

## Exercise Creating a File Geodatabase

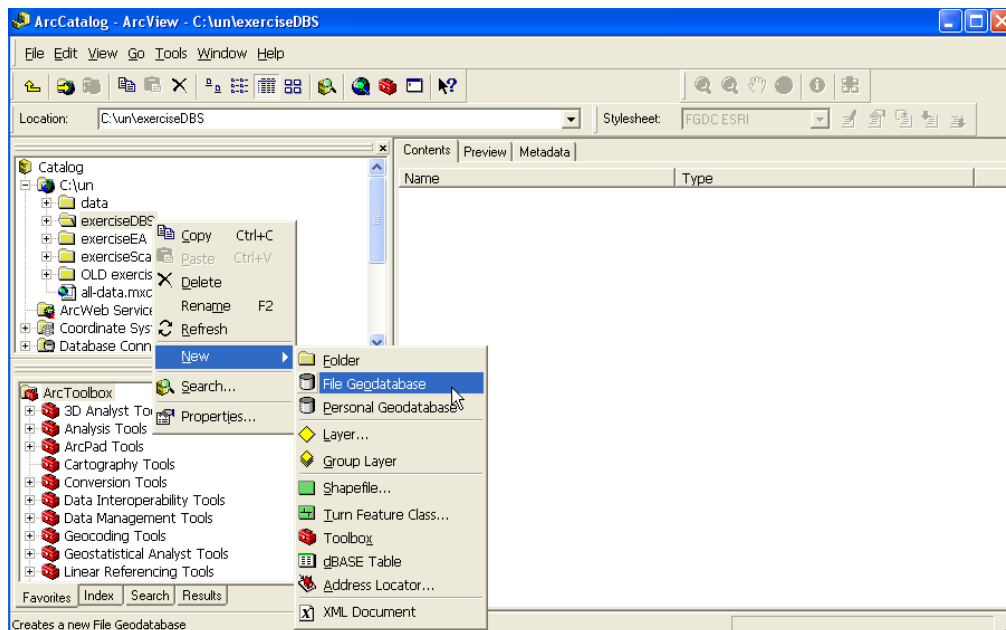
In this exercise you will create a file geodatabase utilizing ArcCatalog. Creating a new file geodatabase involves creating a special file folder on disk using ArcGIS. This is a simple, straightforward process that is performed by using ArcCatalog or geoprocessing tools.

### *File Geodatabase Usage Tips*

- *Each dataset can scale up to 1 TB in size.*
- *Designed to be edited by a single user and does not support geodatabase versioning.*
- *Works across operating systems.*
- *Uses a very efficient data structure that is optimized for performance and storage. File geodatabases use about 1/3 of the feature geometry storage required by shapefiles.*
- *Also include a read-only compression option that allows users to create a read-only, highly compressed, and optimized geodatabase.*
- *Recommended over personal geodatabases.*

### Step 1: Creating a new file geodatabase using ArcCatalog

- Open ArcCatalog. Right-click the file folder in the ArcCatalog tree where you want to create the new file geodatabase. In this case, **C:\un\exerciseDBS\**
- Point to **New**.
- Click **File Geodatabase**. ArcCatalog creates a new file geodatabase in the location you selected.



- Rename the new file geodatabase to **ExerciseFGB** by right-clicking on the new file geodatabase and choosing **Rename**.

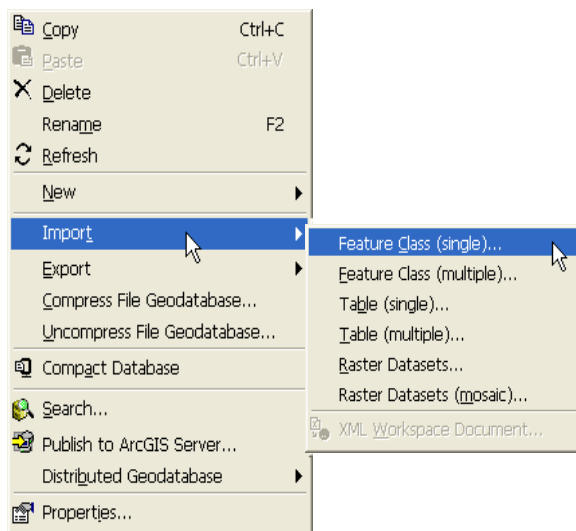
**Additional Notes:*****Creating a new file geodatabase using geoprocessing***

Use the tool Create File GDB in ArcToolbox to specify the path name to the file folder location and name of the new geodatabase you want to create.

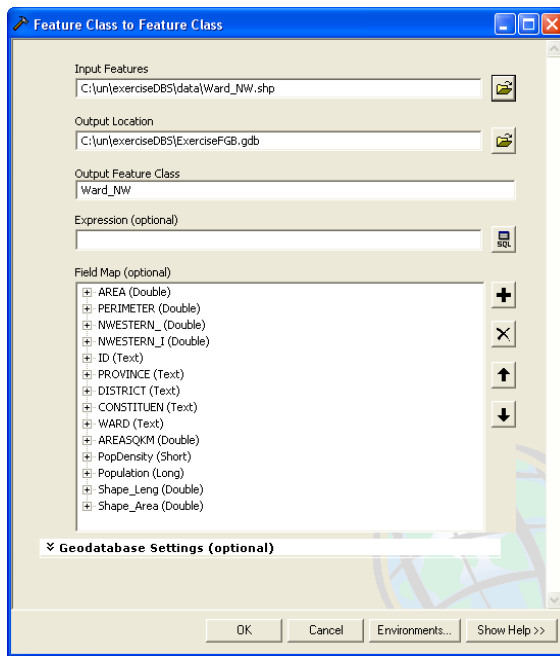
The Create File GDB tool is located in the Data Management toolbox in the Workspace toolset (Data Management > Workspace).

**Step 2: Migrating Existing Data to the File Geodatabase**

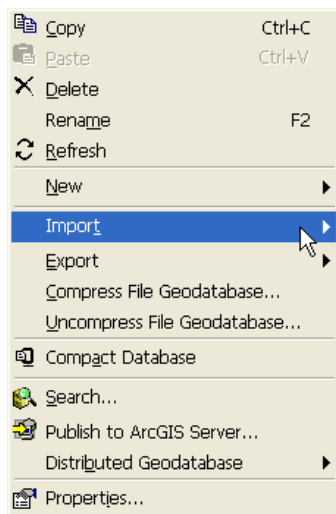
- Right click on the **ExerciseFGB** file geodatabase and click **Import**.
- Select **Feature Class (single)**.



- Select the **Ward\_NW.shp** shapefile as input features from the **C:\un\exerciseDBS\data** directory.
- Output location is **c:\un\exerciseDBS\exerciseFGB.gdb**
- In the **Output Feature Class** box, type **Ward\_NW**.
- Click **OK**. (see below)



- **Close** the geoprocessing dialog box when process is completed.
- You may receive a message in the geoprocessing dialog box. “**The output resolution is larger than the input feature class resolution.**” Click **Close** to close the dialog box. What this means is that in ArcGIS 9.1 and earlier versions, geoprocessing tools produced 32-bit data. The output from geoprocessing tools in ArcGIS 9.2 is 53-bit. This message informs the user of the higher resolution of the output data. Go to *ArcGIS Desktop Help: Migrating to High Precision* for additional information.
- To migrate a database table to a file geodatabase, the steps are the same.
- Right click on the **Ward\_NW file geodatabase** and click **Import**.



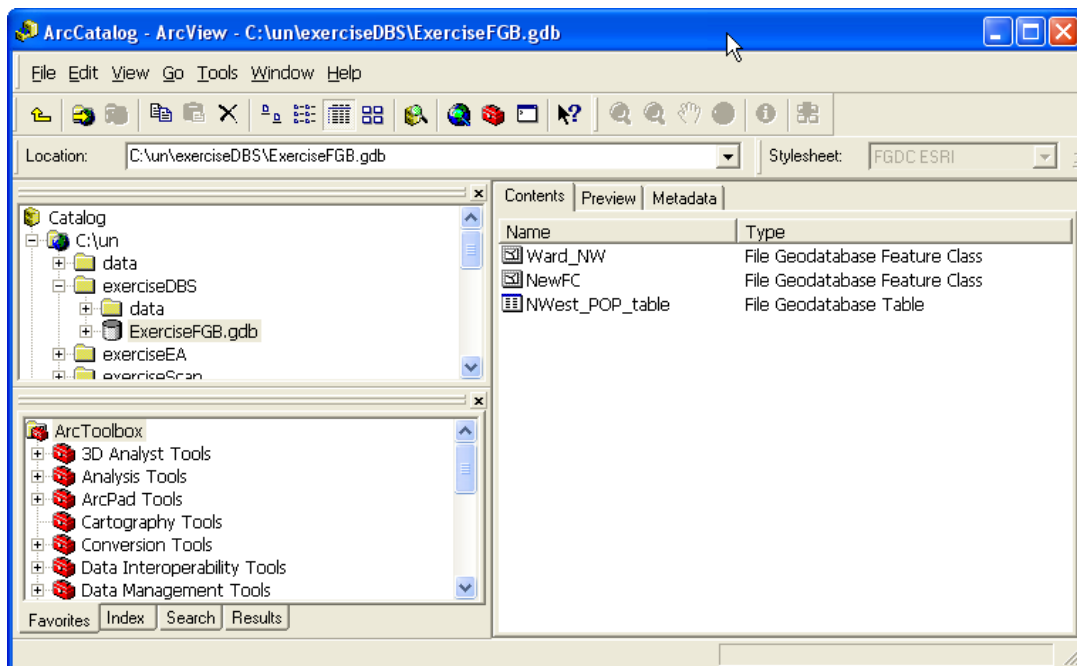
- Select **Table (single)**.
- Select the **NWest\_POP\_table.dbf** table as input from the **C:\un\exerciseDBS\data** directory.

- Output location is C:\un\exerciseDBS\exerciseFGB.gdb.
- In the Output Table box, type **NWest\_Pop\_table**
- **Click OK**

### Step 3: Creating a New Feature Class

- In the ArcCatalog tree, right-click the **ExerciseFGB** file geodatabase.
- Point to **New**.
- Click **Feature Class**.
- Type a name for the feature class, **NewFC**. To create an alias for this feature class, type in an alias. Use **NewFeatureClass** as an alias for this exercise.
- Select the **Type of Features** from the drop-down list that will be stored in this feature class. Select **polygon**.
- Skip geometry properties, but if your data require m- or z-values, you must check the appropriate check boxes.
- Click **Next**.
- Click **Import...** and navigate to a feature class that uses a spatial reference that we want to use as a template. In this exercise, navigate to **ExerciseFGB.gdb** and select **Ward\_NW** feature class. If you did not have a template feature class, you would choose a spatial reference by using the **Select...** button. Click **Next**.
- Accept default value for **xy tolerance**. The default xy tolerance is 1 mm on the Earth's surface at the point of projection.
- By default, the **Accept default resolution** and **domain extent** check box is checked. If you want to manually adjust the domain and extent values of your new dataset, uncheck this box. For this exercise, **keep the box checked**. Click **Next**.
- The configuration keyword applies to ArcInfo and ArcEditor users that have a *file* or *ArcSDE Enterprise* geodatabase. Configuration keyword allows you to create a table using a custom storage keyword. This does not apply to our exercise.
- Click **Next**.
- To add a field to the feature class, click the **blank row below "SHAPE"**, then type the new field name, **EACODE**
- Click in the **Data Type** column next to the new field's name, and select **Text** from the list.
- For **Field Properties**, change **Length** to **13**. Keep the remaining default properties.
- Click **Finish**.

This is the resulting file geodatabase.



## Tips

*To have your frequently used coordinate systems appear at the top of the list in the wizard, begin by closing the wizard. Now, in ArcCatalog, turn on the Coordinate Systems folder ( go to Tools > Options dialog, General tab) if it is not already turned on. Inside the Coordinate Systems folder, drag and drop, or copy and paste, the coordinate systems you use most frequently into the top level of the folder. For example, copy a coordinate system from inside one of the subfolders and then right-click the Coordinate System folder and choose paste. (If you drag and drop coordinate systems to the top level of the Coordinate System folder, they are automatically copied, not moved, by ArcCatalog, so they'll still be accessible via their original subfolder too). You can also create new subfolders or reorganize the existing subfolders. Now when you go into the New Feature Class wizard again, you'll see those coordinate systems that you moved to the top of the Coordinate Systems folder at the top of the list.*

- *You can click Save As to save the coordinate system as a .prj file.*
- *Click Import to populate the Spatial Reference Properties dialog box with information from another feature class. You can then customize the template's spatial reference.*
- *To modify a predefined (or a template's) coordinate system or to define a custom coordinate system from scratch, click Custom on the Coordinate System dialog box.*
- *Since the size of the spatial domain is dependent on the value of precision, when the precision is changed, the maximum z-value will change to fit within the size of the spatial extent. Similarly, when the maximum z-value is changed, the precision will change to fit the domain extent.*