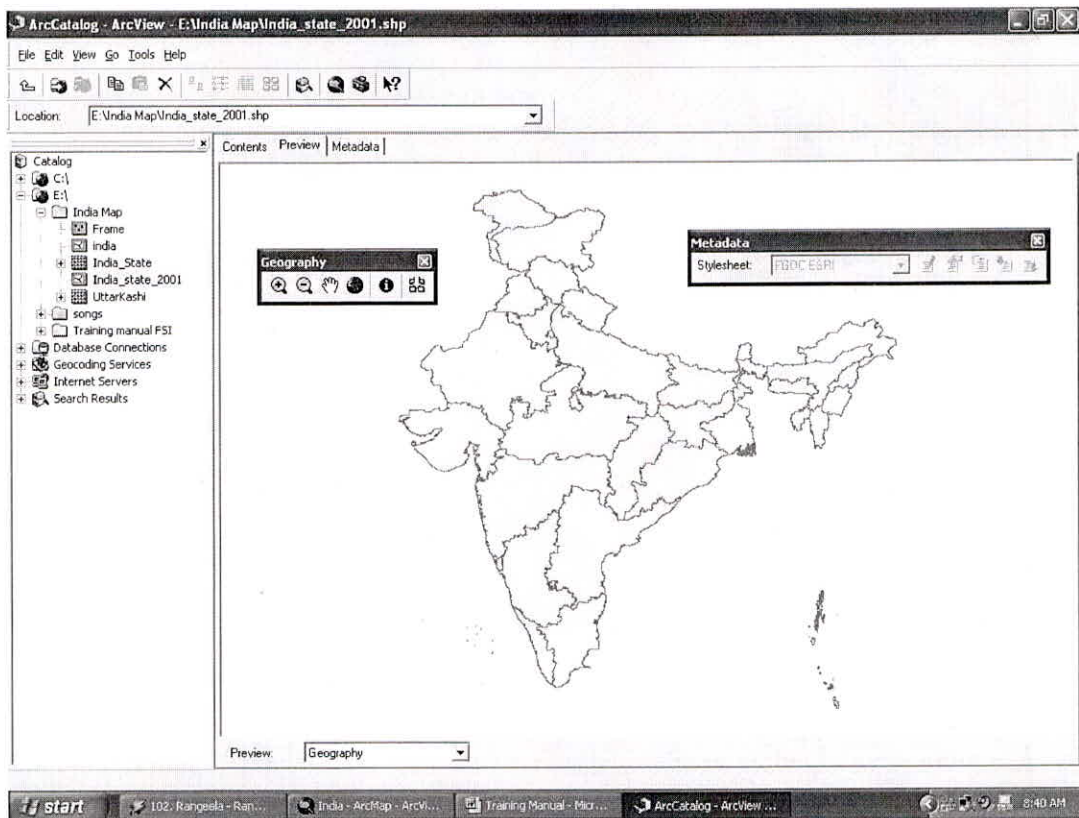# Creating Data

About starting ArcCatalog

Starting ArcCatalog is the first step to exploring your data. You can access ArcCatalog from the Start button on the Windows taskbar.

1. Click the **Start button → Programs → Ars Gis → Arc Catalog**

You can also start ArcCatalog from ArcMap by clicking the Launch ArcCatalog button on the Standard toolbar

Before you create your geodatabase

One of the most important steps in creating an effective database is designing its schema. The same is true for any geodatabase. When designing a geodatabase, you should consider questions such as:

*   What kind of data will be stored in the database?

- In what projection do you want your data stored?

Creating a new personal geodatabase

1. In the ArcCatalog tree, right-click on the location where you want to create the new personal geodatabase.
2. Point to New.
3. Click Personal geodatabase.

ArcCatalog creates a new personal geodatabase in the location you selected and sets its name to edit mode.

4. Type a new name for this personal geodatabase.
5. Press Enter.
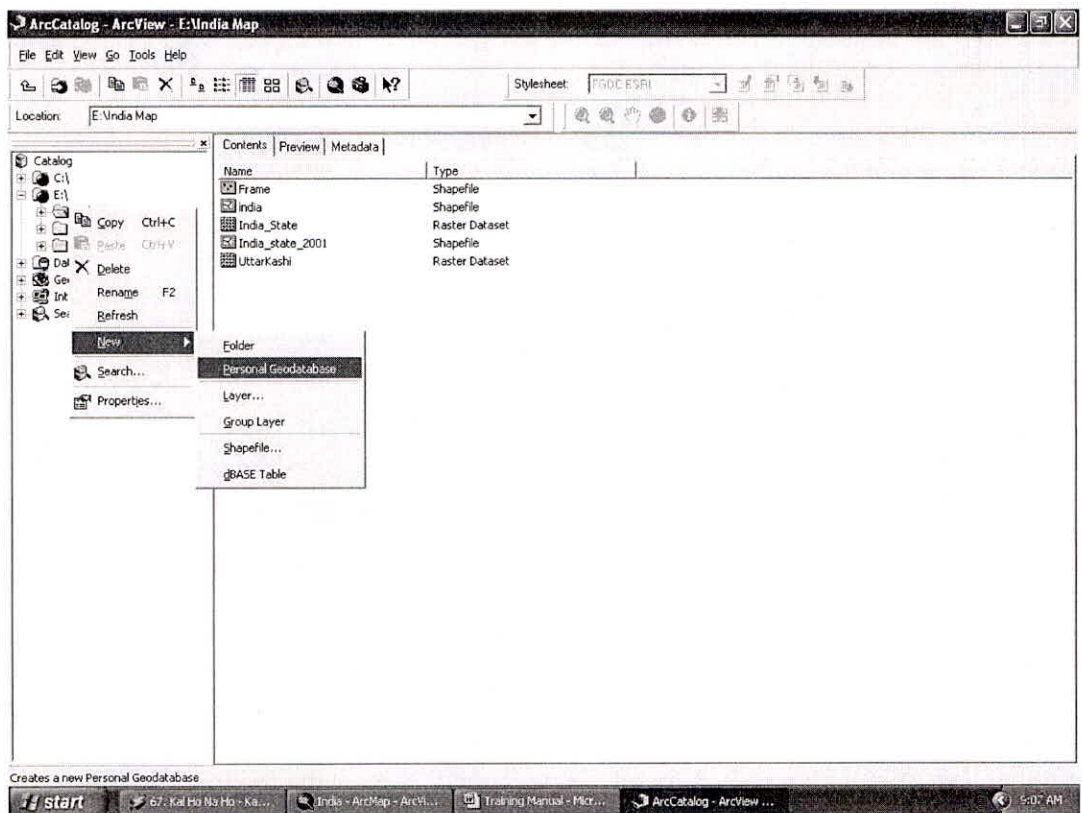
About creating feature datasets

When creating a new feature dataset, you must define its spatial reference. This includes its coordinate system—either geographic or a specific projection—and the coordinate domains—the minimum x, y, z, and m-values and their precision. All feature classes in the dataset must use the same coordinate system, and all coordinates in all features in all feature classes must fall within the coordinate domains. The only exception to this rule is m domains; feature classes in the same feature dataset can have different m domains.

When defining the coordinate system, you can choose a predefined coordinate system, use an existing feature dataset or standalone feature class as a template, or define a custom geographic or projected coordinate system.

How to create feature datasets

Creating a feature dataset with a predefined coordinate system

1. In the ArcCatalog tree, right-click the database in which you want to create a new feature dataset.
2. Point to New.
3. Click Feature Dataset.
4. Type a name for the feature dataset e.g.*Administrative Details*.
5. Click Edit to define the feature dataset's spatial reference.
6. Click Import to set the feature dataset's spatial reference.
7. Navigate to the spatial reference you want to use, or navigate to the feature class (Frame) or feature dataset whose spatial reference you want to use as a template.
8. Click Modify if you want to change any parameters in the coordinate system you've chosen. Edit the coordinate system's parameters, and click OK.
9. Click the X/Y Domain tab.
10. Type the minimum x- and y- and maximum x- and y-coordinate values for the dataset, and type the required precision for the coordinate values.
11. Click OK.
12. To see the details of your new dataset's spatial reference, check Show Details.
13. Click OK.

You can click Save As to save the coordinate system as a .prj file.
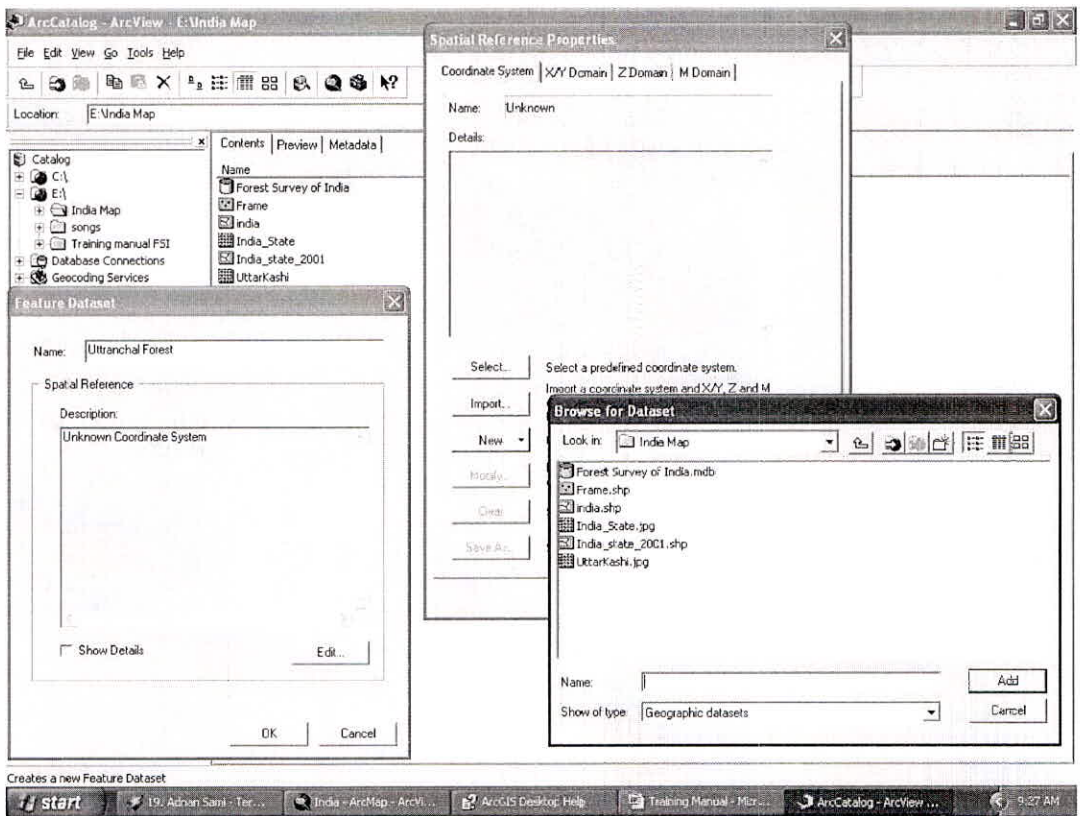
# About creating feature classes

You can create feature classes in a geodatabase with ArcCatalog. If you accept the wizard's defaults, you will create a feature class that uses simple feature objects—points, lines, or polygons—to represent its features. You can also create features with custom behavior.

When creating a feature class, you must define the geometry field's properties, such as its spatial index and the geometry type. When creating a standalone feature class, you must define its spatial reference. All feature classes in a feature dataset must use the same spatial reference, which was defined when the feature dataset was created. The only exception is m domains; feature classes in the same feature dataset can have different m domains.

How to create feature classes

Creating a feature class in a feature dataset

1. In the ArcCatalog tree, right-click the feature dataset in which you want to create a new feature class.
2. Point to New.
3. Click Feature Class.

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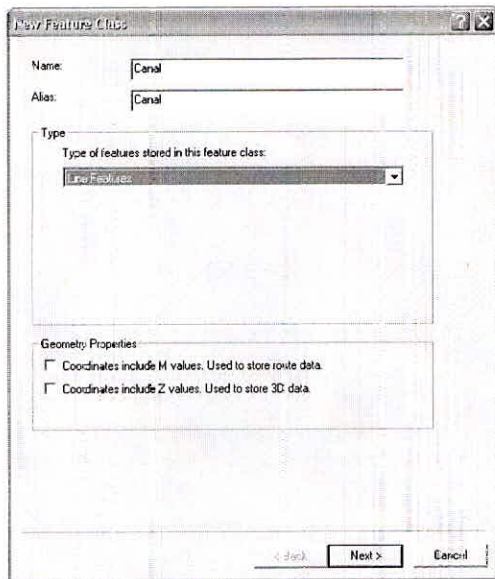
4. Type a name for the feature class "State Boundary". To create an alias for this feature class, type the alias.
5. Select the type of detail you want to capture under this feature class eg. Line Features. As shown above
6. Click Next.
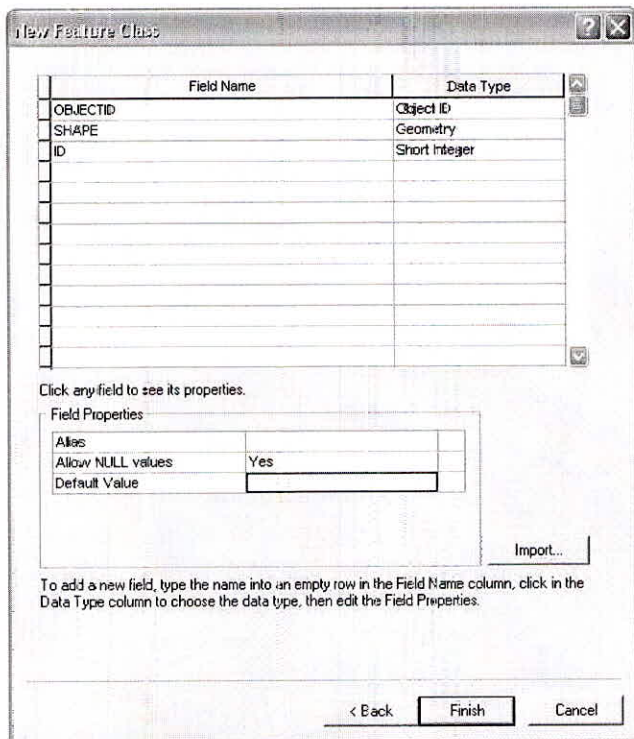
7. To create an alias for this field, click the field next to Alias, and type the alias for this field.

8. To prevent nulls from being stored in this field, click the field next to Allow nulls, click the dropdown arrow, and click No.
9. To associate a default value with this field, click the field next to Default value and type the value.
10. To associate a domain with this field, click the field next to Domain, click the dropdown arrow to see a list of the domains that apply to this field type, and click the domain.
11. To set other properties specific to the type of field, either click the property in the dropdown list or type property.
12. Repeat steps 7 through 11 until all the table's fields have been defined.
13. Click Finish.

When creating a new feature class, you can use another feature class as a template. Click Import, navigate to the feature class whose field definitions you want to copy, then click OK. Now you can edit the field names and their data types.

All simple feature classes in the geodatabase require an ObjectID and geometry type fields. The default ObjectID and geometry fields will not be deletable in this wizard.

When adding a feature class to a feature dataset, the Spatial Reference button lets you review the feature dataset's spatial reference parameters; however, you can't change them. The exception to the rule is m domains; feature classes in the same feature dataset can have different m domains.