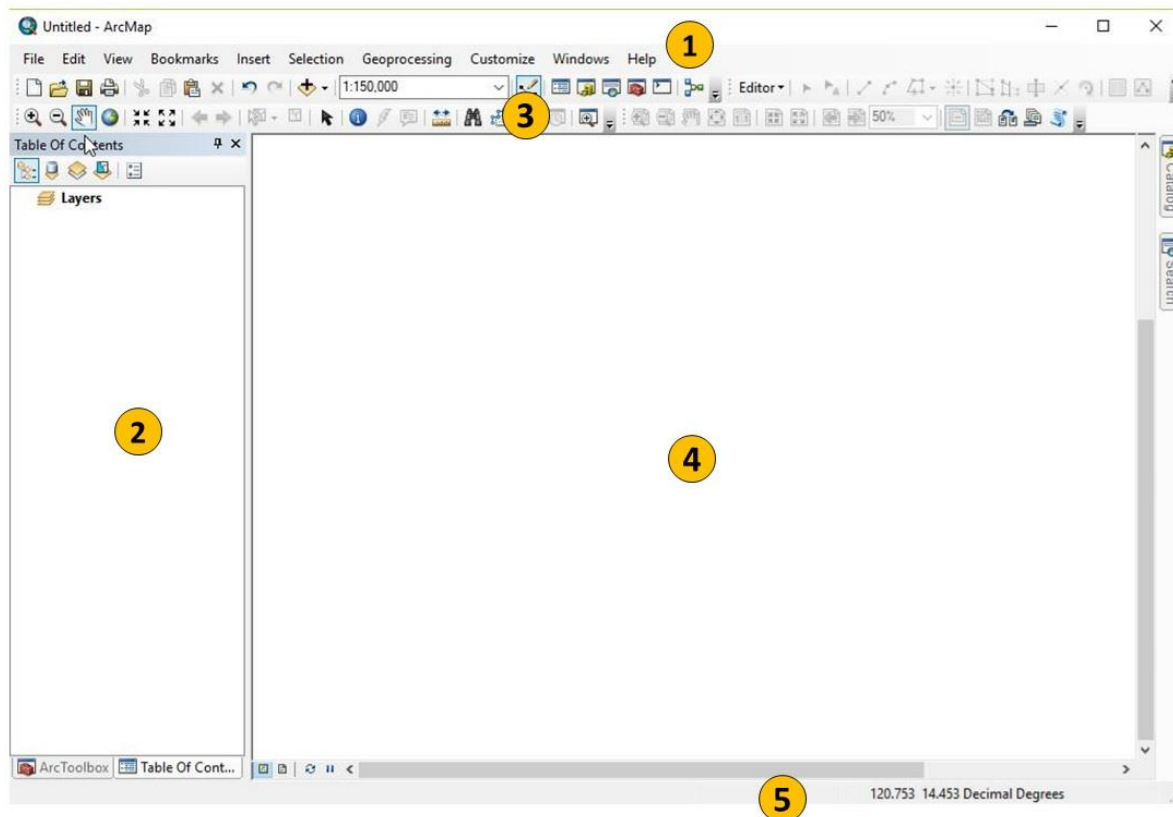


## Session 4.B: Using the basic functionalities of GIS software (ArcMap)

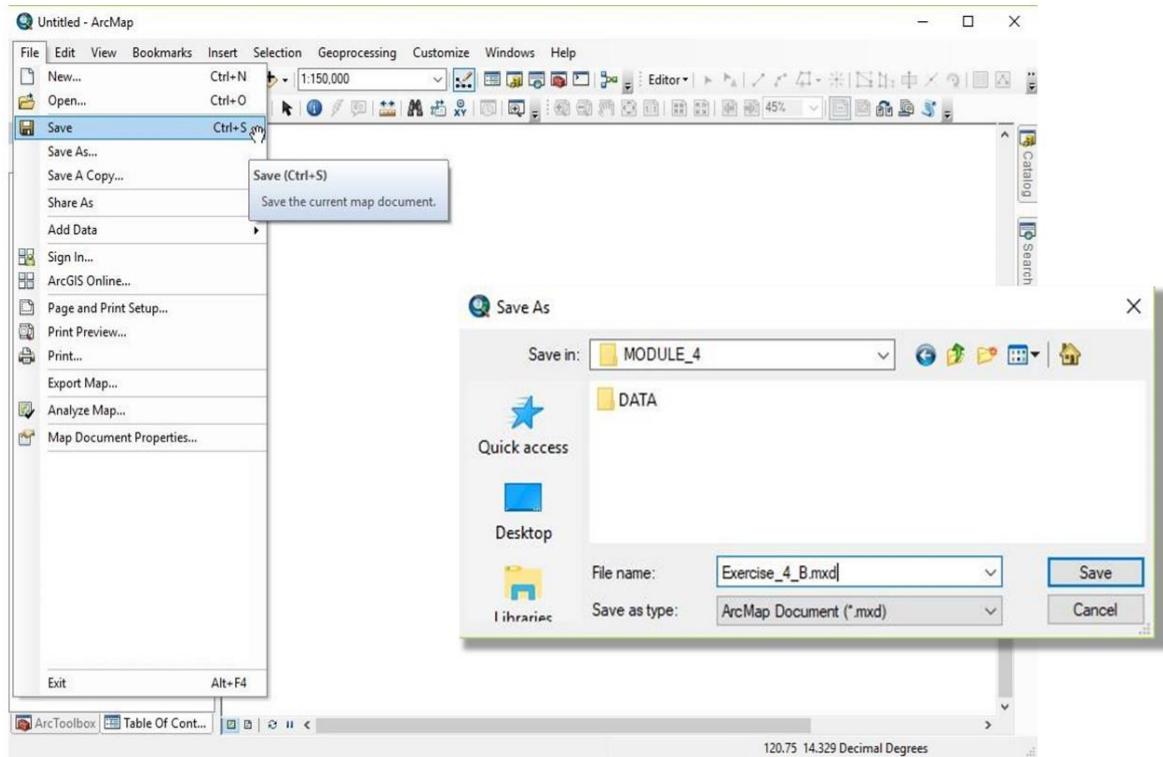
### Navigating the Interface:



The ArcMap interface is divided into 5 main areas:

1. Main Menu bar
  - Has some items common to most Windows application packages, plus some that are unique to GIS
2. Table of contents
  - Lists all the data in the map document by layer and allows you to change visibility and access layer properties
3. Tools Toolbar
  - Has frequently used tools and can be docked or undocked
4. Map display
  - Where the map layers loaded into the map are drawn
5. Status bar
  - Displays the map coordinates of the pointer location in the map display

## Saving Map Documents



- ArcMap can save user sessions. An ArcMap document is called a map document or mxd since the file name extension (.mxd) is automatically appended to your map document name.
- *File > Save*
- Type in a file name and save your map document.

## Standard Toolbar



- New
- Open
- Save
- Print
- Cut
- Copy
- Paste
- Delete
- Undo
- Redo
- Add Data
- Map Scale
- Editor Toolbar
- Table of Contents
- Catalog
- Search
- Arc Toolbox
- Python
- Model Builder

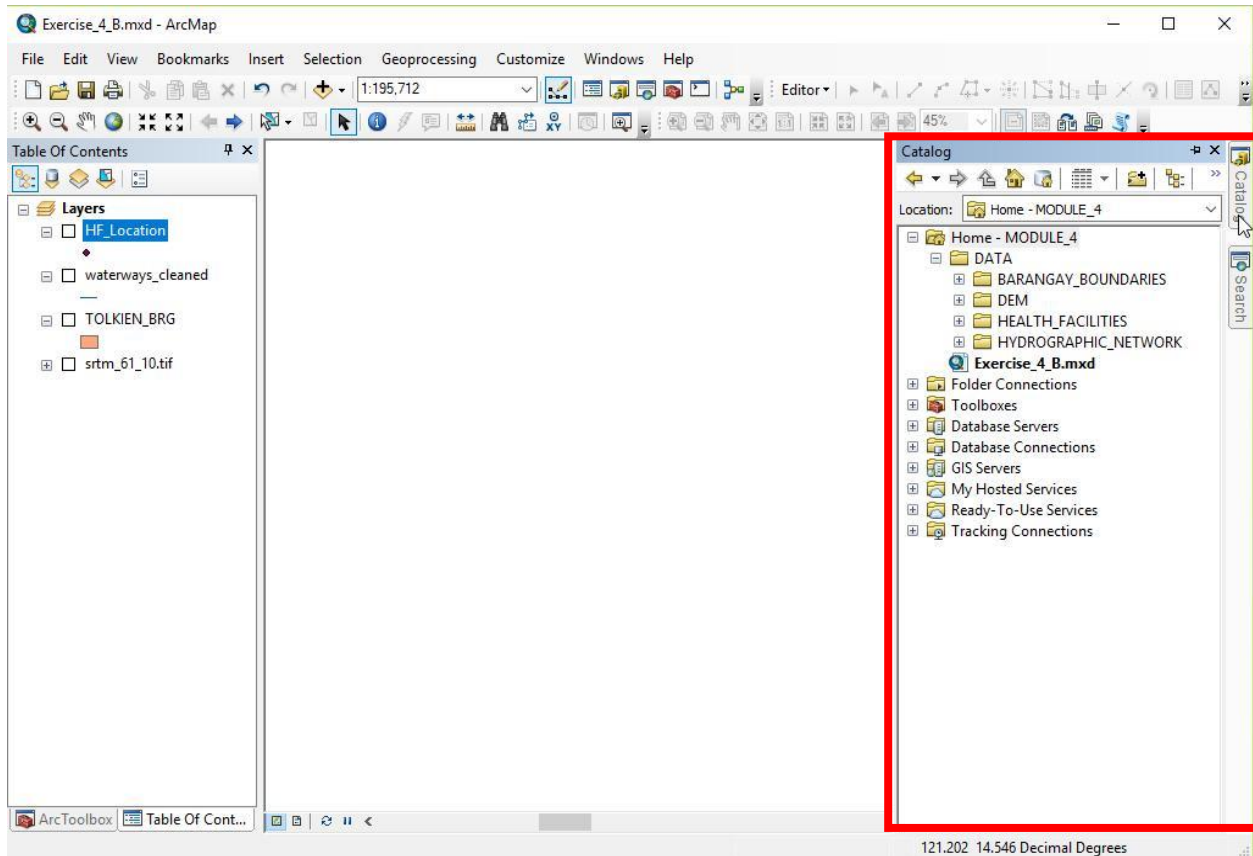
## Tools Toolbar



- Zoom In
- Zoom Out
- Pan
- Zoom to Full Extent
- Fixed Zoom In
- Fixed Zoom Out
- Go Back To Previous Extent
- Go To Next Extent
- Select Features
- Clear Selected Features

- Select Elements
- Identify
- Hyperlink
- HTML Popup
- Measure
- Find
- Find Route
- Go To XY
- Time Slider
- Create Viewer Window

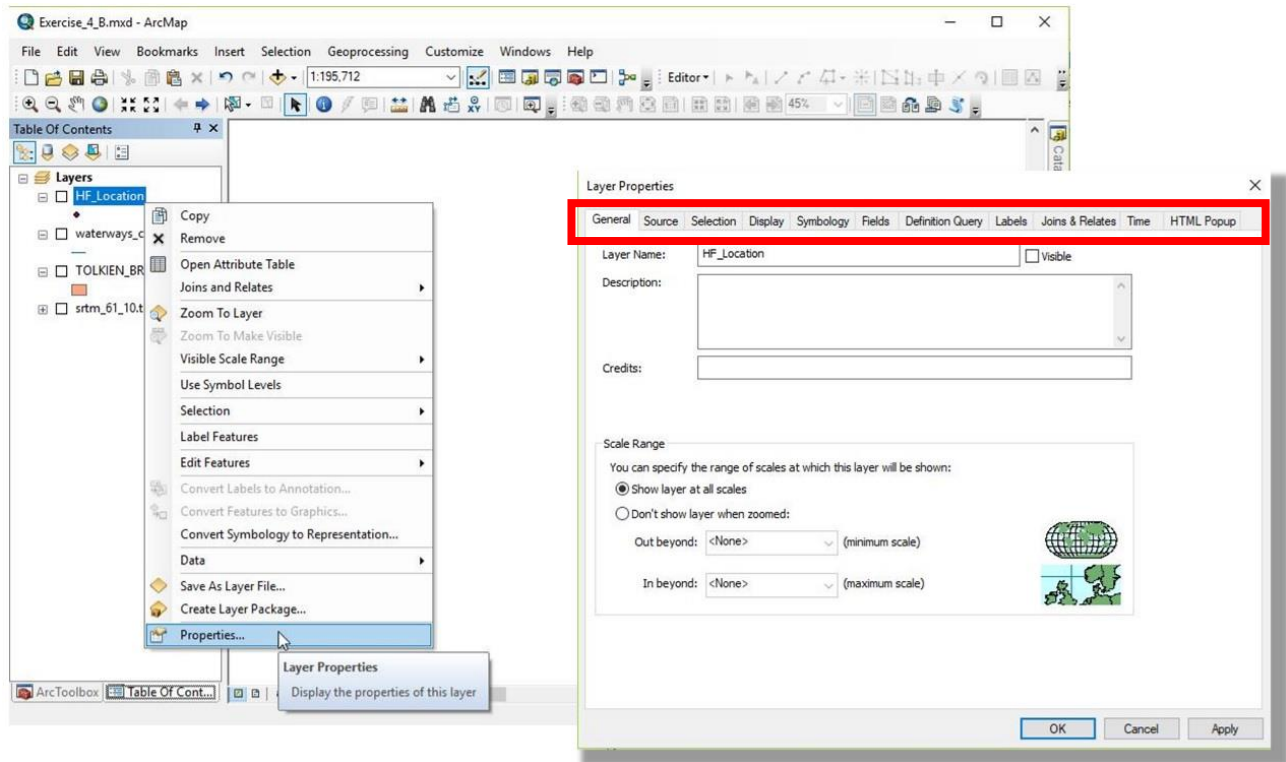
## Catalog Window



The Catalog window provides an integrated and unified tree view of all the data files, databases, and ArcGIS for Server documents available to you.

You can add data from the Catalog window by dragging and dropping the selected data into the Map display area or the Table of contents.

## Vector Layer Properties

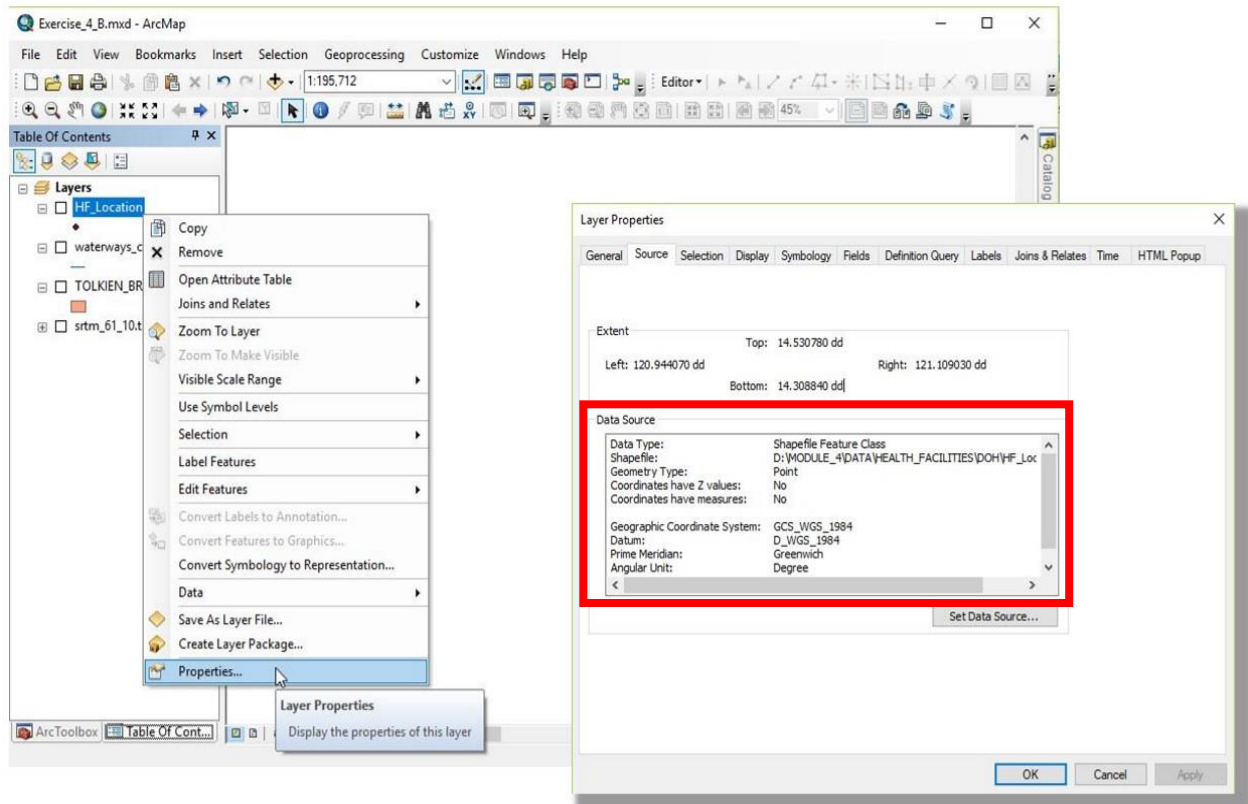


Here is a brief description of tabs in the Layer Properties dialog box for Feature layers:

- **General**—Used to record a layer description, set credits, and specify scale-dependent drawing properties.
- **Source**—Allows you to view the extent of your data. You can view and change the source of your data from this tab.
- **Selection**—Allows you to set how features in a specific layer are highlighted when they are selected. Selection property changes in a specific layer override the default Selection Options settings.
- **Display**—Controls how your data is displayed as you move in the view. Options include making a layer transparent, adding MapTips and hyperlinks, and restoring excluded features.
- **Symbology**—Provides options for assigning map symbols and rendering your data. Options include drawing all features with one symbol; using proportional symbols; using categories based on attribute values; the use of quantities, color ramps, or charts based on attributes; or the use of representation rules and symbols.

- **Fields**—Used to set characteristics about attribute fields. You can also create aliases, format numbers, and make fields invisible. An important aspect is to set Alias names for visible fields that make it easier for your users to work with feature attributes.
- **Definition Query**—Allows you to specify that a subset of your features will be used in the layer. With the Query Builder dialog box, you can create an expression to select particular features of a dataset to be used in your layer.
- **Labels**—Allows you to turn on a layer's labels, build label expressions, manage label classes, and set up the labeling options for label placement and symbology. Alternatively, you can set labeling properties for all layers within the map using the Label Manager.
- **Joins and Relates**—Allows you to join or relate attribute tables to the layer's feature attribute table.
- **Time**—Used to specify the time properties of time-aware layers.
- **HTML Popup**—Used to specify how pop-up lists are generated when you click a feature to display information about it.

## Data Projections

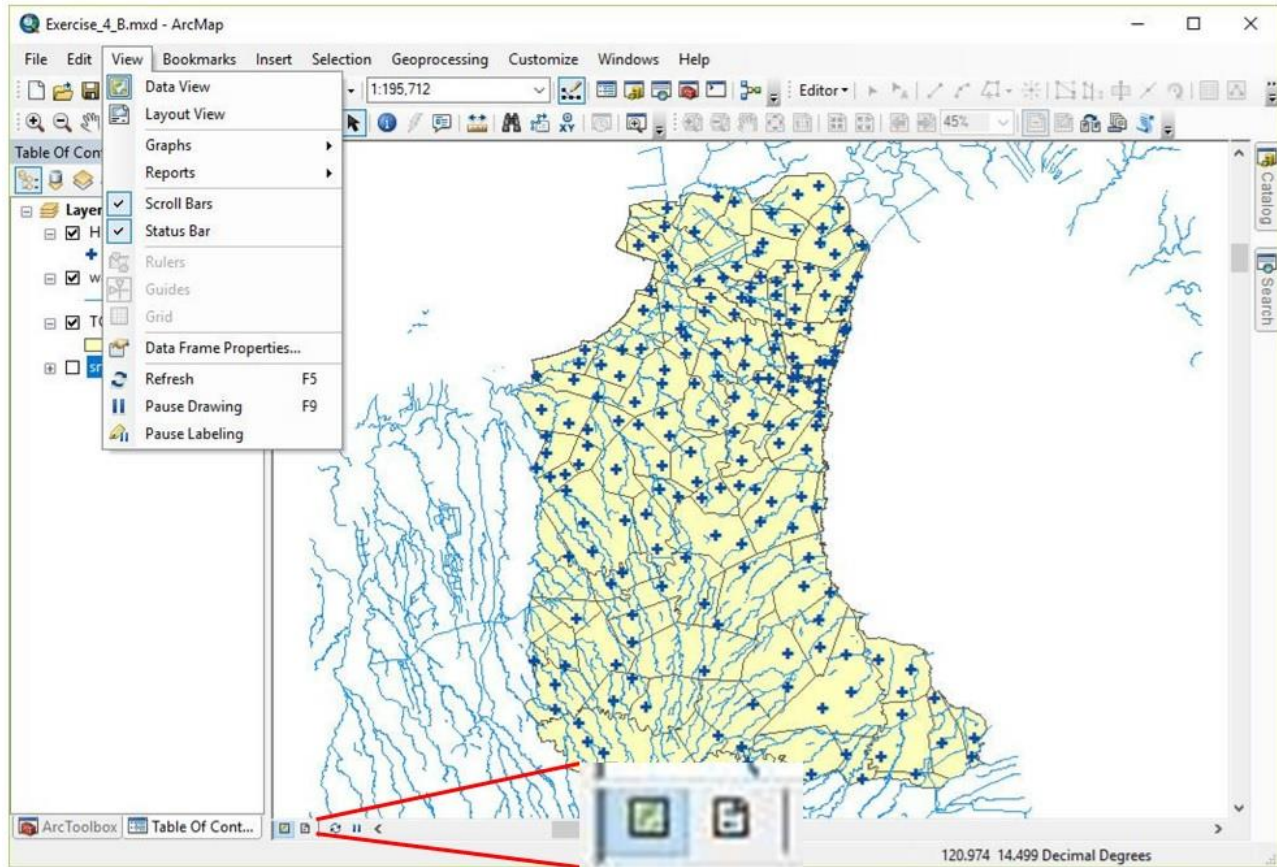


All vector/raster layers have a projection or CRS. The quickest way to check projections is to right click on the layer > *Properties* > *Source*.





## ArcMap Views



ArcMap has two available views: Data View and Layout View.

You can access either view from the View main menu or the view button on the bottom of the map display.

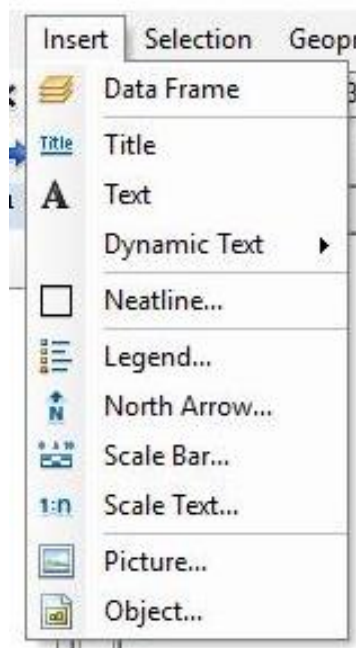
- Data view - an all-purpose view for exploring, displaying, and querying the data on your map. This view hides all the map elements on the layout, such as titles, north arrows, and scale bars, and lets you focus on the data in a single data frame, for instance, editing or analysis.
- Layout view- a virtual page on which you can place and arrange map elements, and you can do almost everything you can in data view, plus design your map.

## Layout Toolbar



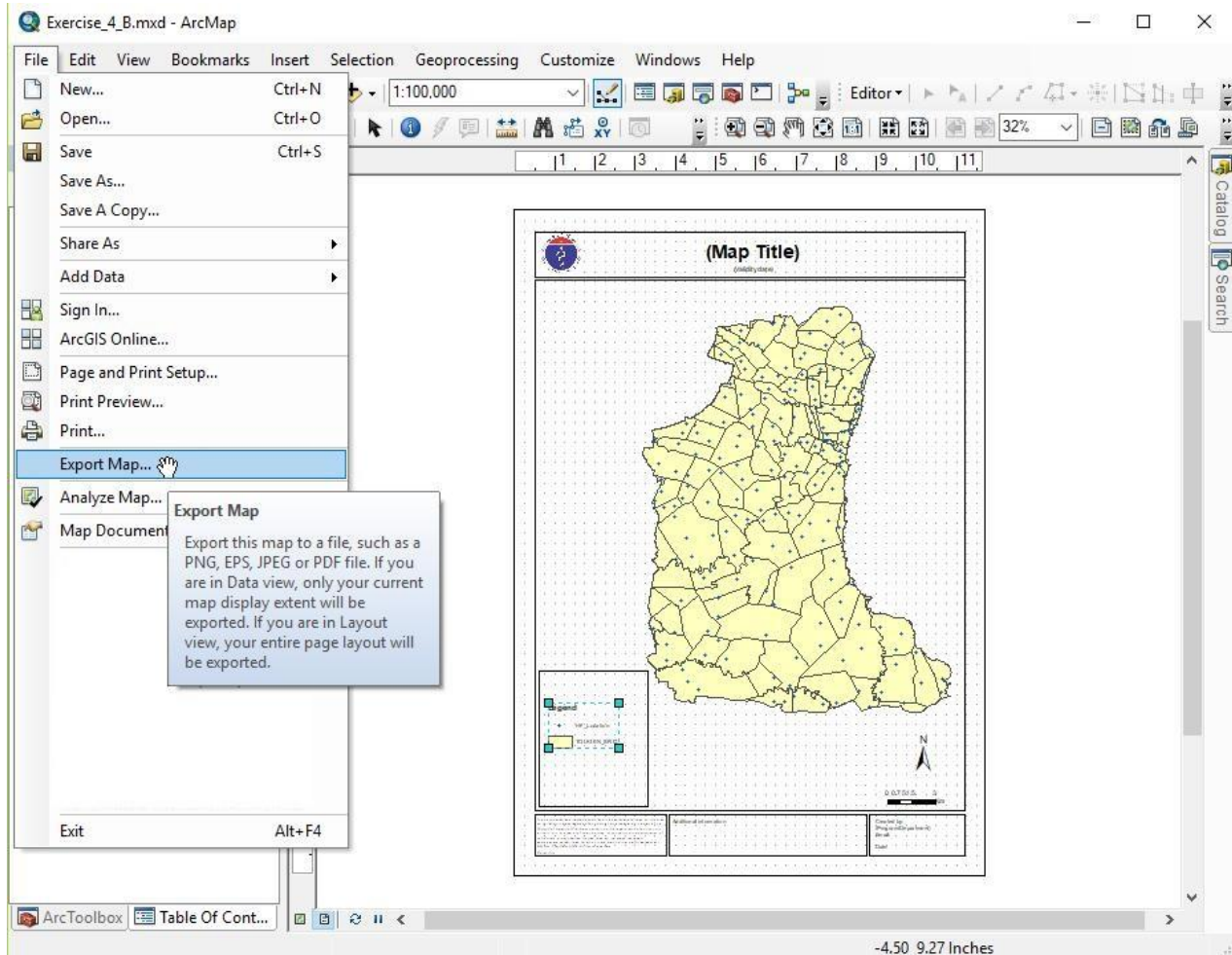
- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Zoom In</li> <li>• Zoom Out</li> <li>• Pan</li> <li>• Zoom Whole Page</li> <li>• Zoom to 100%</li> <li>• Fixed Zoom In</li> <li>• Fixed Zoom Out</li> </ul> | <ul style="list-style-type: none"> <li>• Go Back To Extent</li> <li>• Go Forward To Extent</li> <li>• Zoom To Percent</li> <li>• Toggle Draft Mode</li> <li>• Focus Data Frame</li> <li>• Change Layout</li> <li>• Data Driven Pages Toolbar</li> </ul> |
|--|---|

## Map Elements



The different map layout elements can be added through the Insert main menu.

## Exporting the Map Layout



Once you are done with your map layout, you can export it by going to the File main menu and choosing *Export Map...*

You can save your file as BMP, TIFF, JPEG, GIF, PNG, EMF, EPS, PDF, AI, or SVG file.