Week 4 Assignment: Build a geodatabase to support Salzburg tourism

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In this week's assignment, we explore a tutorial that instructs an ArcGIS Pro user to build and manipulate a geodatabase to support tourism in Salzburg (*Build a Geodatabase to Support Salzburg Tourism*, n.d.). This tutorial doesn't involve any actual maps but is more involved with the processes of organizing and re-structuring before the maps get created. Let's begin!

Create a geodatabase Project

In the first section of the tutorial, we get started with the Salzburg tourism data by beginning a new project and loading in the data via ArcGIS Pro Folder Connection. We don't begin a new project by clicking the "Map" button but rather the "Catalog" button. This is because we aren't dealing with maps in this tutorial, but rather data alone. I chose to save the Salzburg.zip provided to my Regis University directory on my laptop, whereas the tutorial instructs the user to save the zip file directly under the C:\ drive. This doesn't affect anything practically in the tutorial.

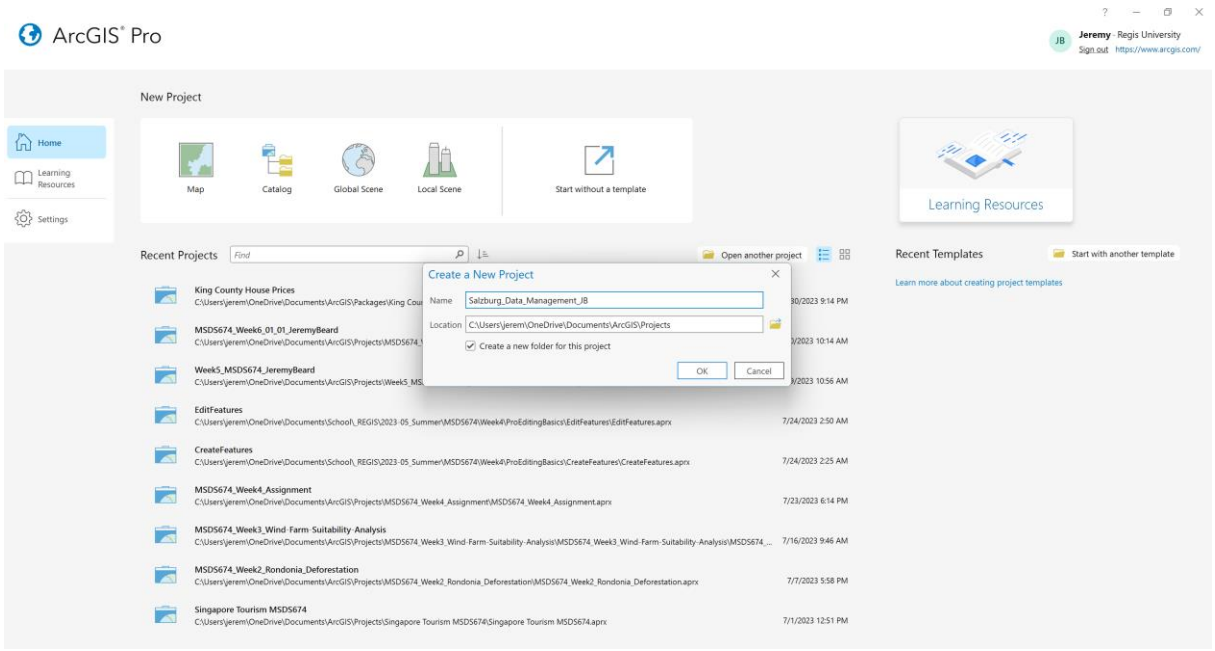

Figure 1: Creating Project

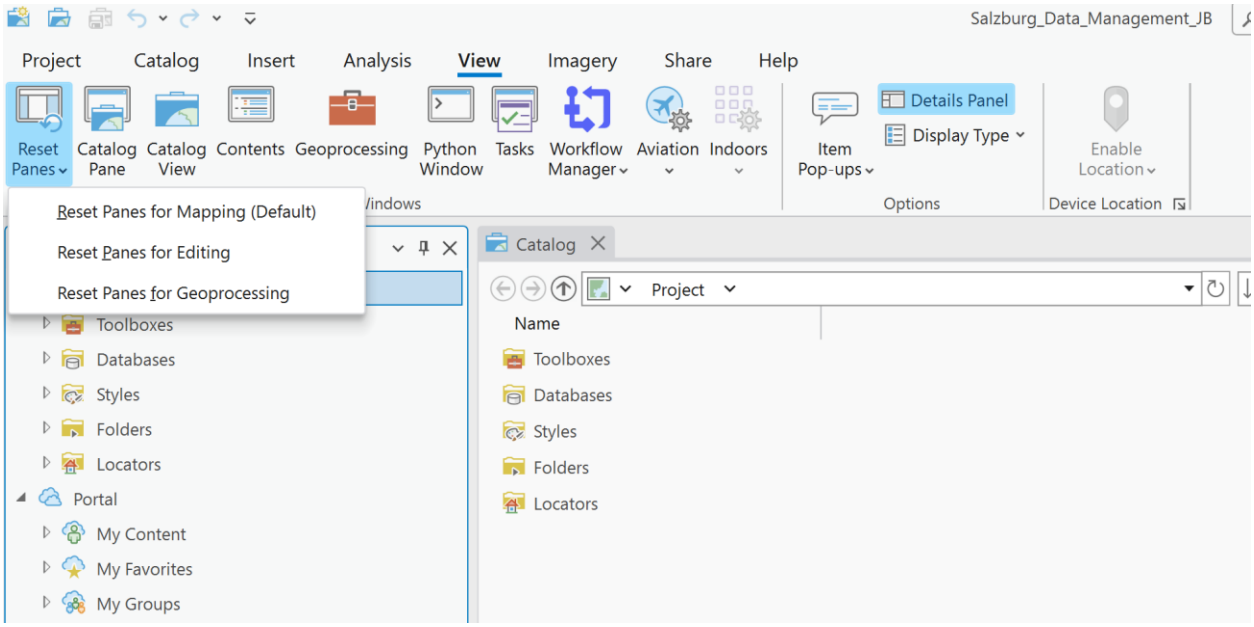

Figure 2: Resetting Panes for Mapping

In Figure 2 above, we reset the panes for mapping. This opens the Contents and Catalog panes and closes others. In my case, I already had both of these panes open and had others closed, so this didn't affect anything in my display. I still clicked this button to see if it would have any effect.

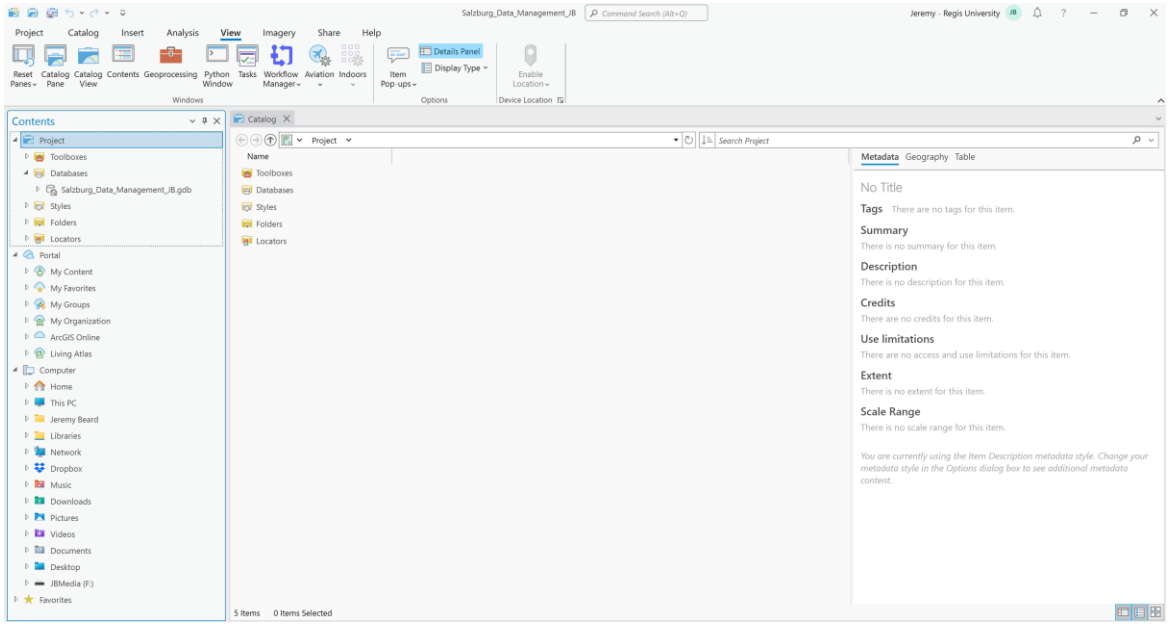

Figure 3: After Closing Catalog Pane

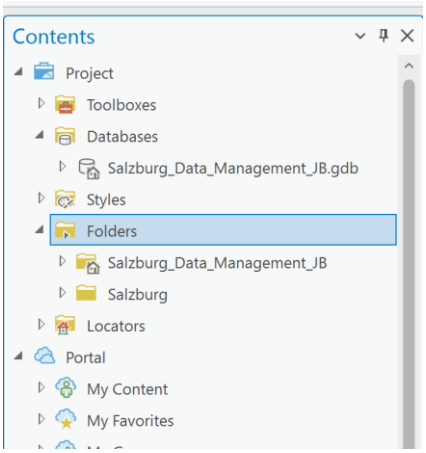

Figure 4: Added Folder Connection to Salzburg Folder

After this section, we have began our project and loaded our data. A folder connection has been made and we're ready to start working with the data!

Evaluate Data Sources

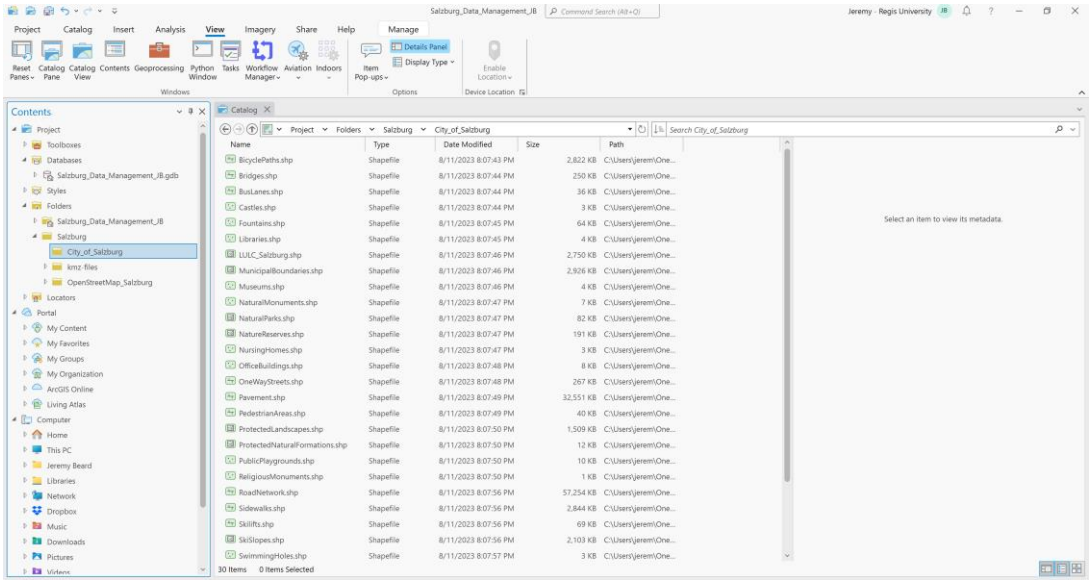

Figure 5: City of Salzburg Folder

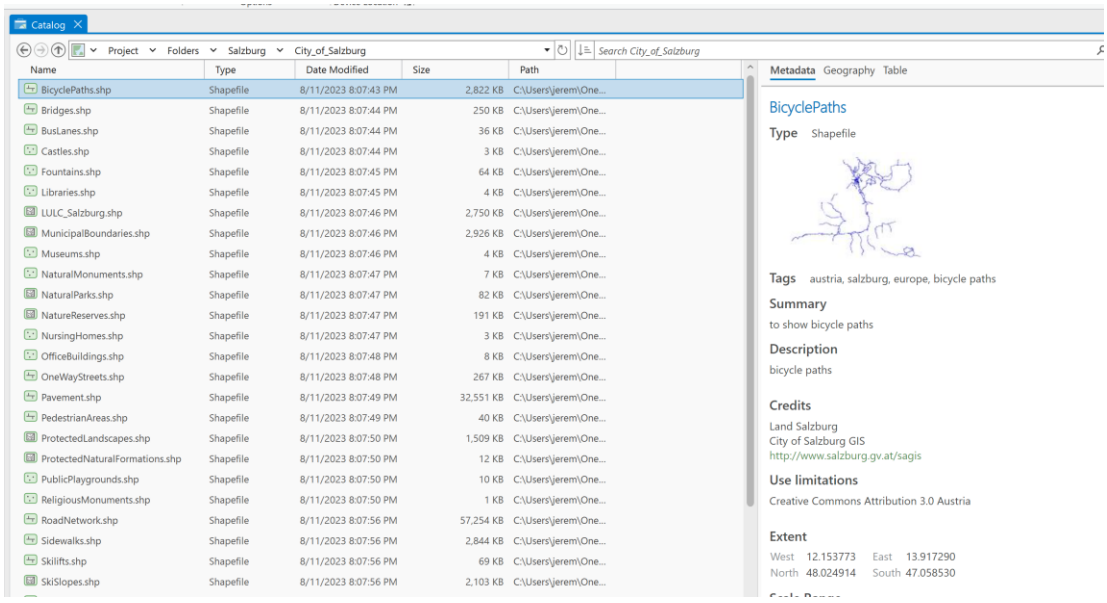

Figure 6: BicyclePaths.shp Metadata

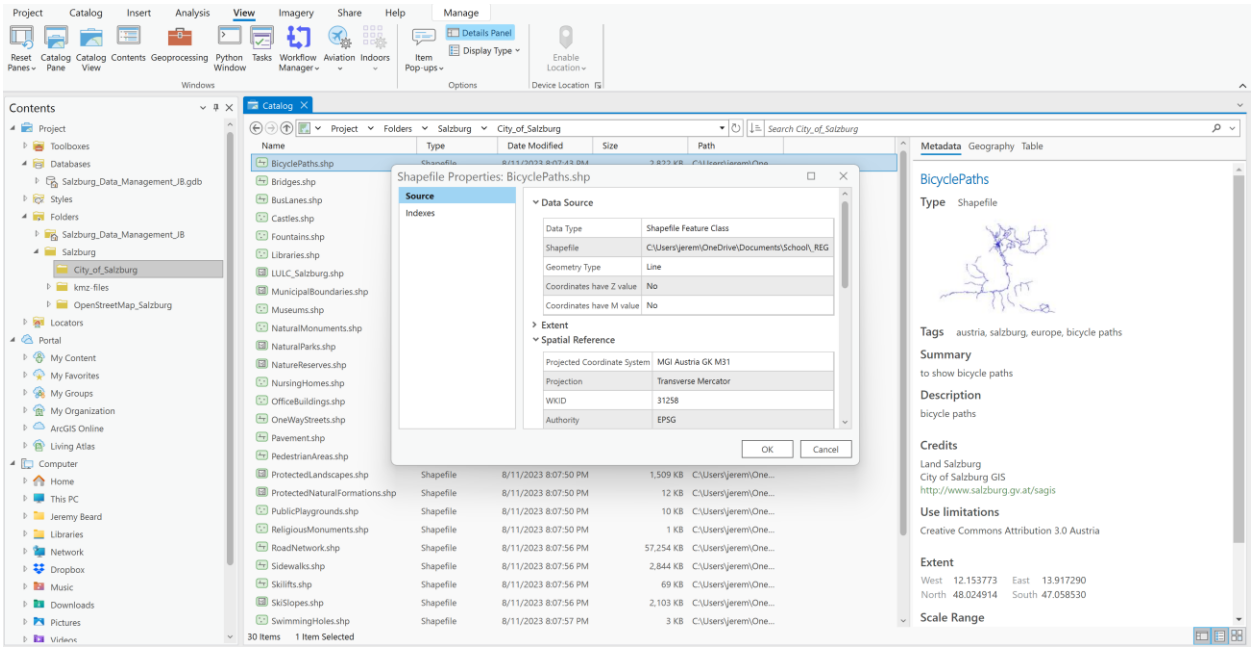

Figure 7: BicyclePaths.shp Spatial Reference Properties

In the screenshots above, we were exploring the folder connection made previously. After viewing the folder, we view the metadata for BicyclePaths.shp. We also view the properties on the BicyclePaths.shp shapefile. In the figures below, we explore the different tabs that can be viewed regarding the shapefiles and their metadata. We also view the properties on a couple different files as well.

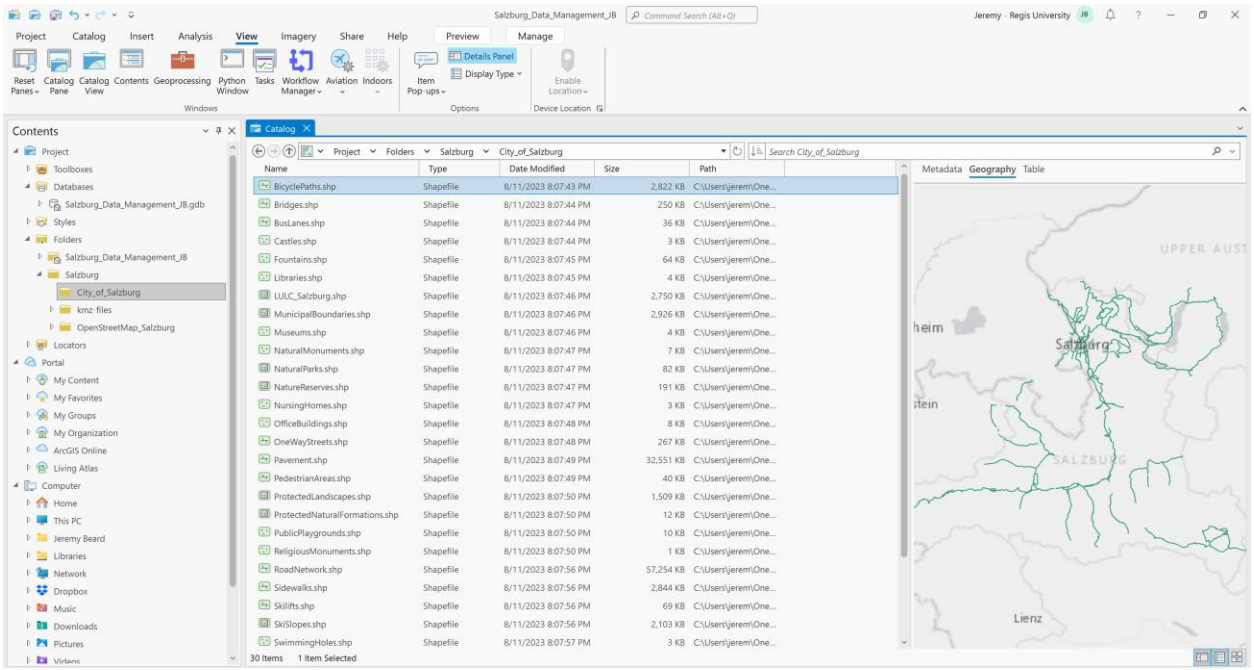

Figure 8: Exploring Geography Tab

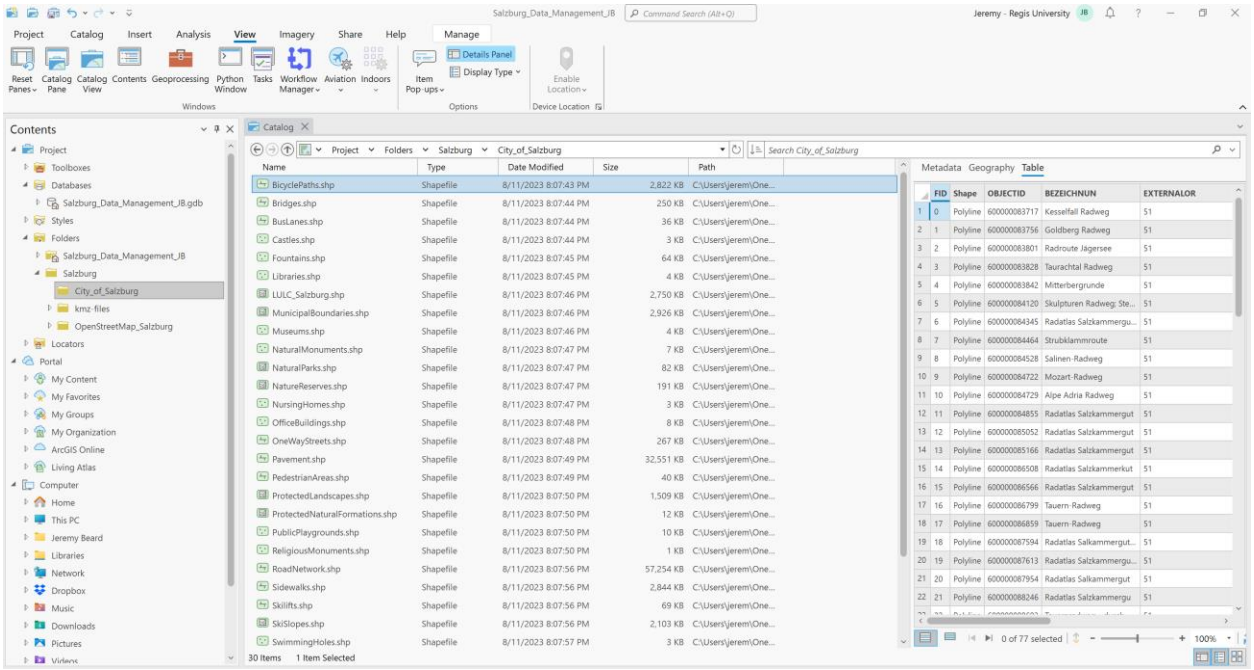

Figure 9: Exploring Table Tab

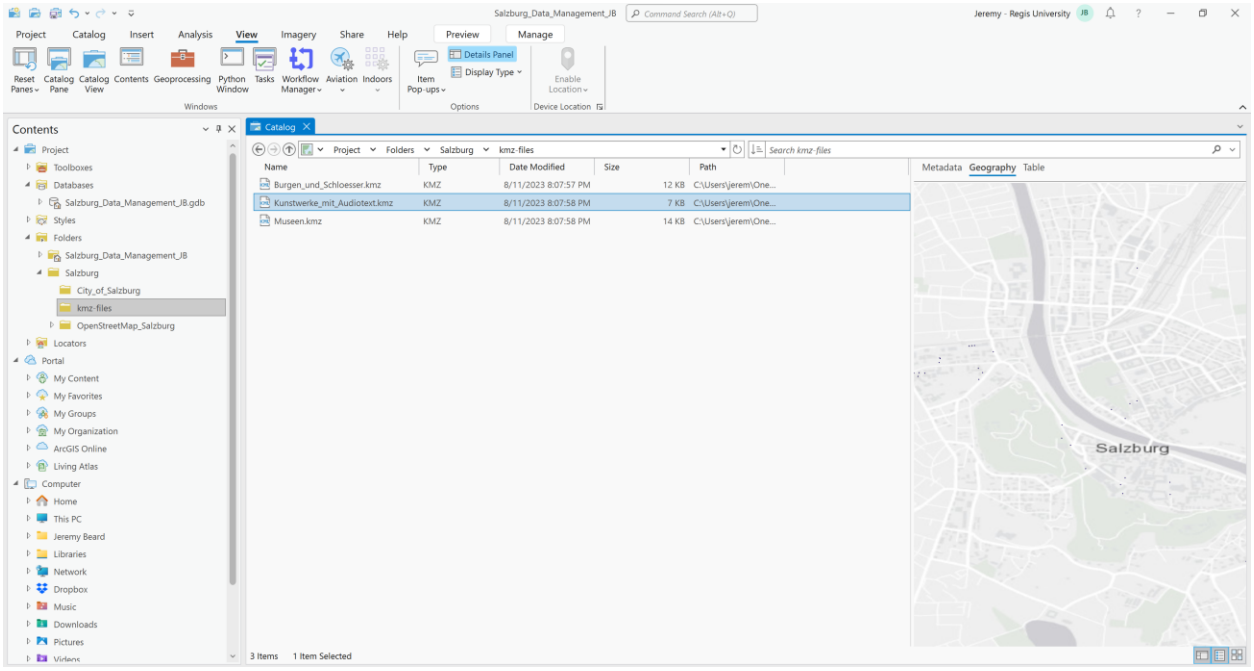

Figure 10: Kunstwerke mit Audiotext Geography properties

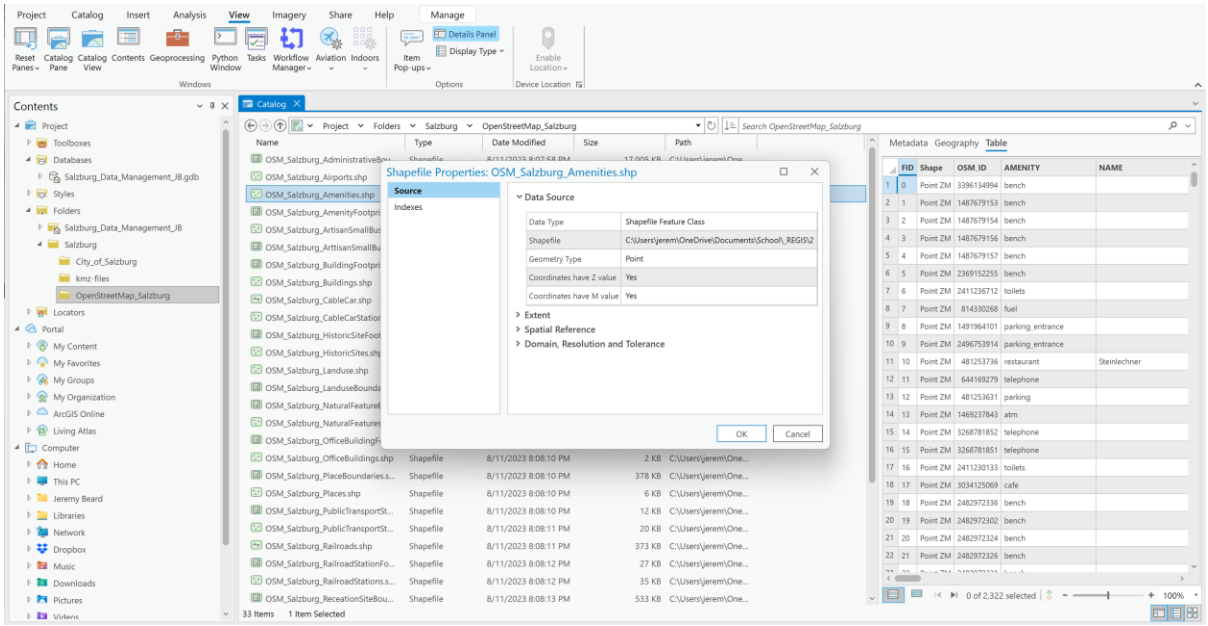

Figure 11: OSM_Salzburg_Amenities properties

Prepare the geodatabase Schema

In the next part of the assignment, we explore the dataset a bit more. We edit the metadata of the dataset below in Figure 12 and confirm the metadata in Figure 13. In the figures following, we create feature datasets within the geodatabase. We import coordinate systems for these feature datasets. We will make feature datasets for city attractions, transportation, scenic attractions, and trails. We also edit the metadata for these feature datasets.

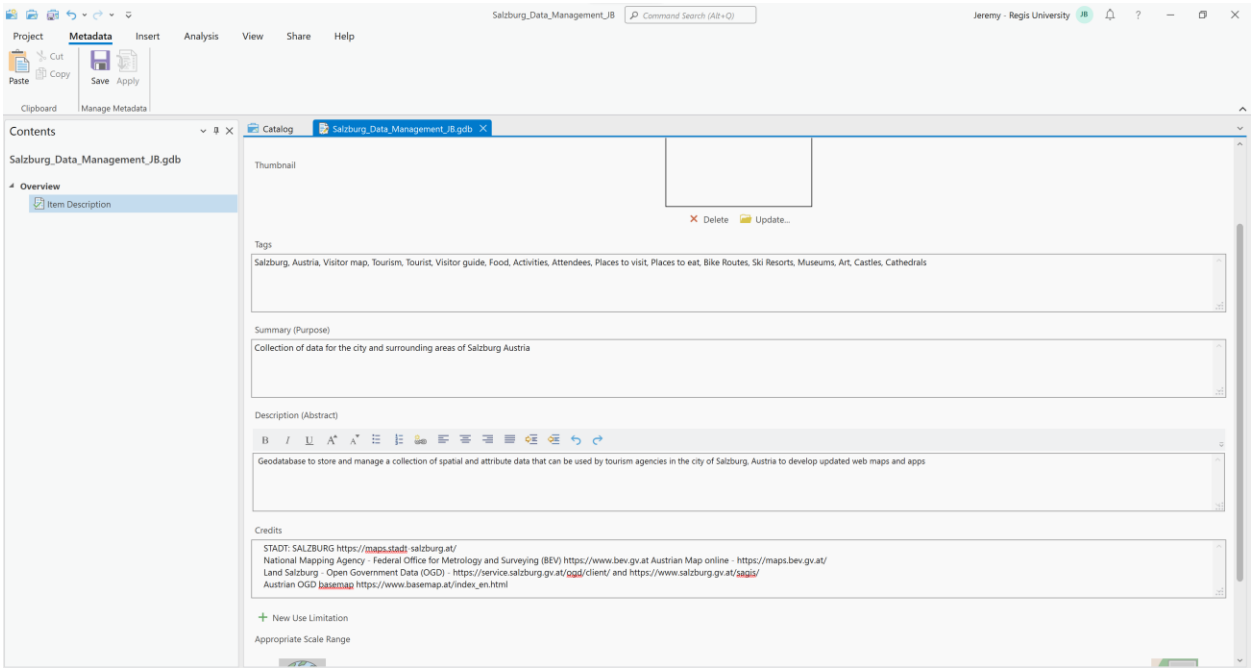

Figure 12: Editing Metadata

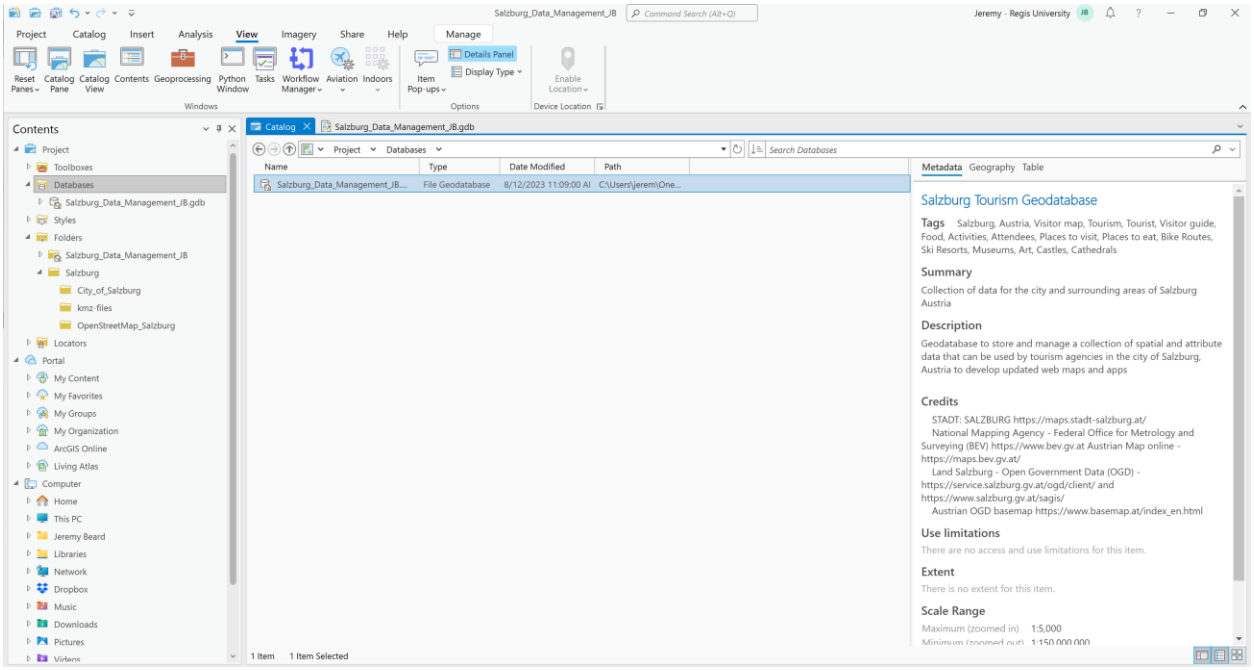

Figure 13: Salzburg_Data_Management Metadata

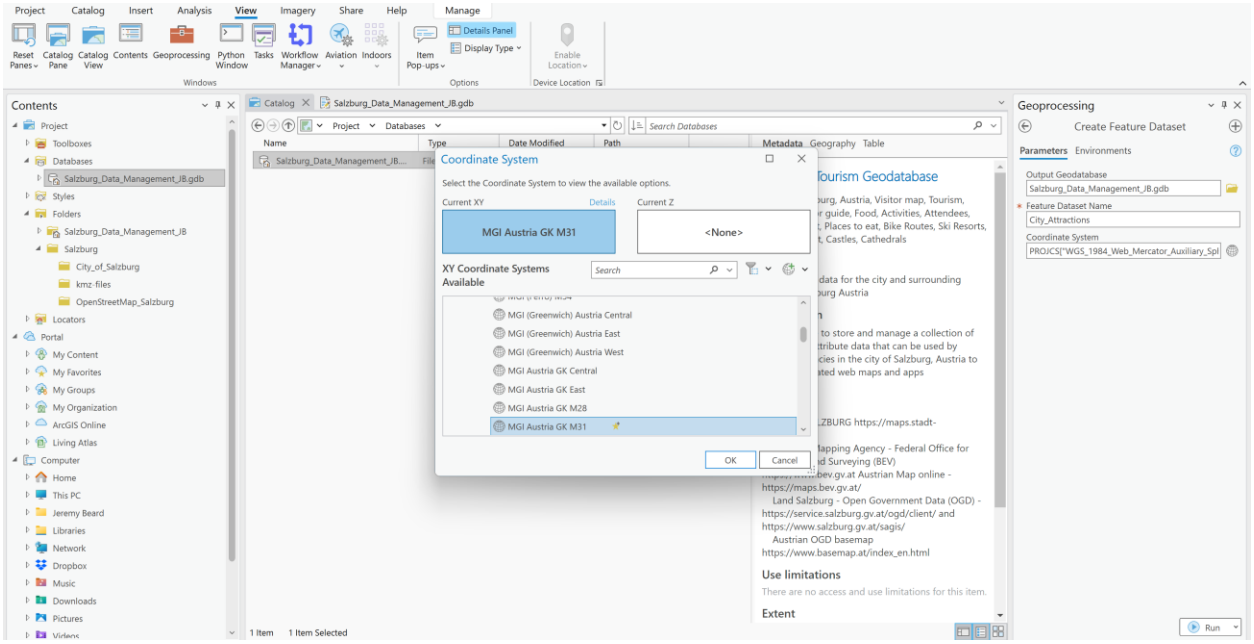

Figure 14: Choosing New MGI Austria GK M31 Coordinate System

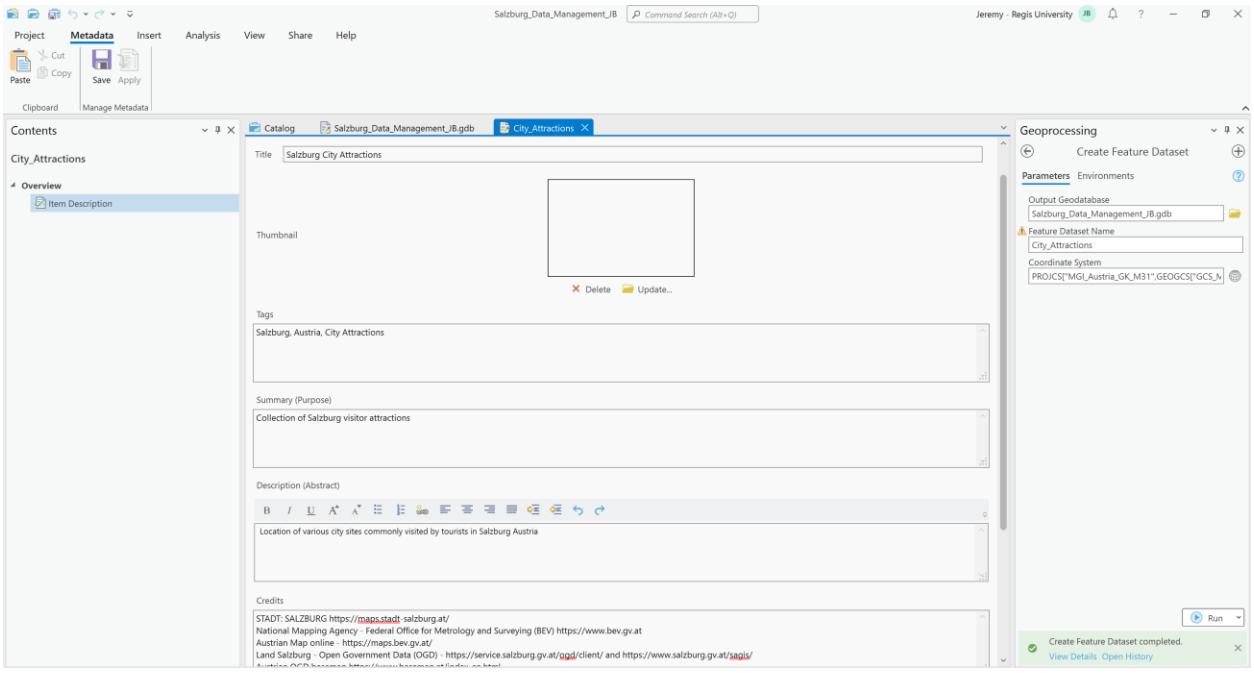

Figure 15: Editing City_Attractions Metadata

Now we have completed creating a feature dataset. Following that, we will complete this section of the tutorial by creating the rest of the feature datasets. ArcGIS Pro has a handy feature where these datasets can be batch created, eliminating the unnecessary duplicate work. We see this below in Figure 16.

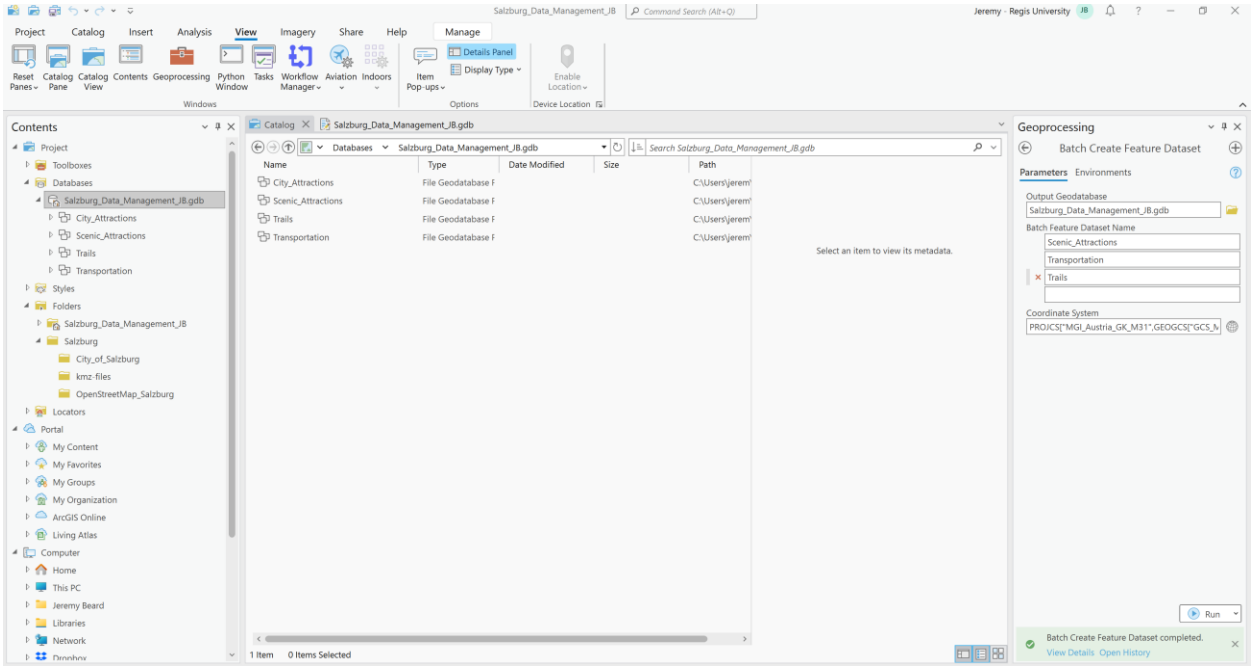

Figure 16: Batch Creating Feature Datasets

Populate the geodatabase

In this final part of the assignment, we populate the geodatabase by first importing a shapefile using the Feature Class to Feature Class geoprocessing operation, shown below in Figure 17. Shapefiles directly map to feature classes which make them a good candidate for this operation. We also update the metadata of the feature class, shown in Figure 18. We then export feature classes to geodatabases, essentially converting these shapefiles to geodatabases. We also explore the world of KML files. KML files can be useful and sometimes are the only file type provided. We go through the process of importing KML files and converting to geodatabases. There are two KML files we use for this part of the tutorial.

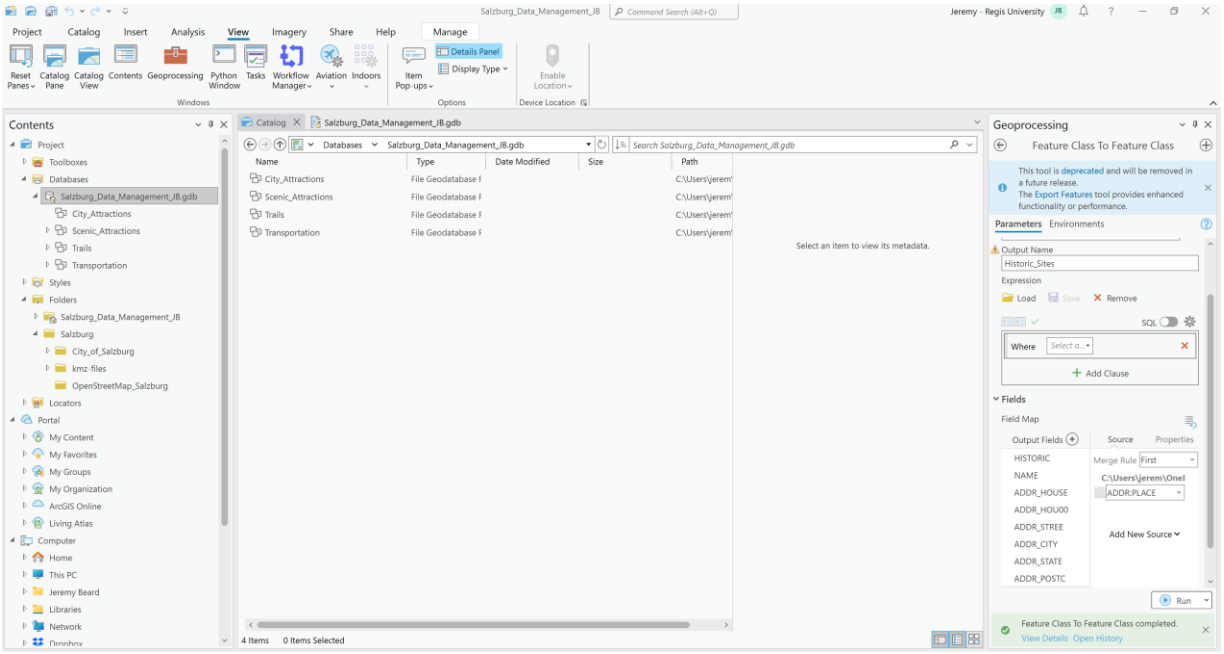

Figure 17: Feature Class to Feature Class

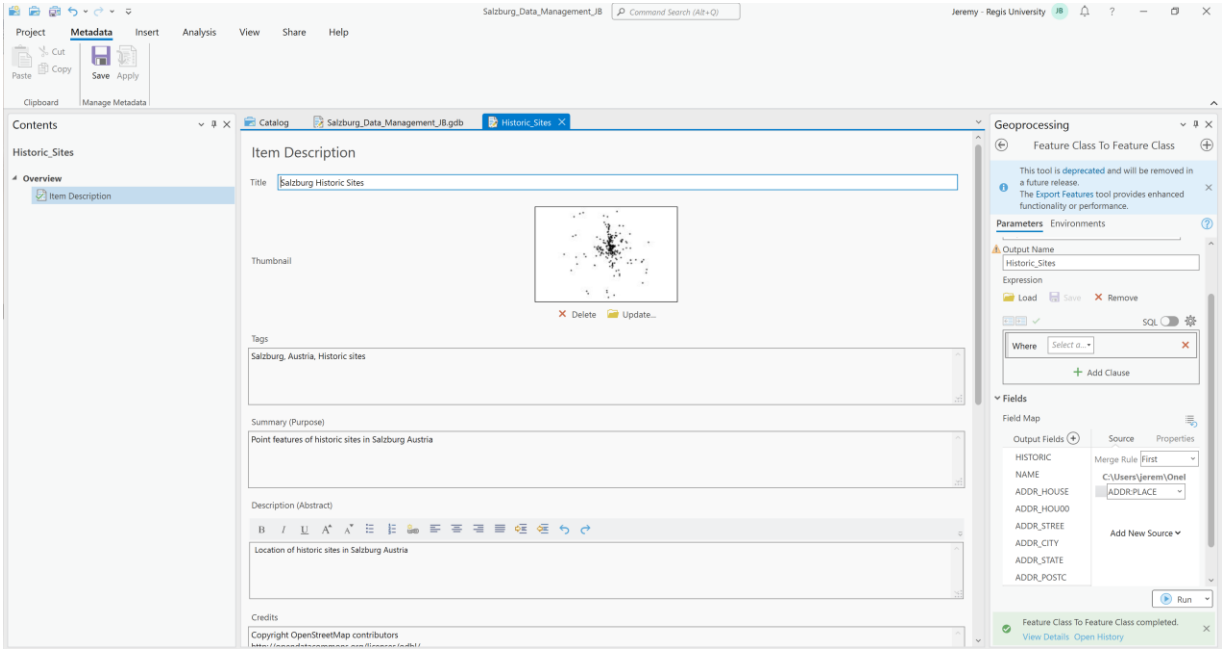

Figure 18: Editing Historic_Sites Metadata

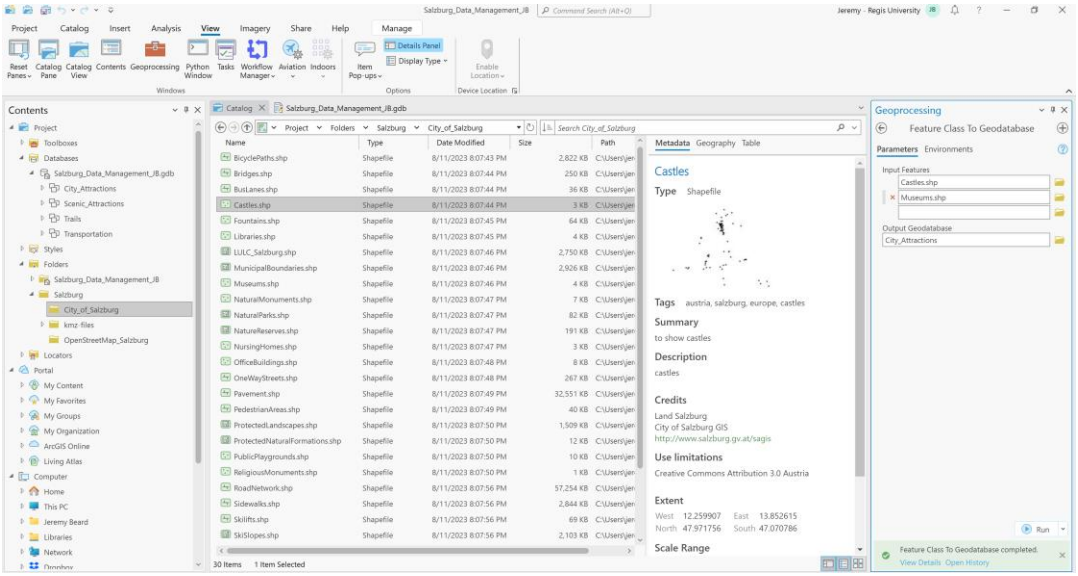

Figure 19: Exporting Feature Class to Geodatabase

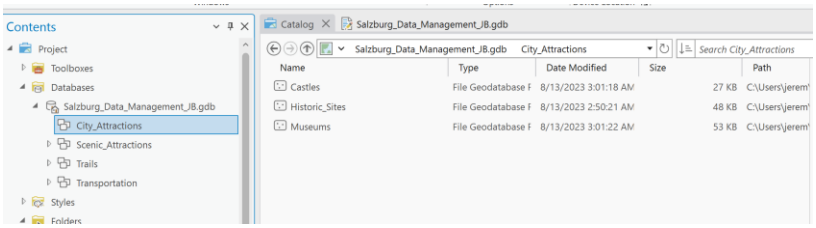

Figure 20: Confirming New Feature Classes

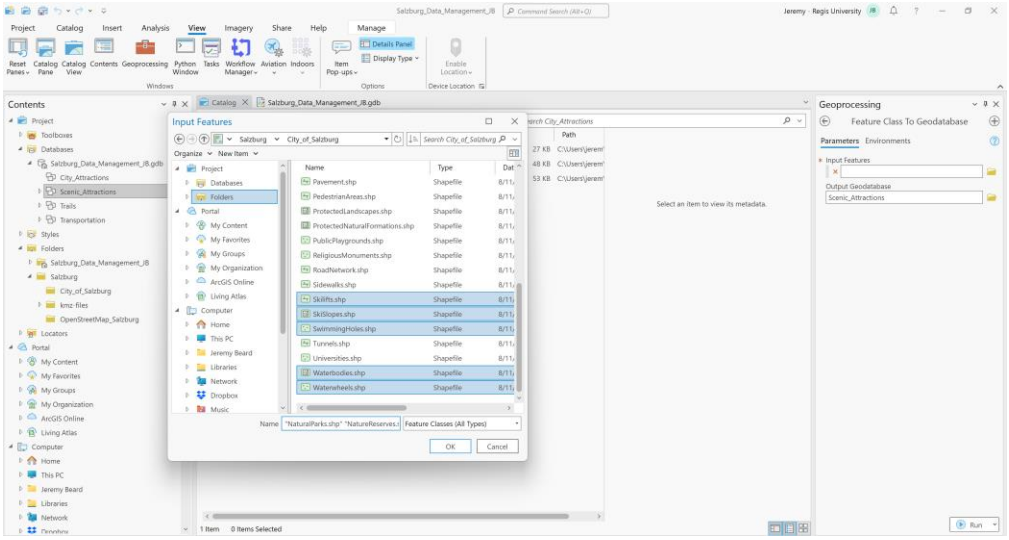

Figure 21: Importing Feature Classes to Scenic_Attractions

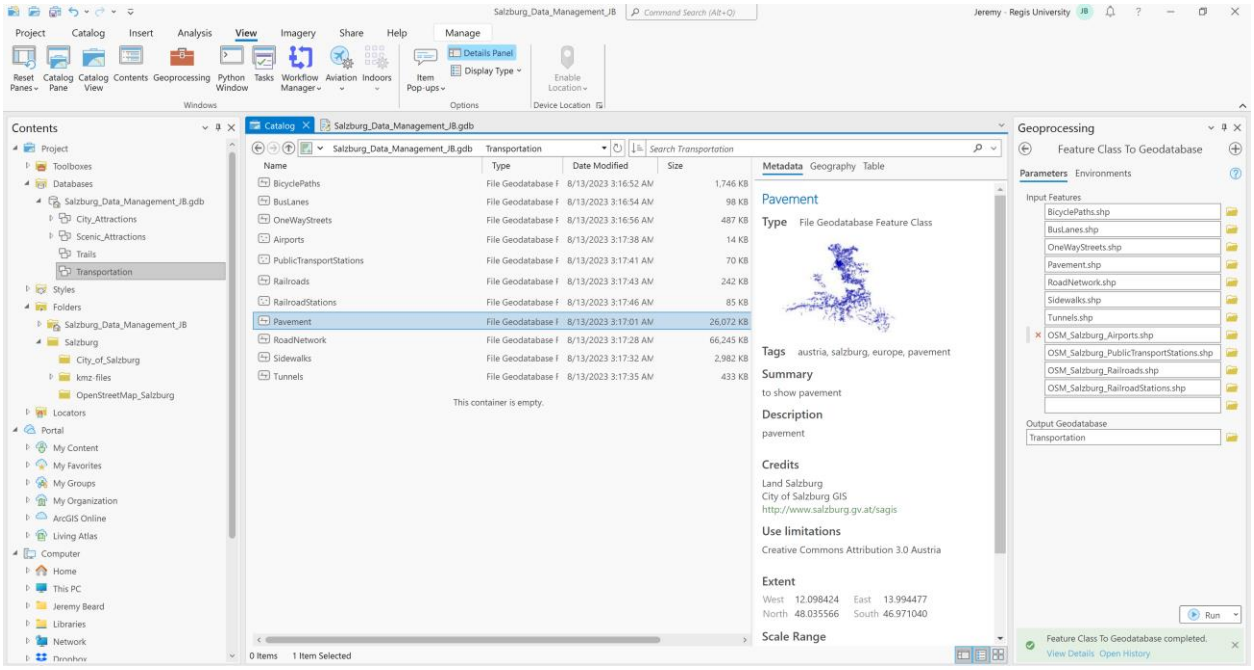

Figure 22: Importing Feature Classes to Transportation

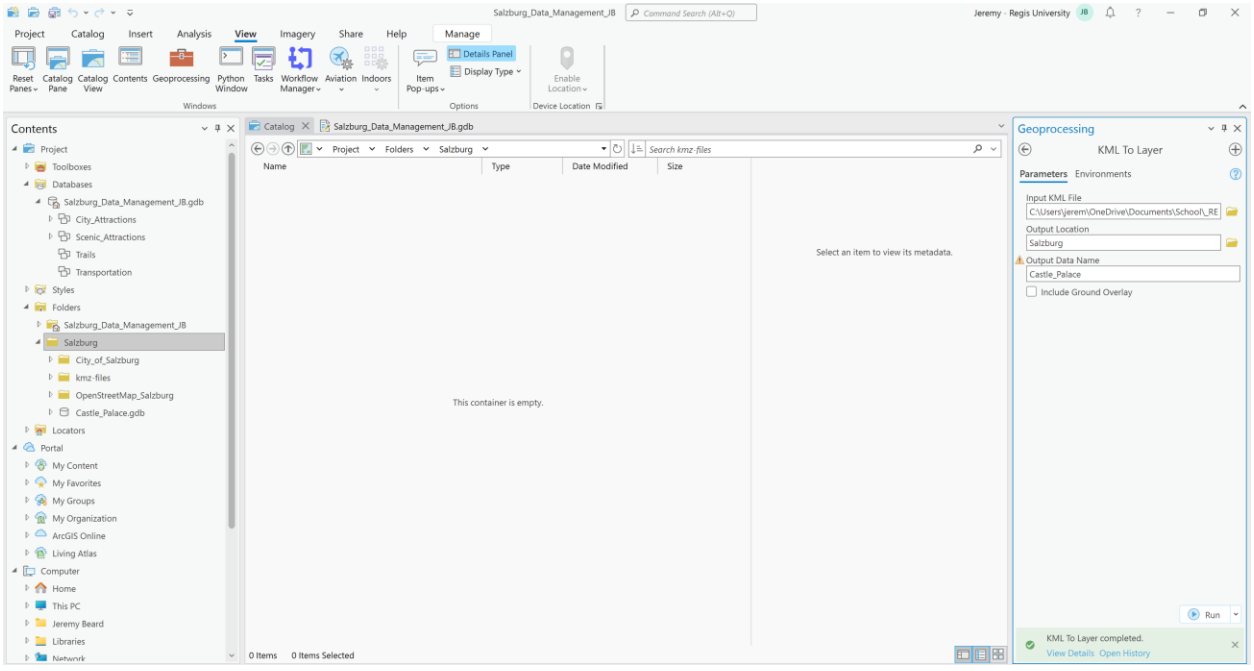

Figure 23: KML to Layer Tool

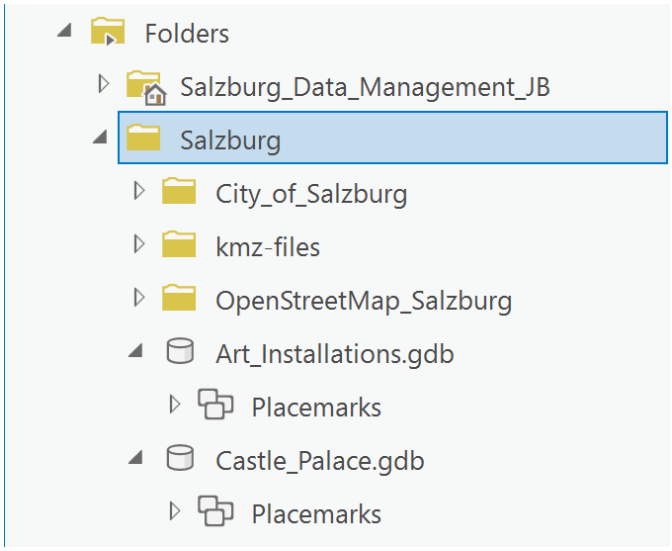

Figure 24: Output of KML to Layer Tool

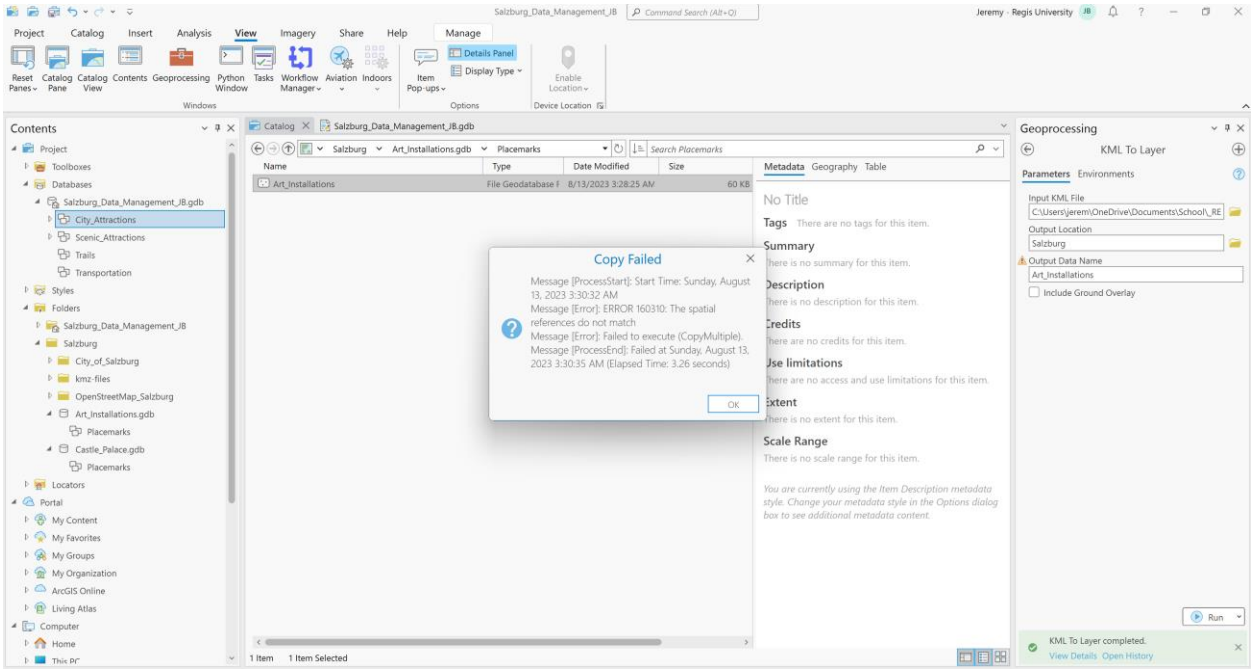

Figure 25: Copy/Paste Operation Failed

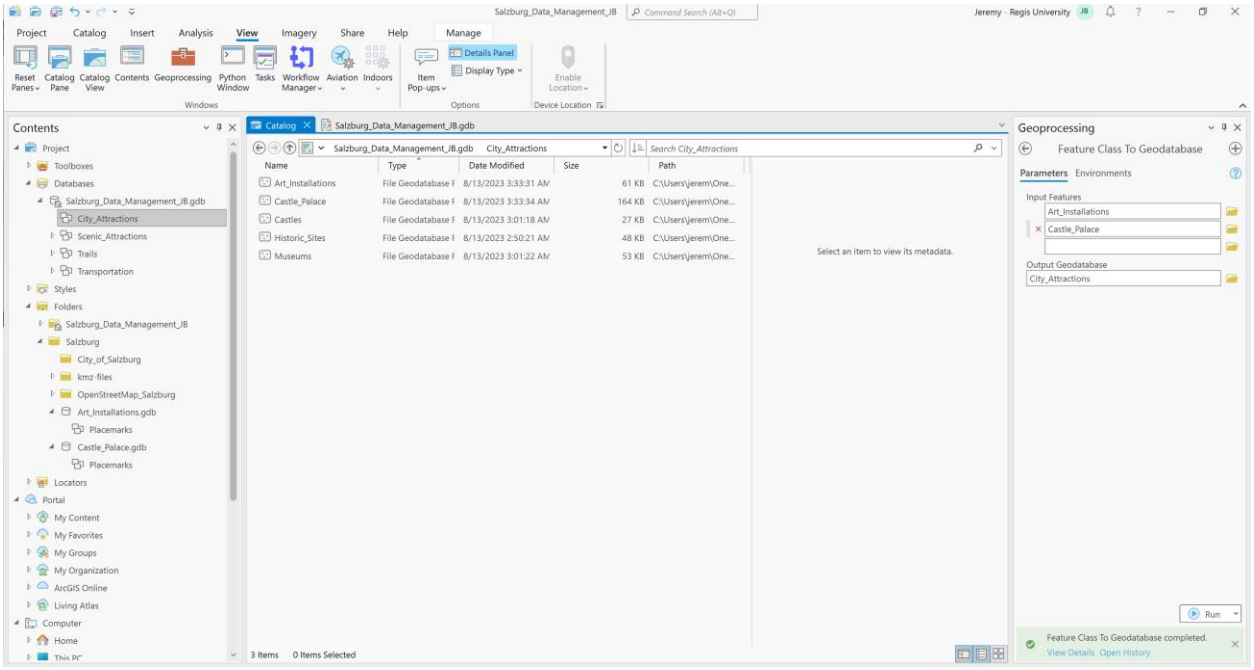

Figure 26: Exporting Features to City_Attractions

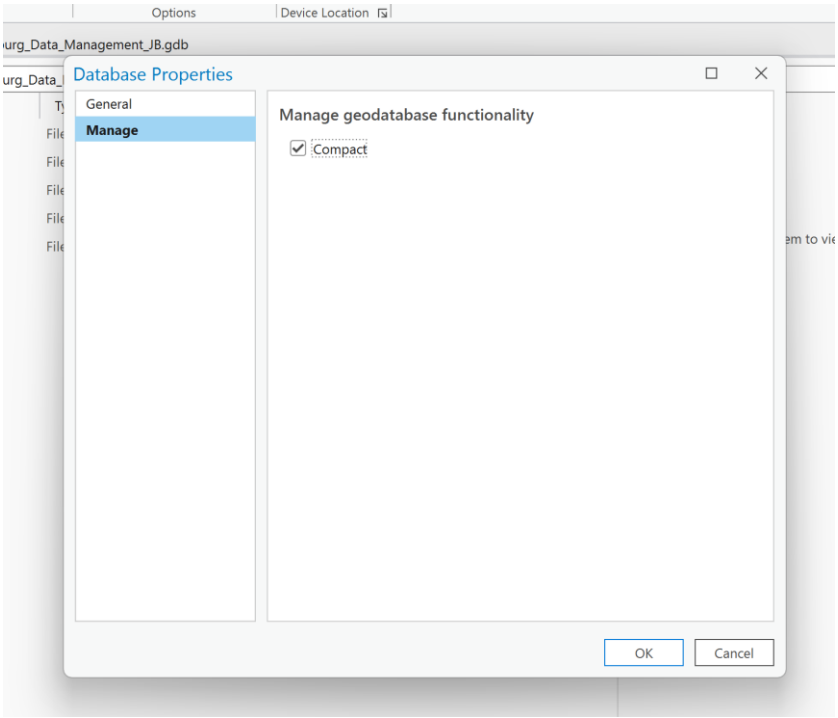

Figure 27: Salzburg_Data_Management Database Properties

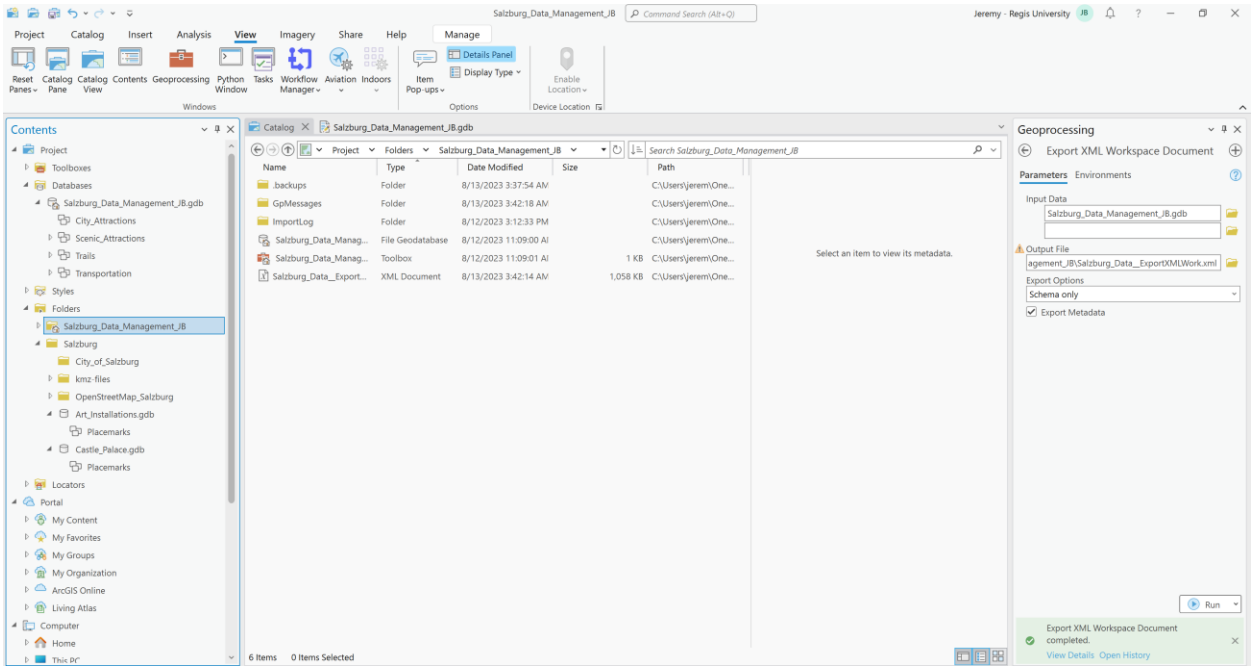

Figure 28: After Exporting XML Workspace Document

Conclusion

This tutorial in ArcGIS Pro taught us how to work with geodatabases and get them prepared for mapping processes which occur later in the timeline. We worked with geodatabase metadata, exploring different metadata areas, importing feature classes, exporting feature classes, and using shapefiles and KML files. It was an interesting look into the preprocessing that goes into a GIS analysis. I'd like for a future tutorial to work with this data output and proceed into the mapping portion! For next time. Thank you.

References

Build a geodatabase to support Salzburg tourism. (n.d.). Learn ArcGIS. https://learn.arcgis.com/en/projects/build-a-geodatabase-to-support-salzburg-tourism/