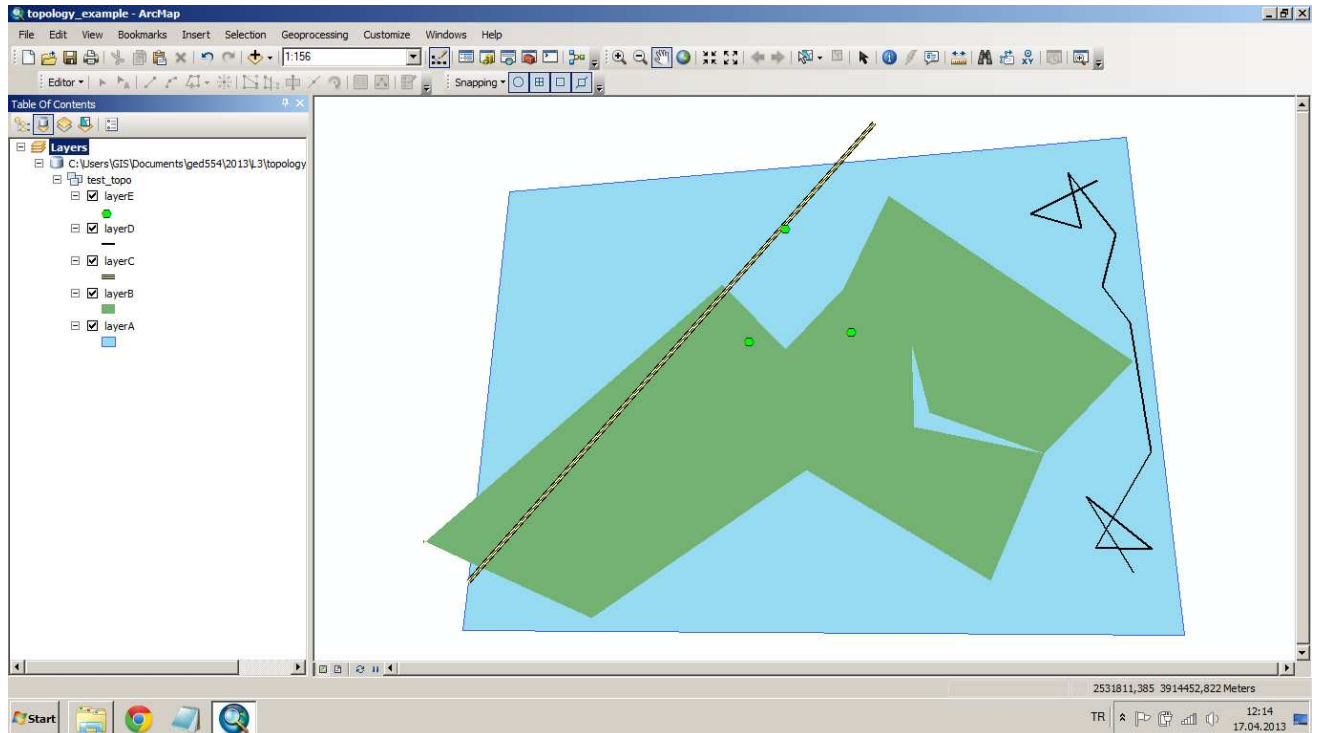
To create a geodatabase → Open ArcCatalog, navigate to the location where you want to work > right click on the folder and click on New>Personal Geodatabase (rename it “test\_topology.mdb”).

To create a feature dataset → right click on the new Geodatabase and click on New>Feature Dataset Type in a new name (like “my\_data\_container”), click on <Next> to specify a spatial reference, click Add Coordinate System, select Clear. Now coordinate system of your new dataset is unknown.

The next window shows the tolerances for the data. If you uncheck “Accept default resolution”, the next window displays the default extent and resolution information for the data this is where you can change these values if needed. For now you accept the defaults and finish creating the feature dataset.

To create a feature class → right click on the new feature dataset and click on New>Feature Class  
Type in a new name (like “parcels”). Do the same for the other “line” and “point” feature classes (like roads and poles).

After add your new data to your map, create features (polygons, lines, and points) using Editor toolbar.



**Note:** If you have “The coordinates or measures are out of bounds” error message when you are trying to create new features on your map, set your scale to 1:1000 from the scale drop-down menu and try again.

*The default bounds (spatial domain) is set by the coordinate system automatically in ArcGIS 10 version. If you don't define the coordinate system when the feature dataset or feature class is created, you use default values. You can check the spatial domain in ArcCatalog by opening the feature dataset or class property page. There is a domain tab. When you add features for the first time, you need to make sure that you are in a valid area. The map display may include invalid areas.*

To create topology → Right click on the feature dataset (my\_data\_container) and click on New> Topology.  
A wizard dialog box will appear, click Next. Enter a name for your new topology (“test\_topology”) and leave the cluster tolerance at the default value. Press next. Select all feature classes and click Next. Ignore the ranks and click Next again. You are now ready to add rules. Click OK, click next to view the Topology summary and click Finish to build the topology. When it asks if you want to validate it now, say yes

Open ArcMap, add all feature classes and topology into your map. You will see the area, line and point errors.

You can fix errors using Editor and Topology toolbars! If they are not visible, go to Customize>Toolbars and select them. Later, you need to start editing. you can use the “Error Inspector” in the topology toolbar to check each error. To fix the errors, click on “Fix Topology Error Tool” icon. Right click over the error, you can use “Create Feature” for automatic fixing. It makes a new polygon out of the error polygon. If you want to edit a rule, first save your edits and then go to ArcCatalog. Right click on your topology feature dataset> Properties > Rules tab > click on a rule > Add Rule...