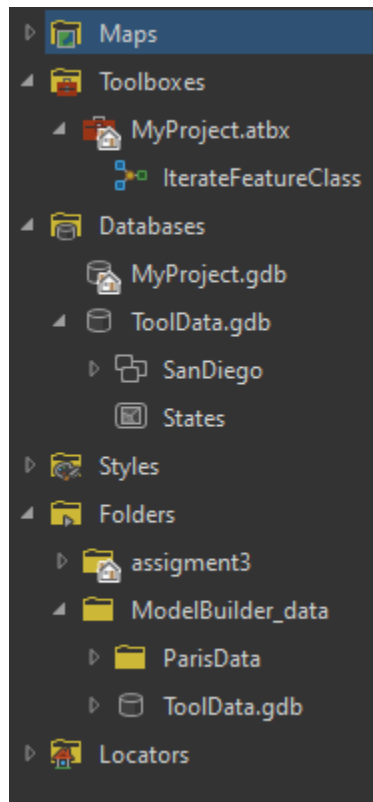
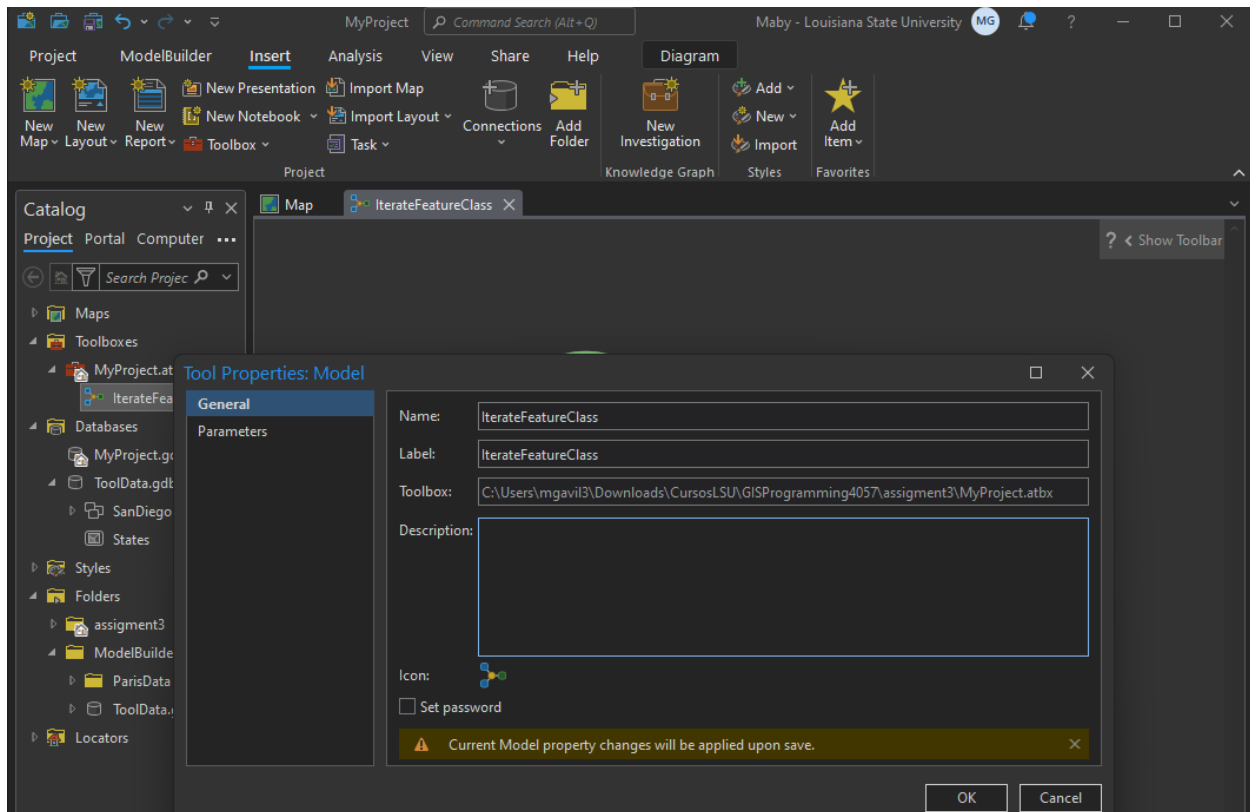


## TASK 1:

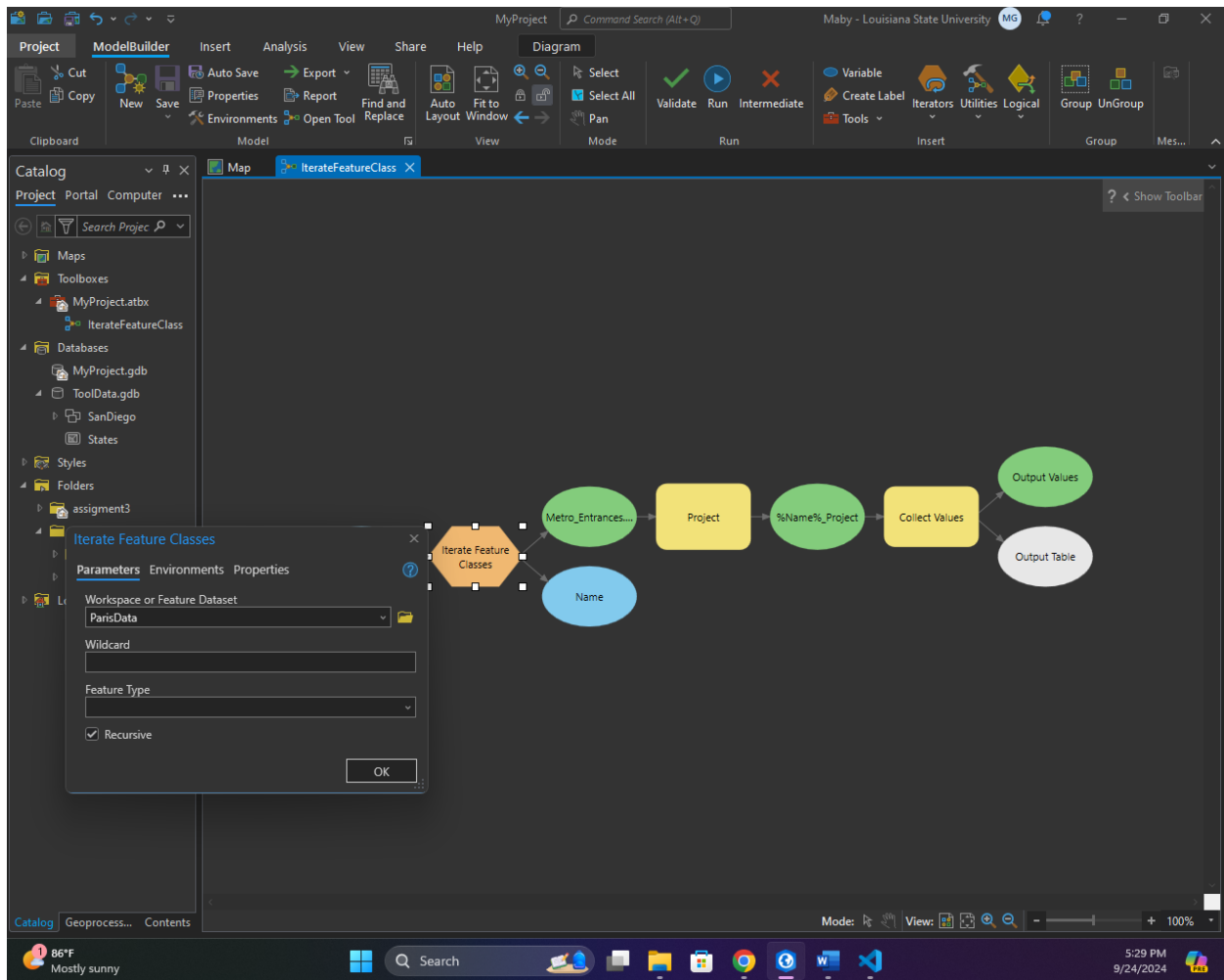
Toolbox and ParisData connections:



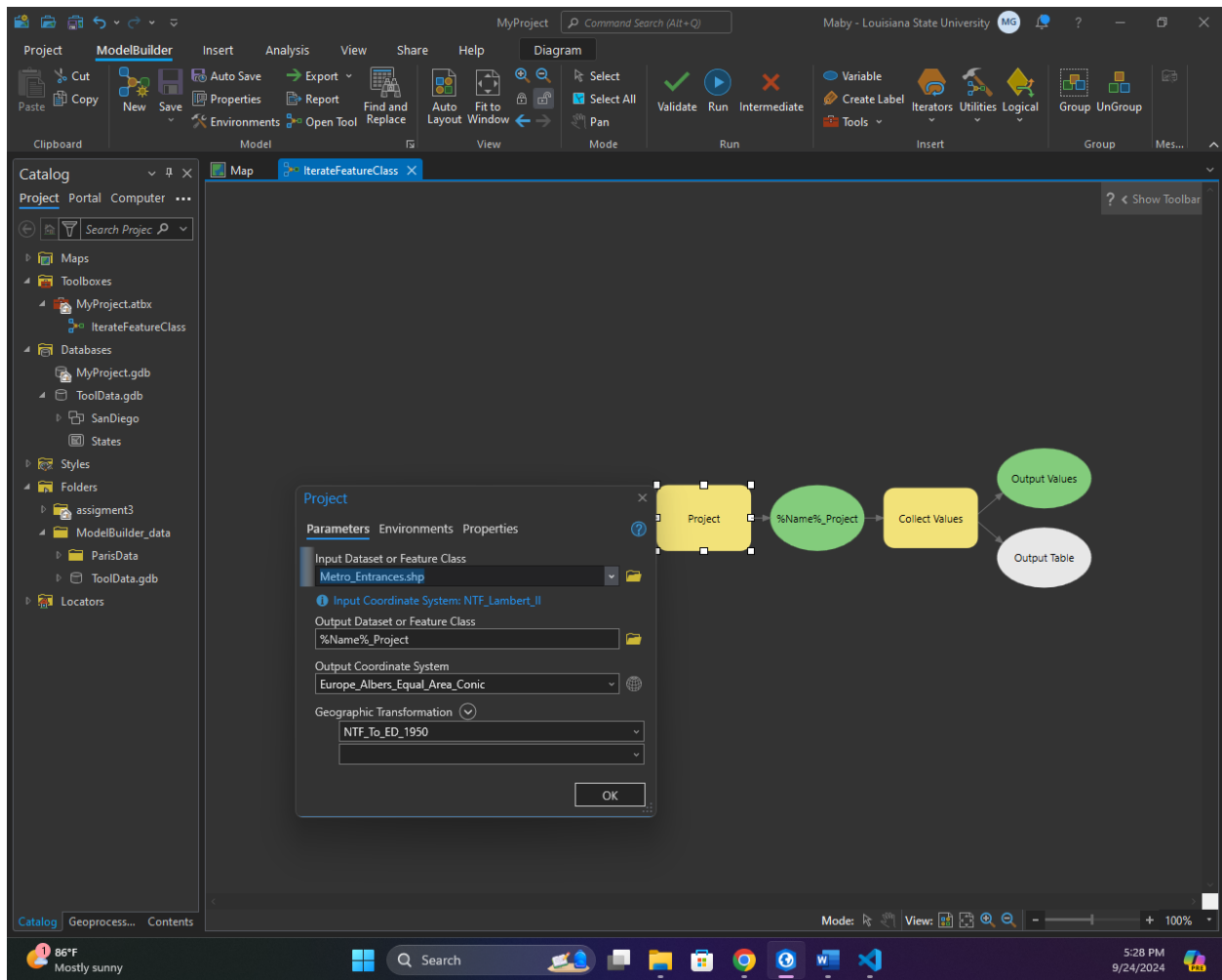
## Defining the model builder



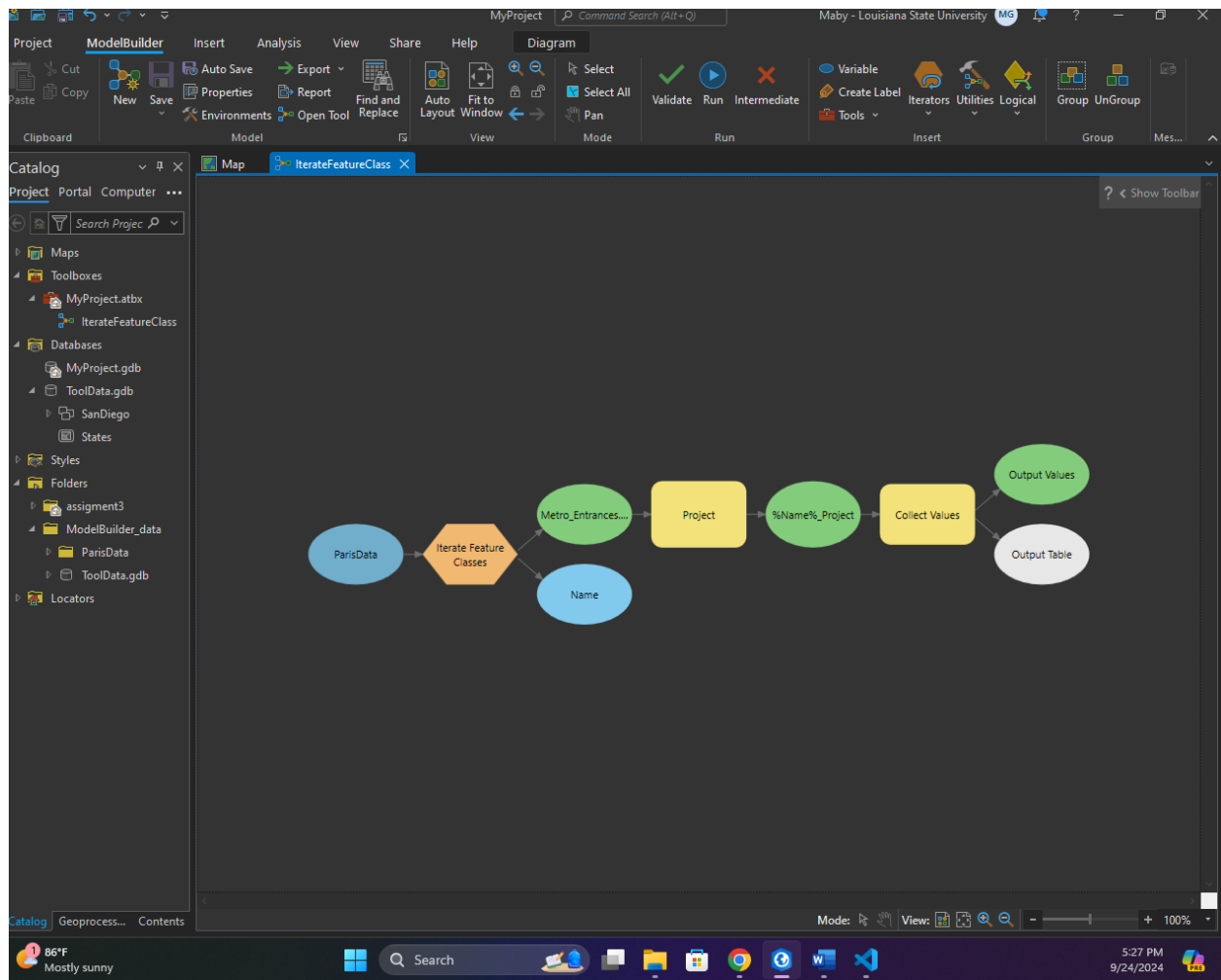
## Specifying parameters for the Iterate Feature Class:



Parameters changed for Project tool:



Project and Collect Values inserted and connected.



Running the model:

The screenshot displays the QGIS ModelBuilder interface. The top menu bar includes Project, ModelBuilder, Insert, Analysis, View, Share, and Help. The toolbar contains various icons for file operations, model building, and execution. The left sidebar shows the Catalog panel with a tree view of project components: Maps, Toolboxes, Databases (MyProject.gdb), and Styles. The main workspace shows a workflow diagram with the following steps: ParisData (blue oval) -> Iterate Feature Classes (orange hexagon) -> Metro\_Entrances... (green oval) -> Project (yellow rectangle) -> %Name%\_Project (green oval) -> Collect Values (yellow rectangle) -> Output Values (green oval) and Output Table (white oval). A console window titled 'IterateFeatureClass' is open, showing the execution progress and output.

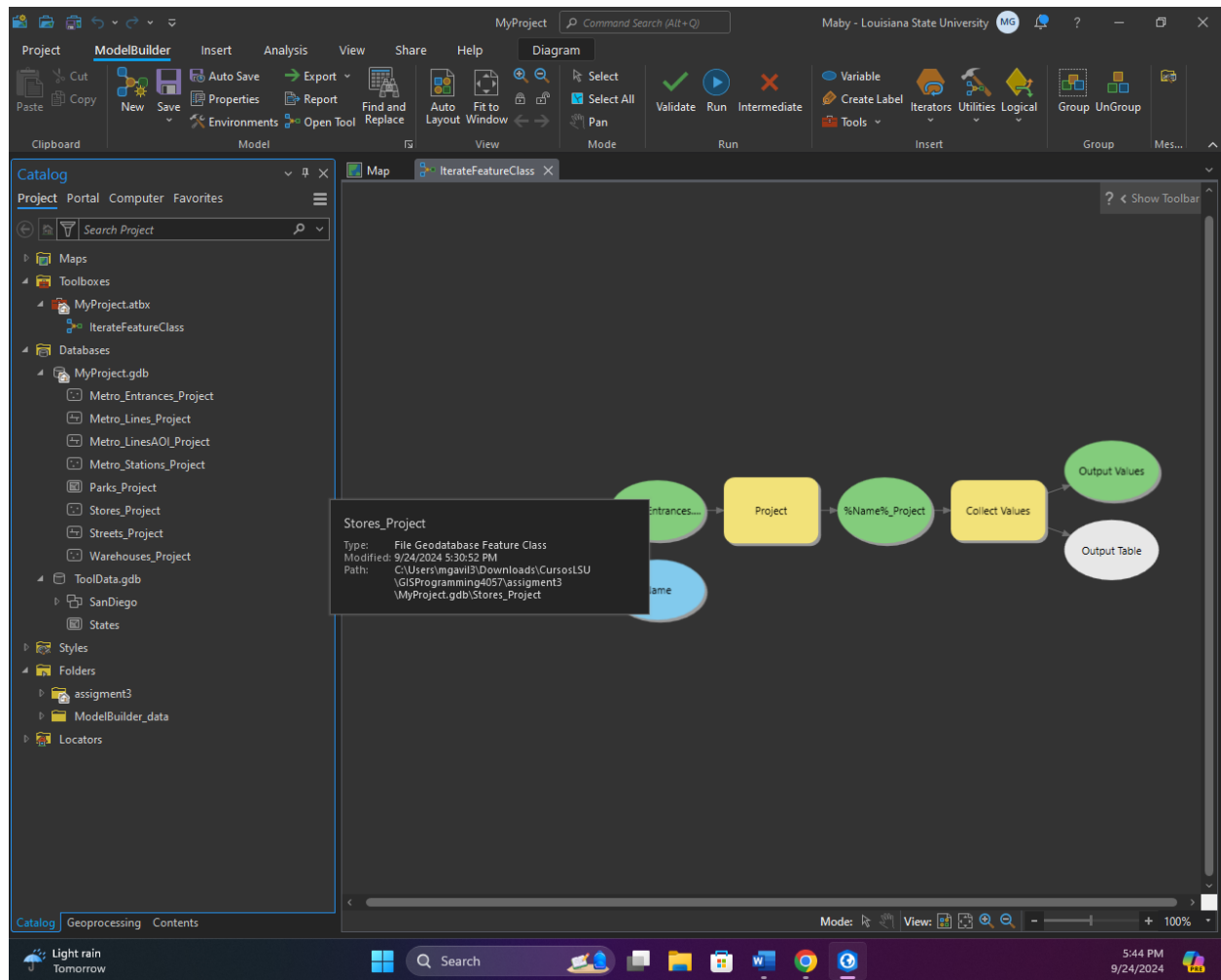
**IterateFeatureClass**

Done (00:21:31)

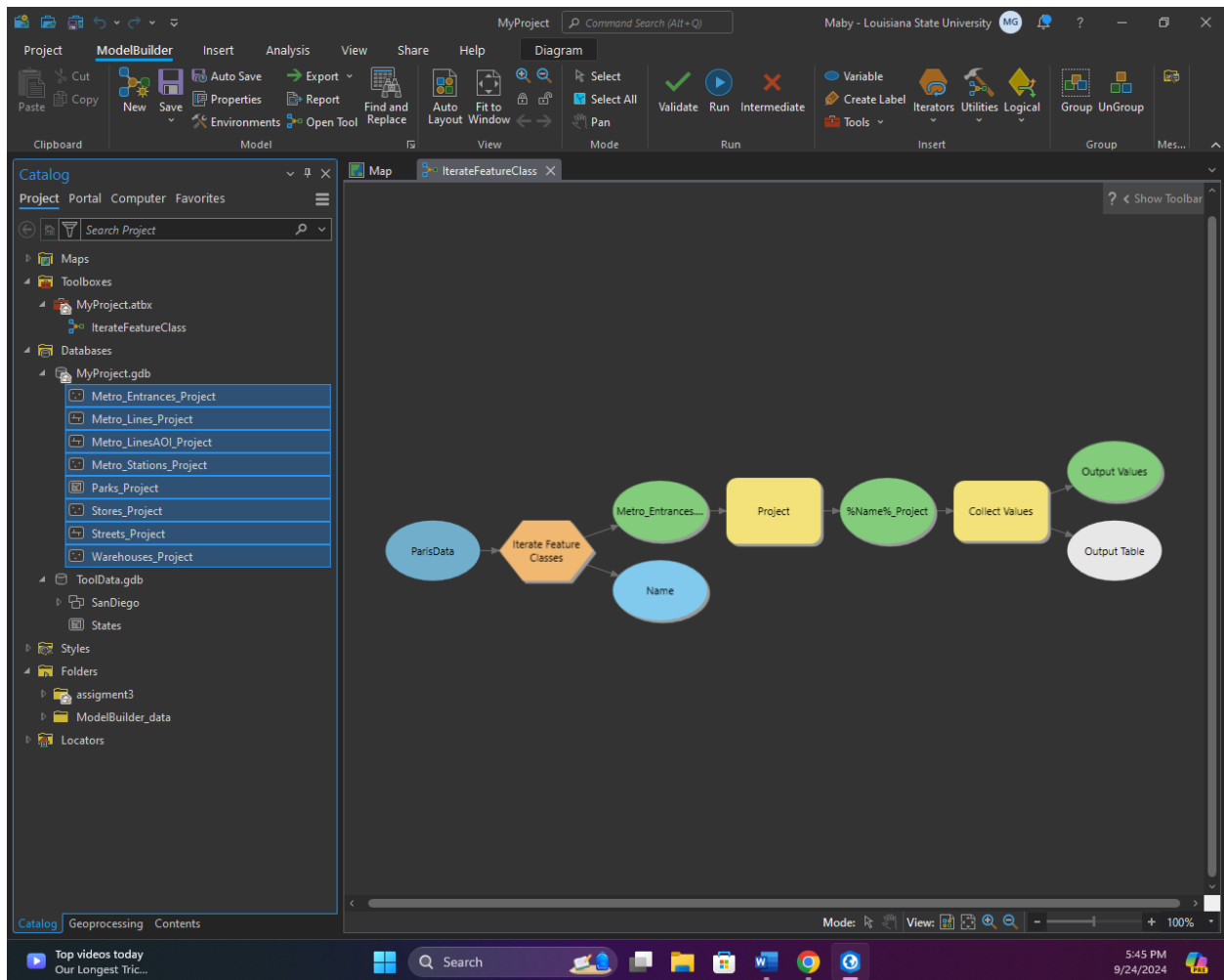
C:\Users\mgavil3\Downloads\CursosLSU\GISProgramming4857\assign  
#  
Start Time: Tuesday, September 24, 2024 5:42:30 PM  
Succeeded at Tuesday, September 24, 2024 5:42:30 PM (Elapsed  
Time: 0.01 seconds)  
Executing (Iterate Feature Classes): IterateFeatureClasses  
C:\Users\mgavil3\Downloads\CursosLSU\GISProgramming4857\assign  
# # RECURSIVE  
Start Time: Tuesday, September 24, 2024 5:42:31 PM

☐ Close on completion

New data layers in geodatabase:



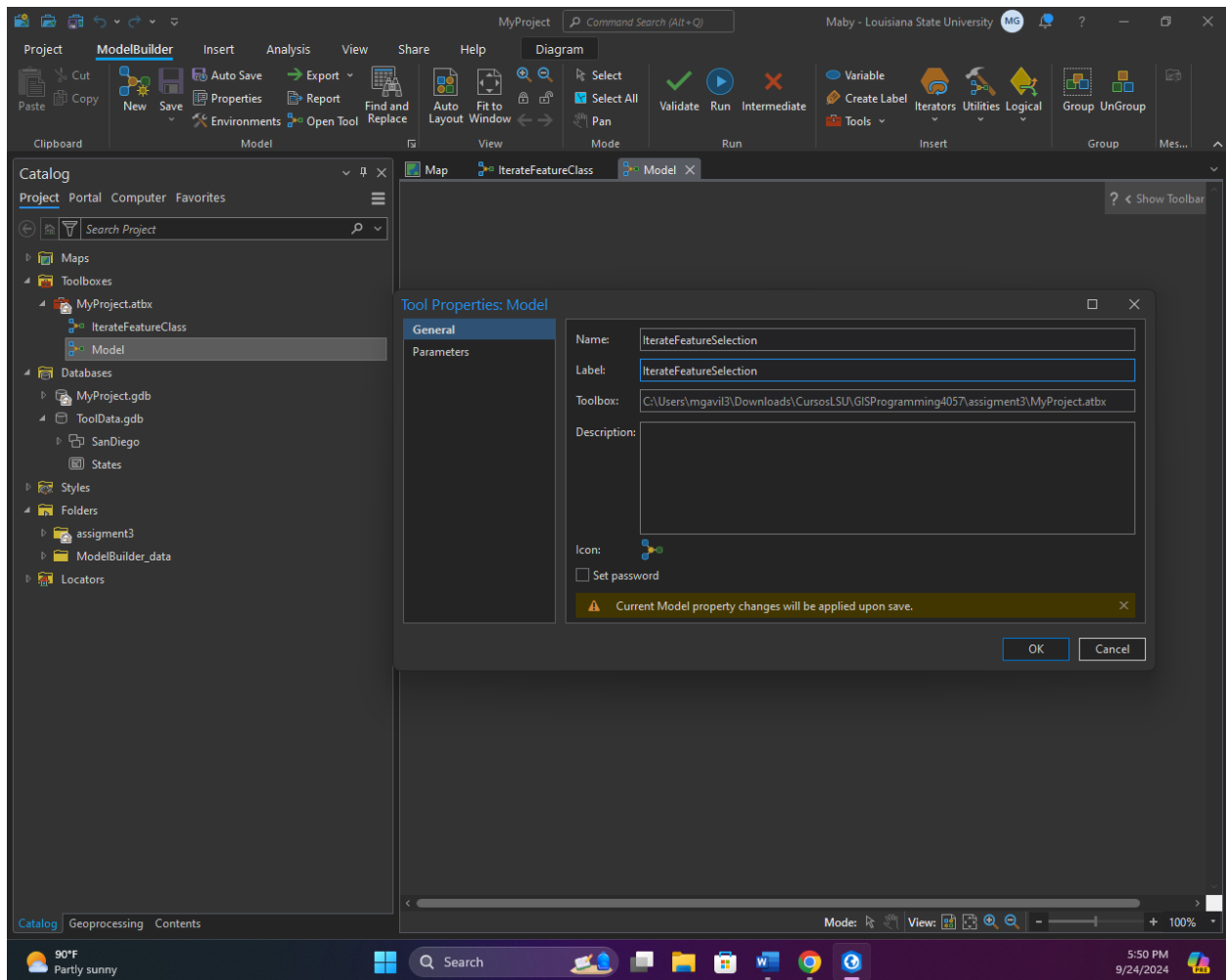
Final model graph and database updated with feature classes:



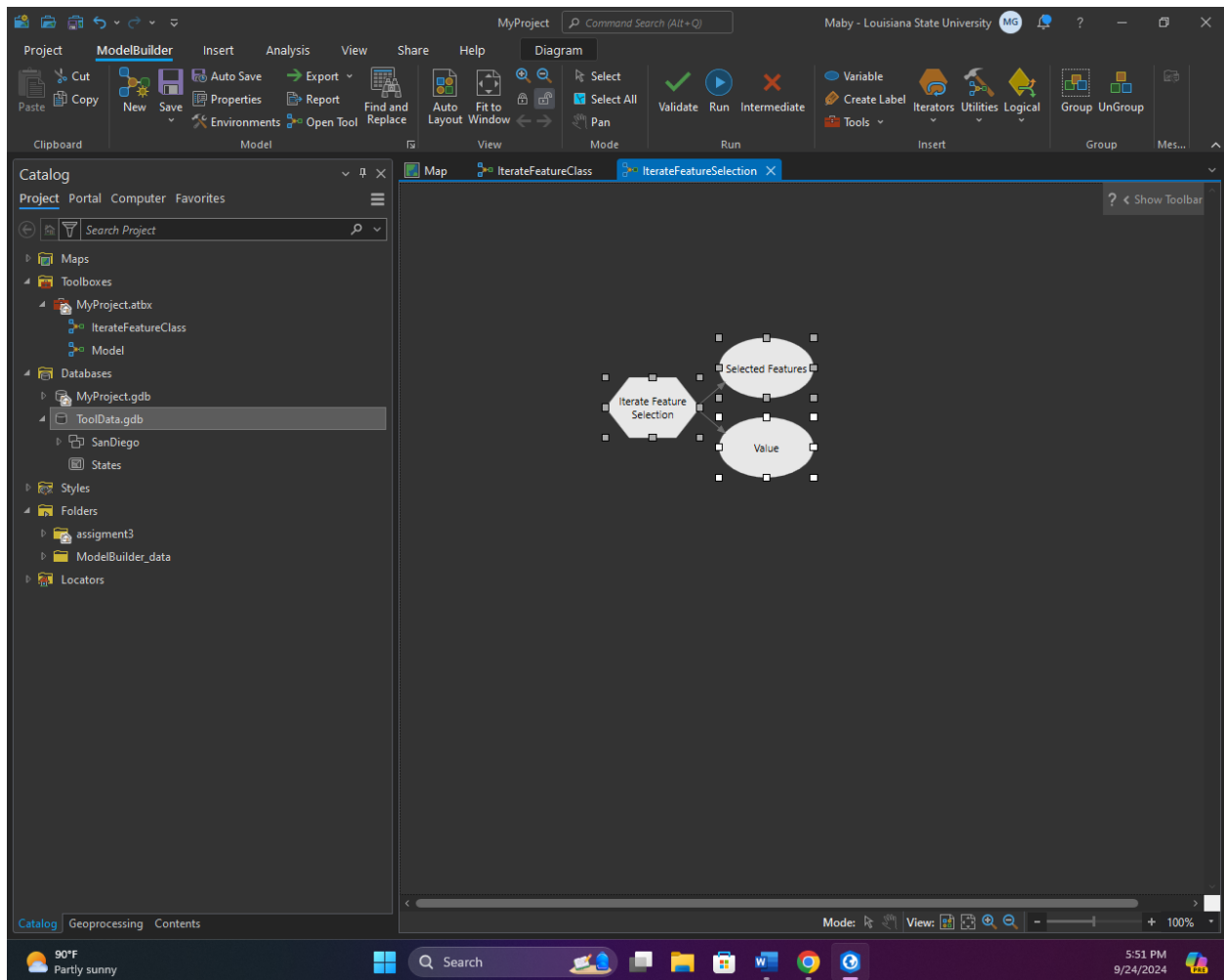


## TASK 2:

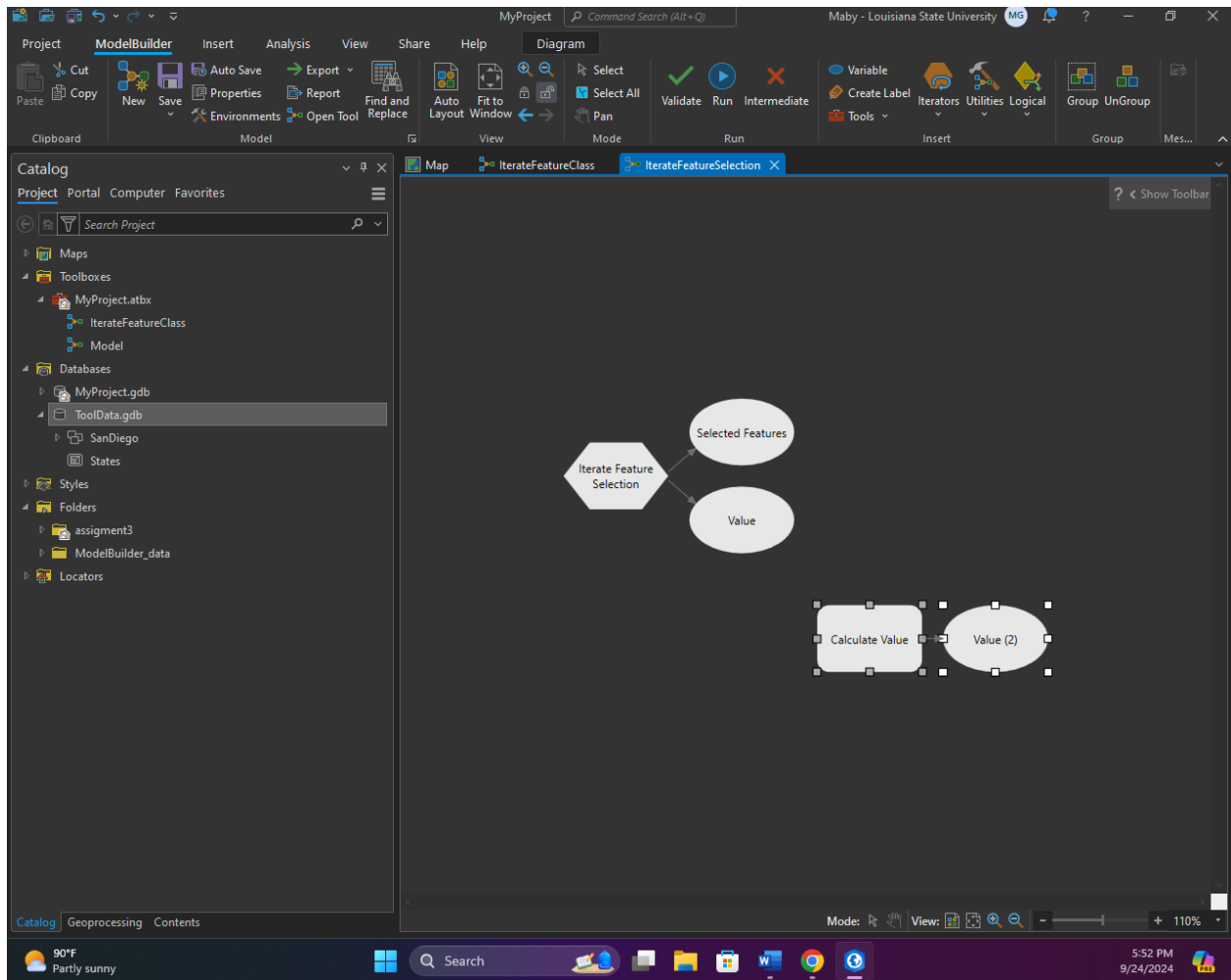
### Creating IterateFeatureSelection



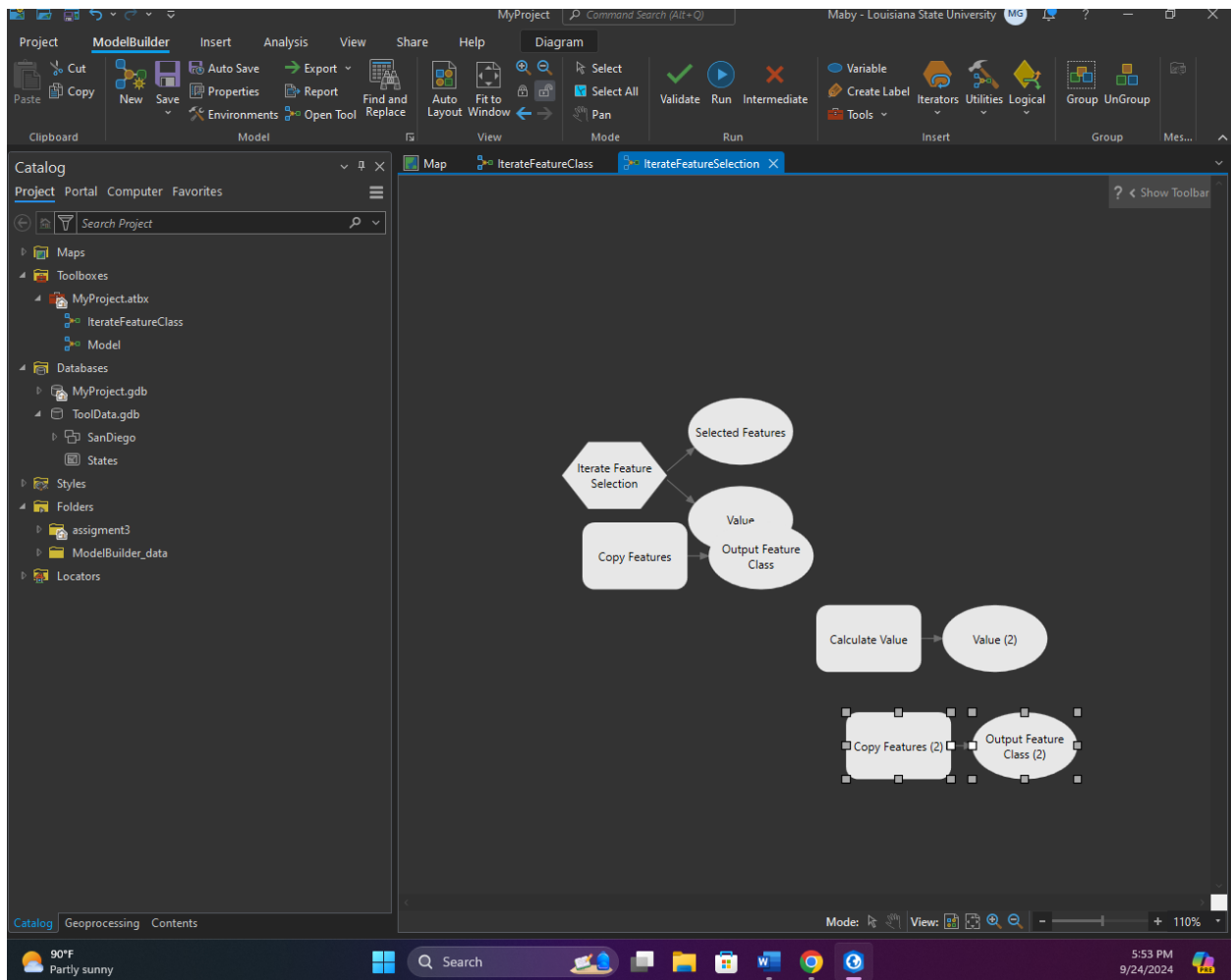
Iterate feature selector:



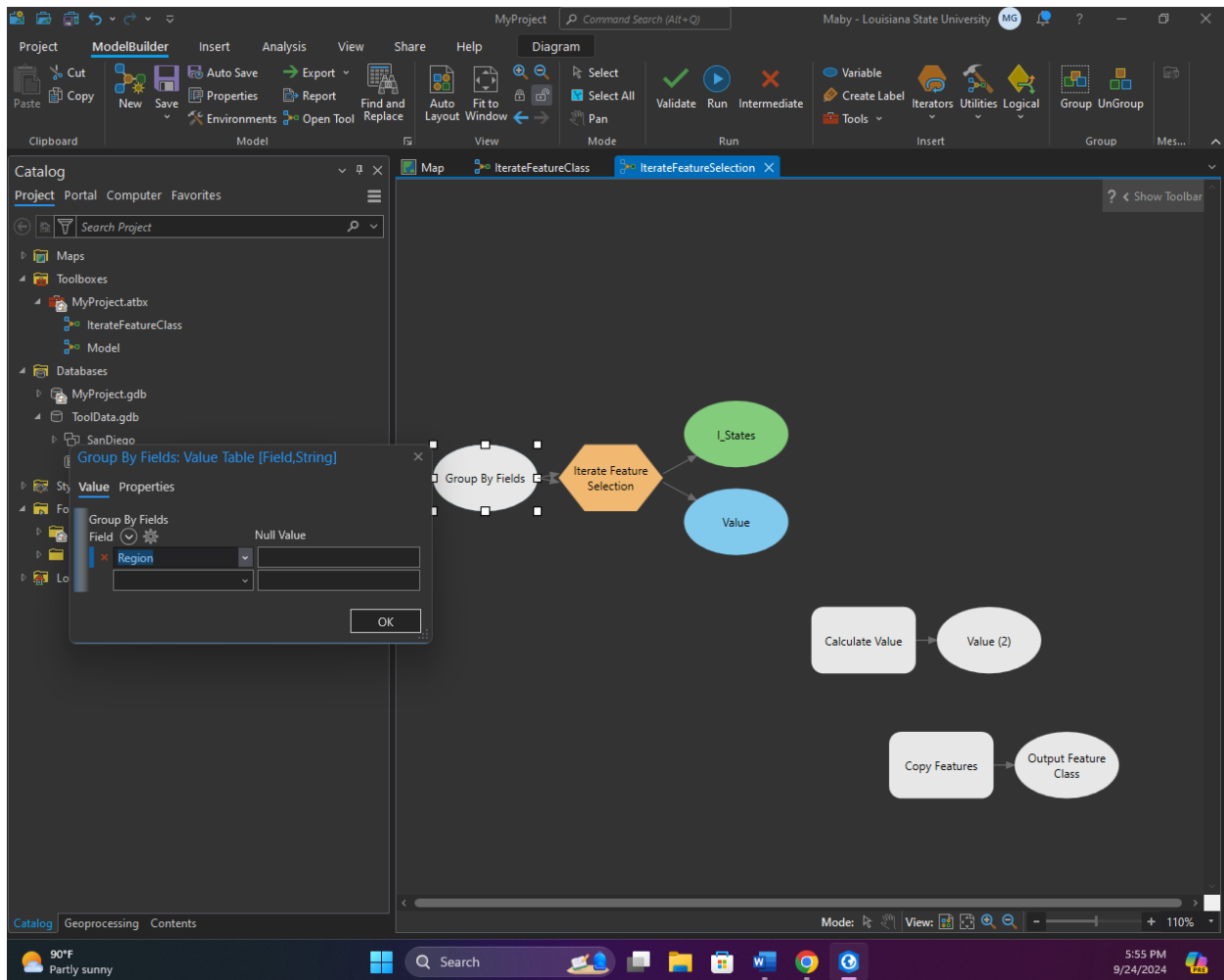
Calculate value:



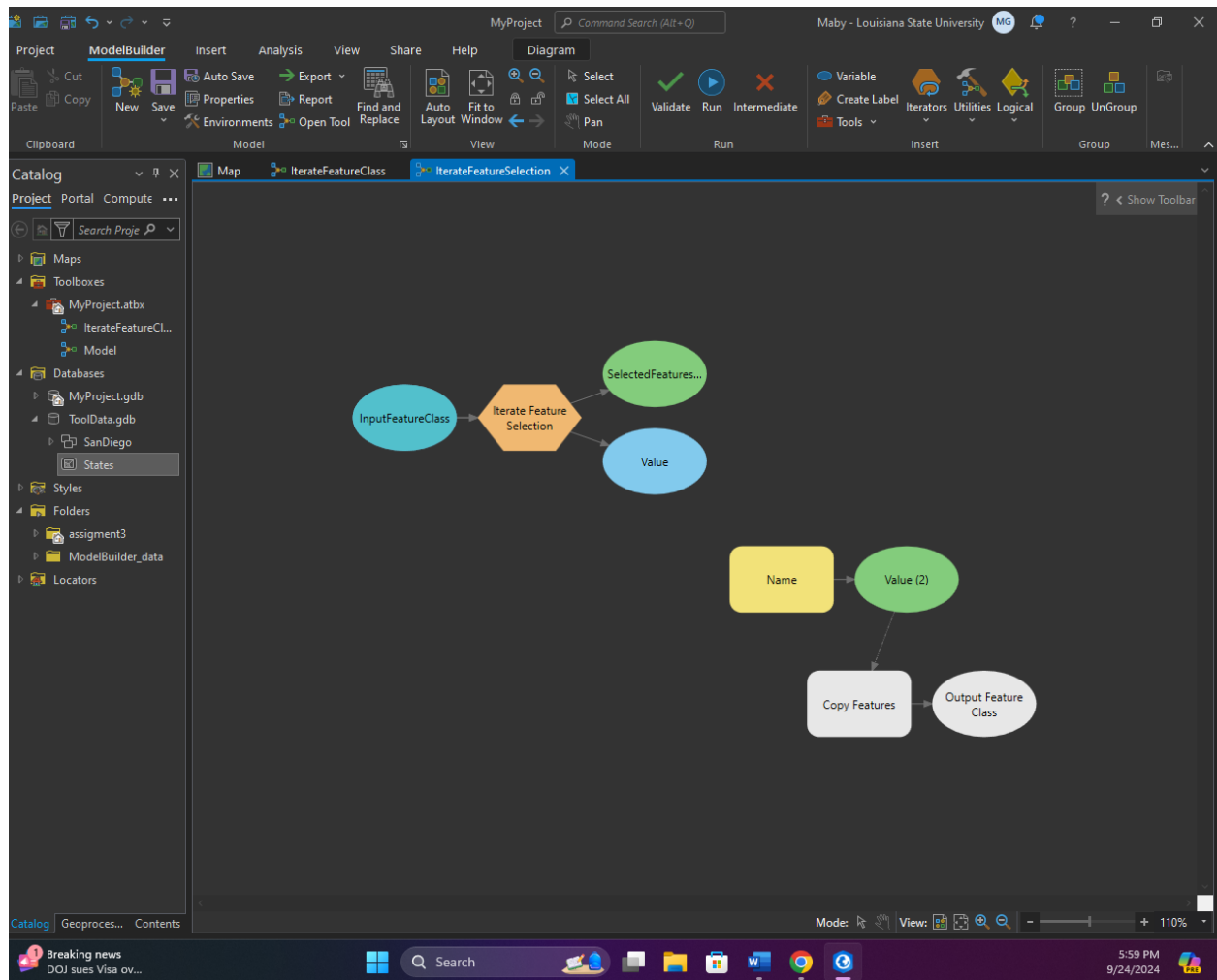
Copy features:



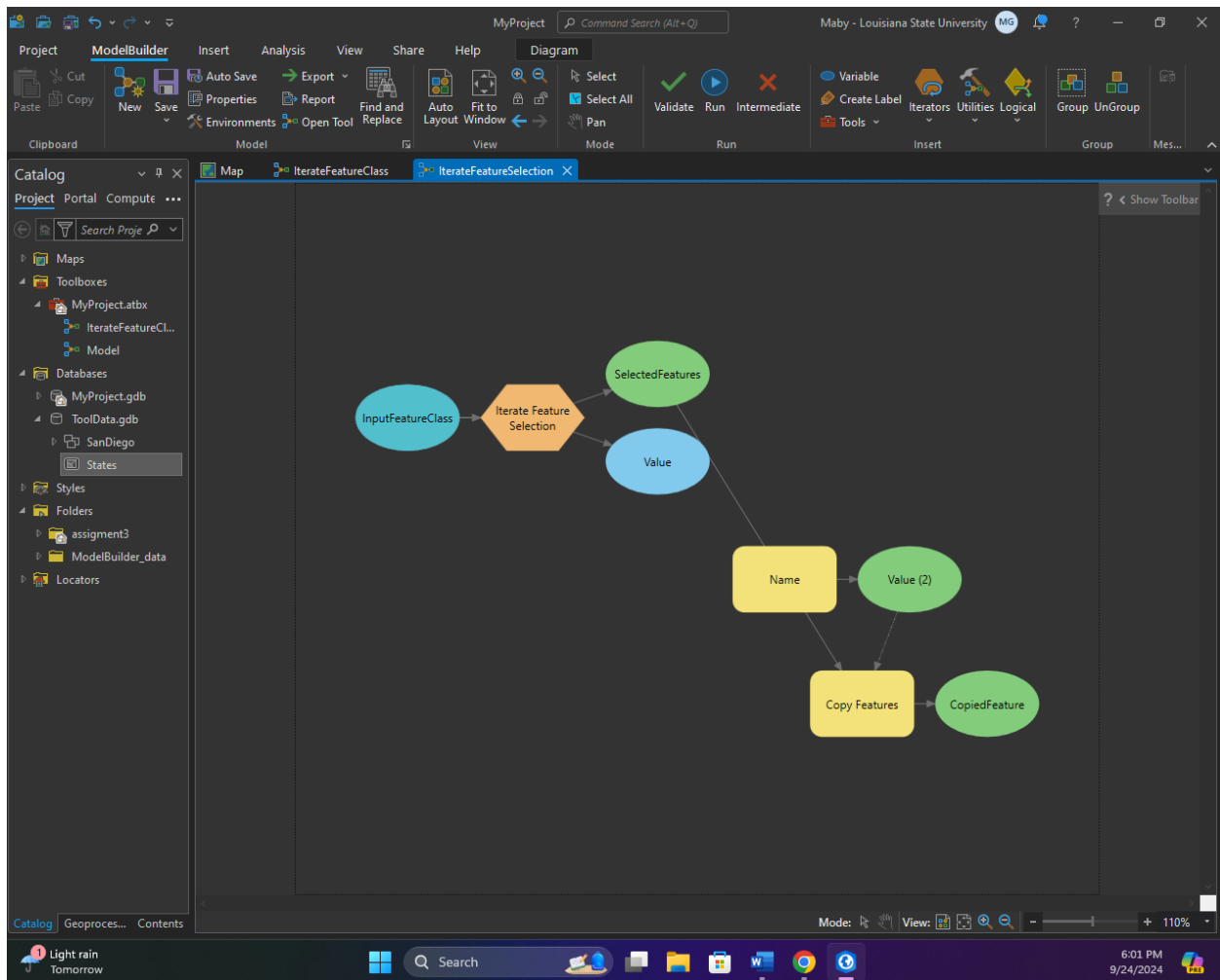
## Specifying tool parameters



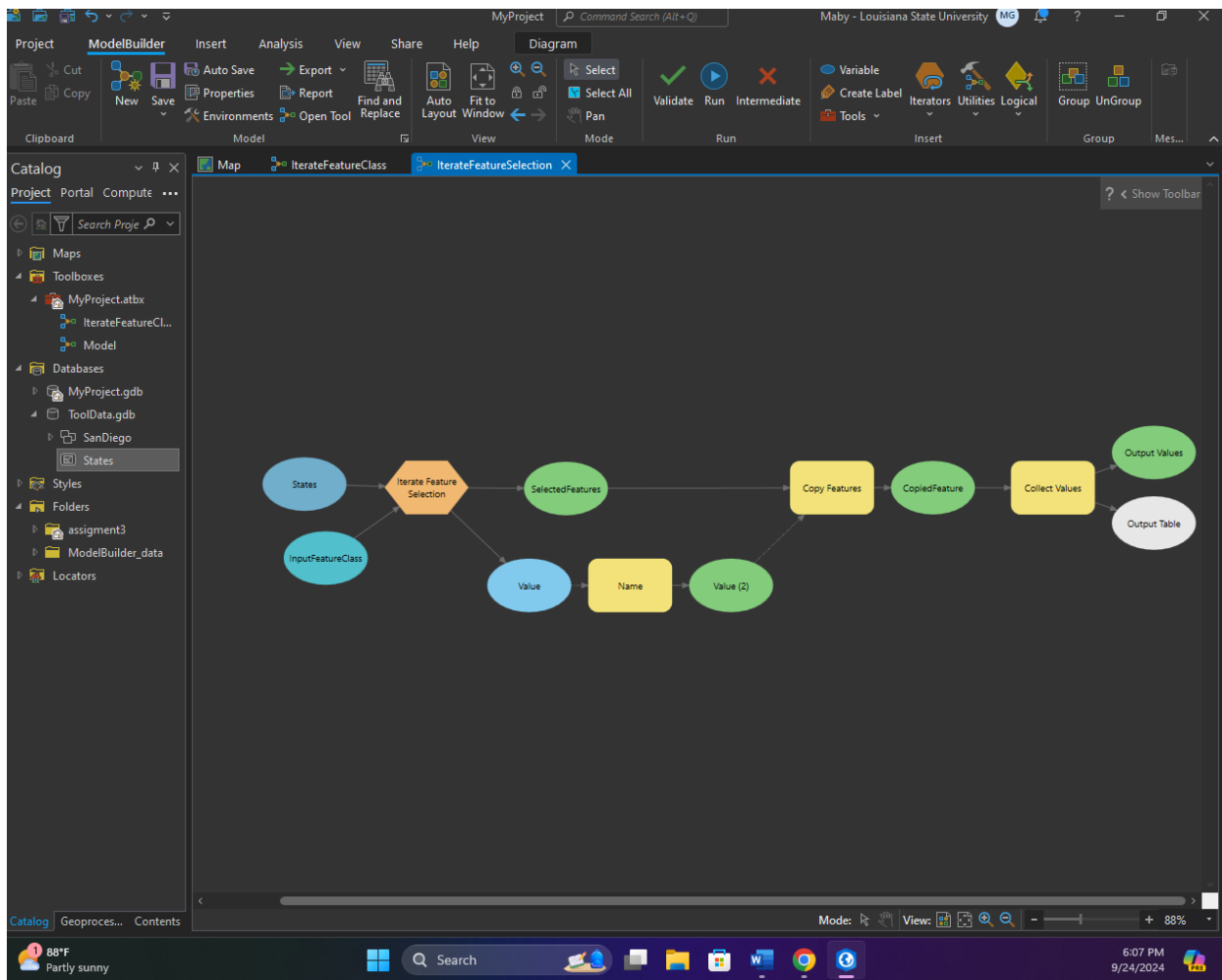
Calculate Value tool modifications and connection as precondition:



%name% as the output name of Selected Features and Renaming to CopiedFeature:

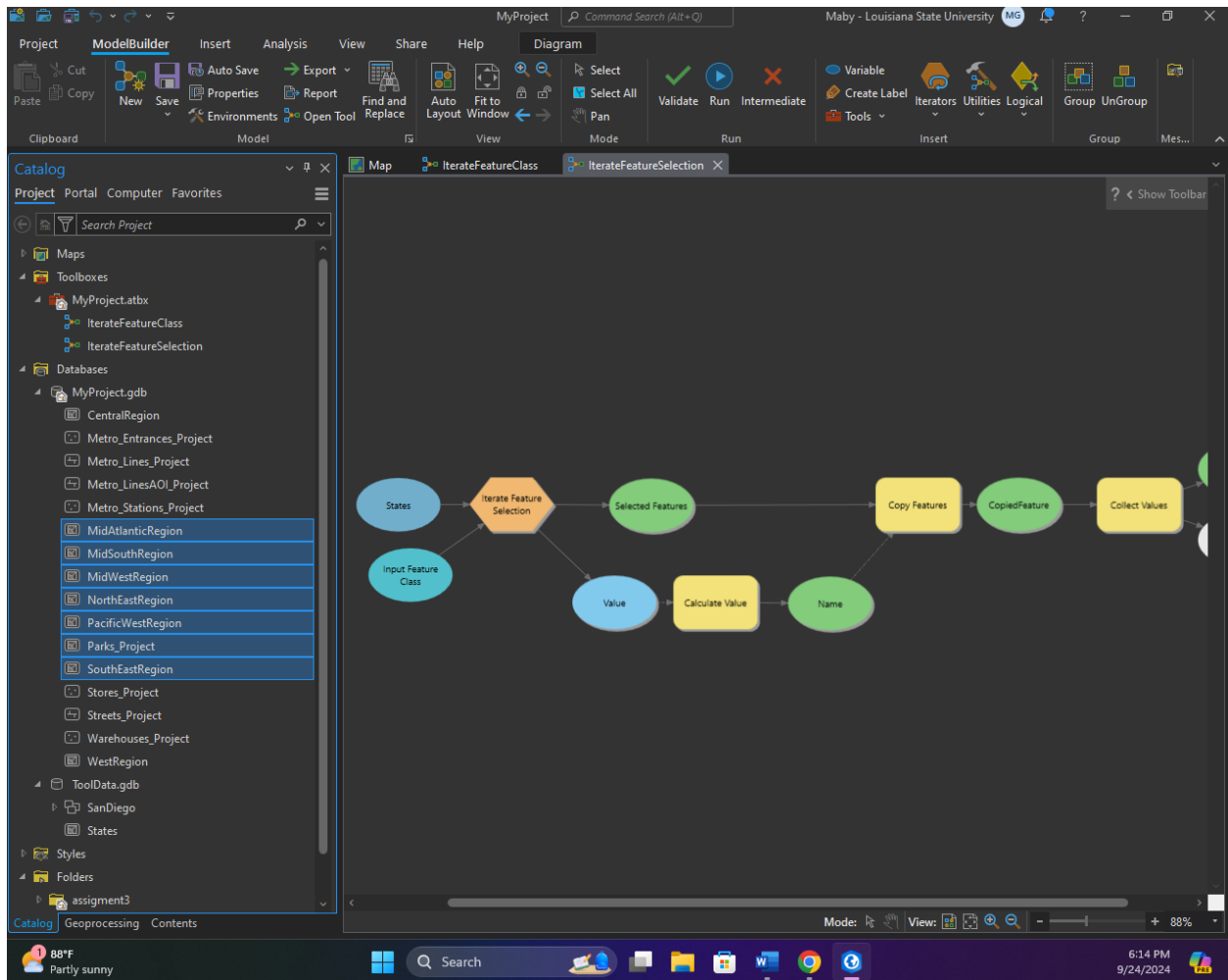


Final model:



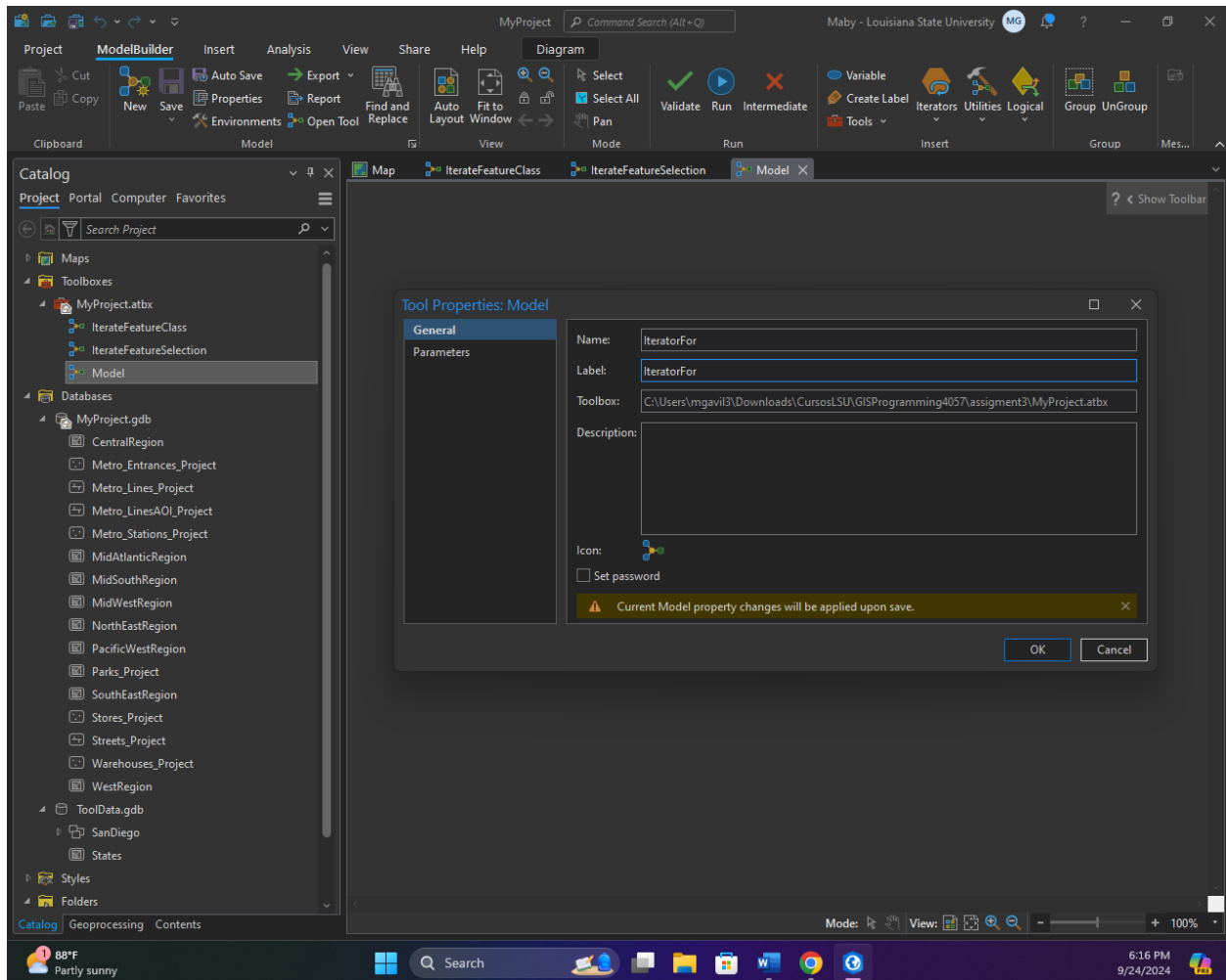


## Final Results:

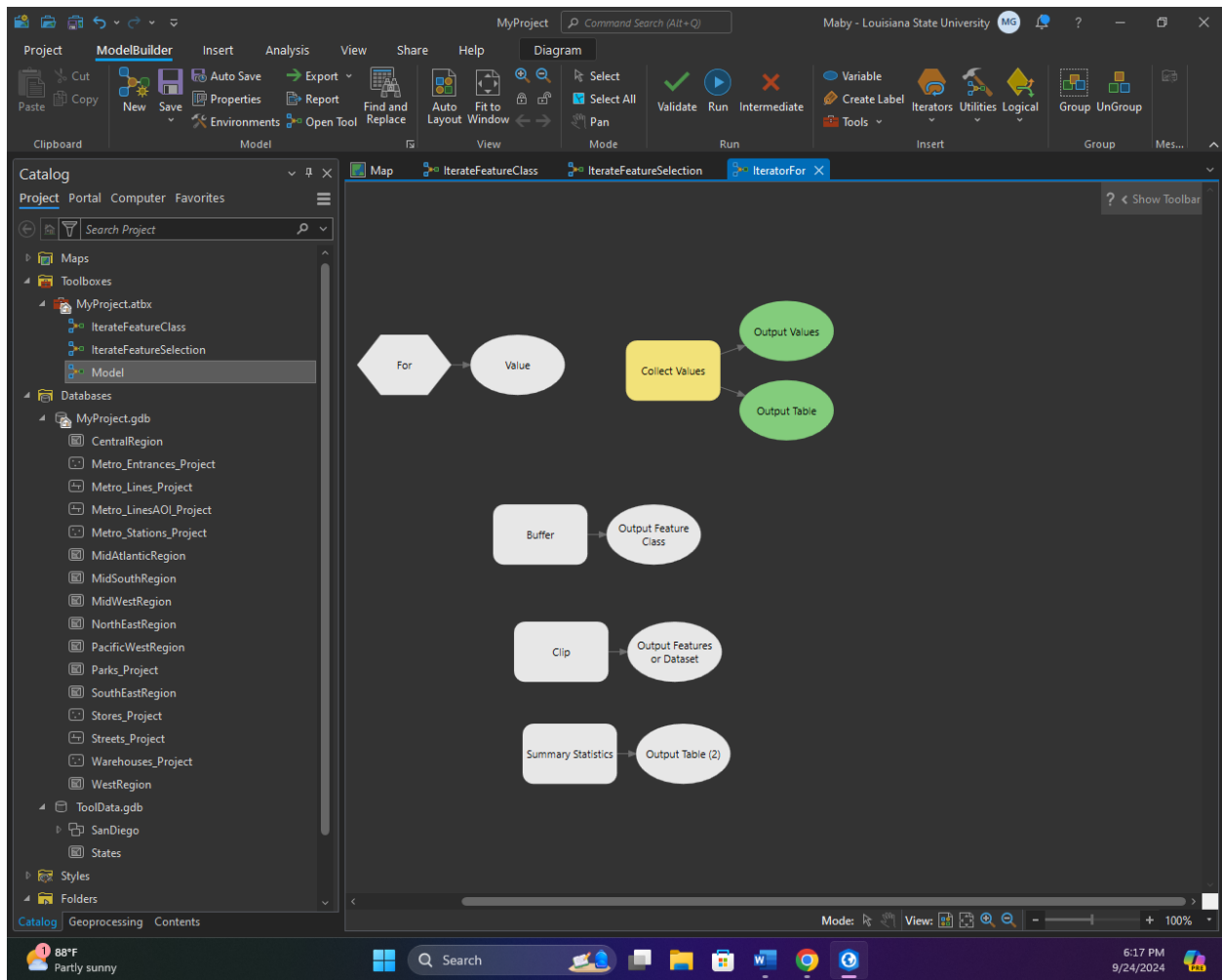


### TASK 3:

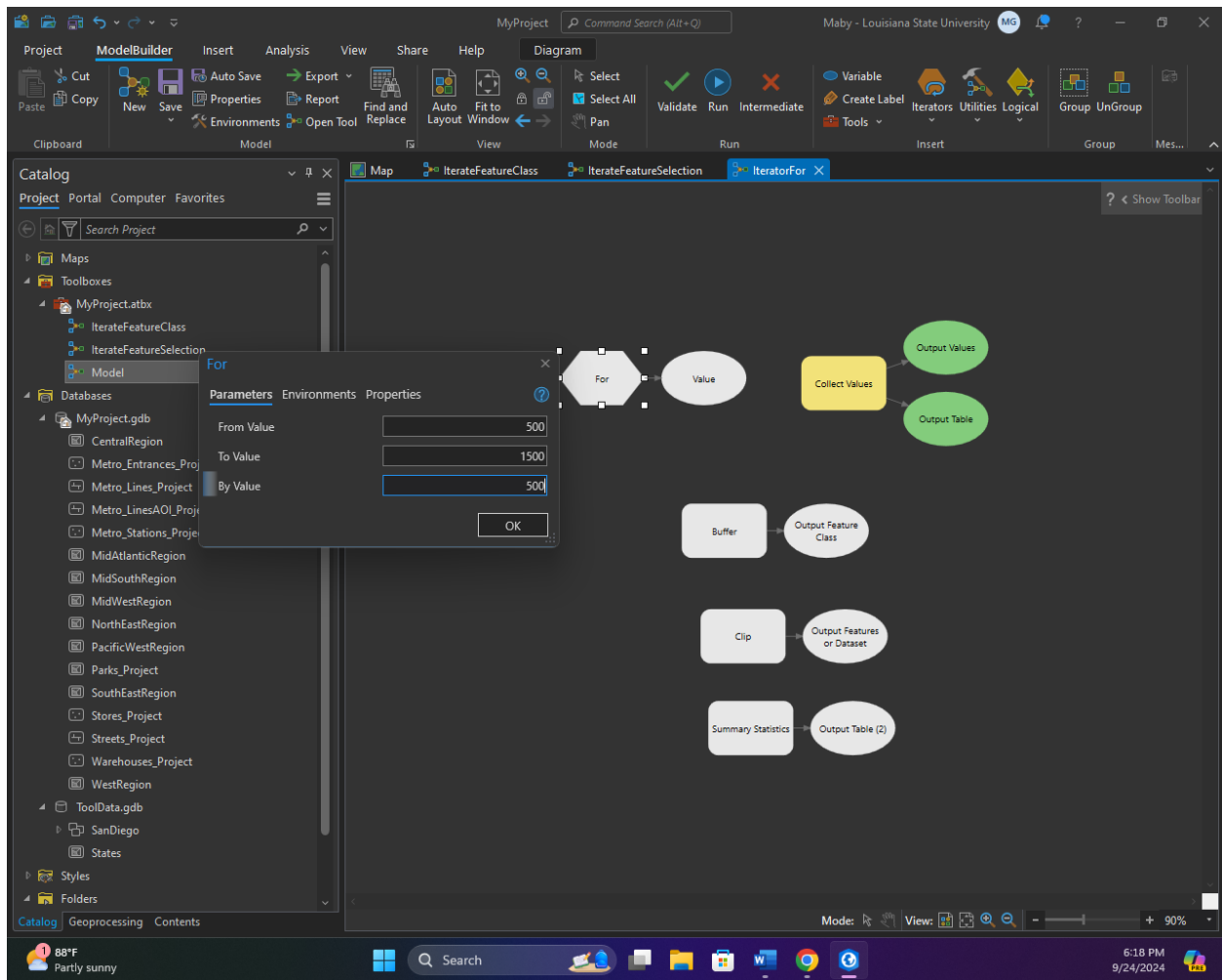
#### Creation of Iterator For



Adding tools:



## Parameters For iterator:



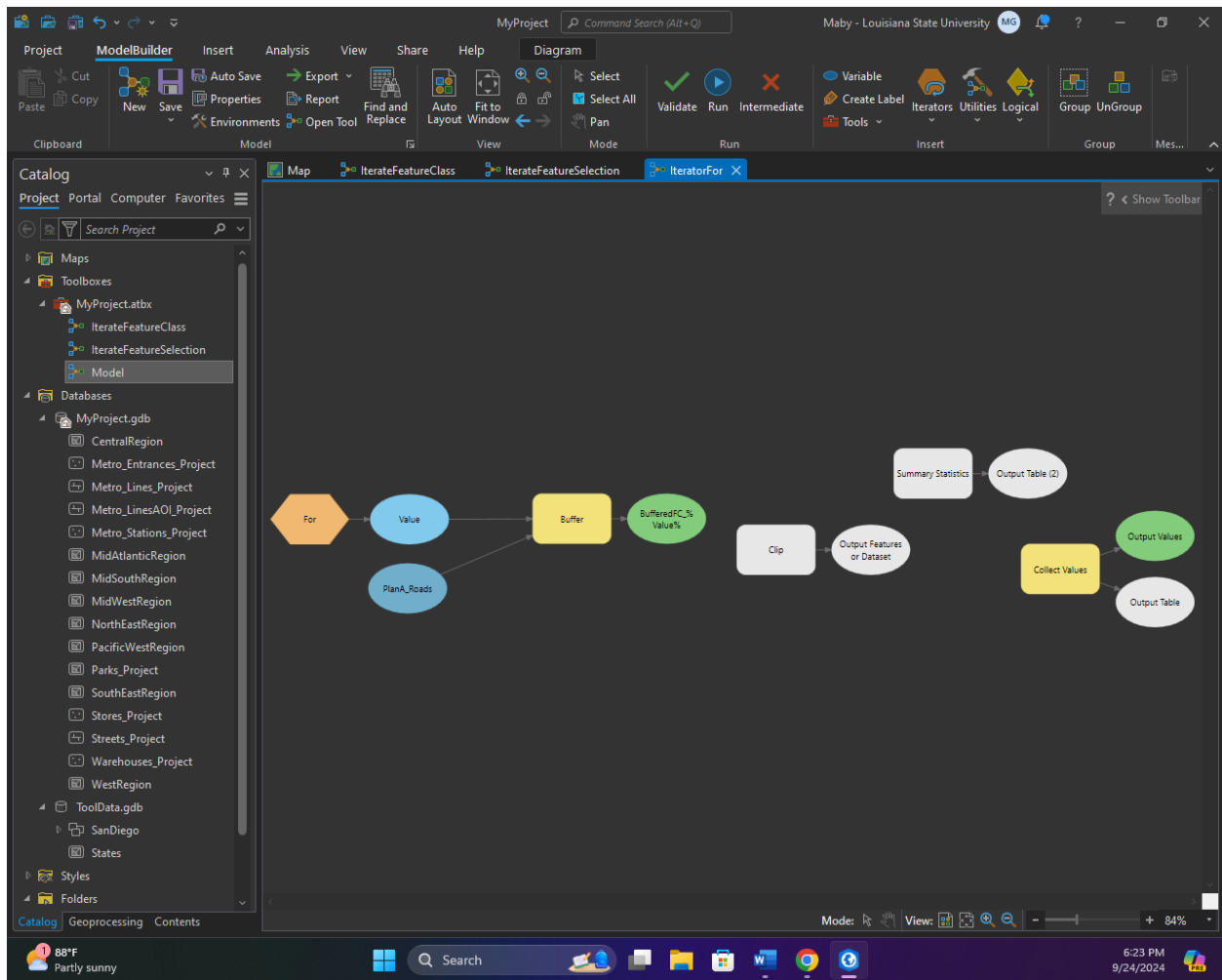
Buffer parameters:

The screenshot displays the ArcGIS ModelBuilder interface. The Catalog pane on the left shows a project named 'MyProject' with a toolbox containing 'IterateFeatureClass' and 'IterateFeatureSelection'. The main workspace shows a workflow diagram with a 'For' loop, a 'Value' variable, and a 'Collect Values' tool. The 'Buffer' tool is selected, and its parameters dialog is open. The dialog has three tabs: 'Parameters', 'Environments', and 'Properties'. The 'Parameters' tab is active, showing the following settings:

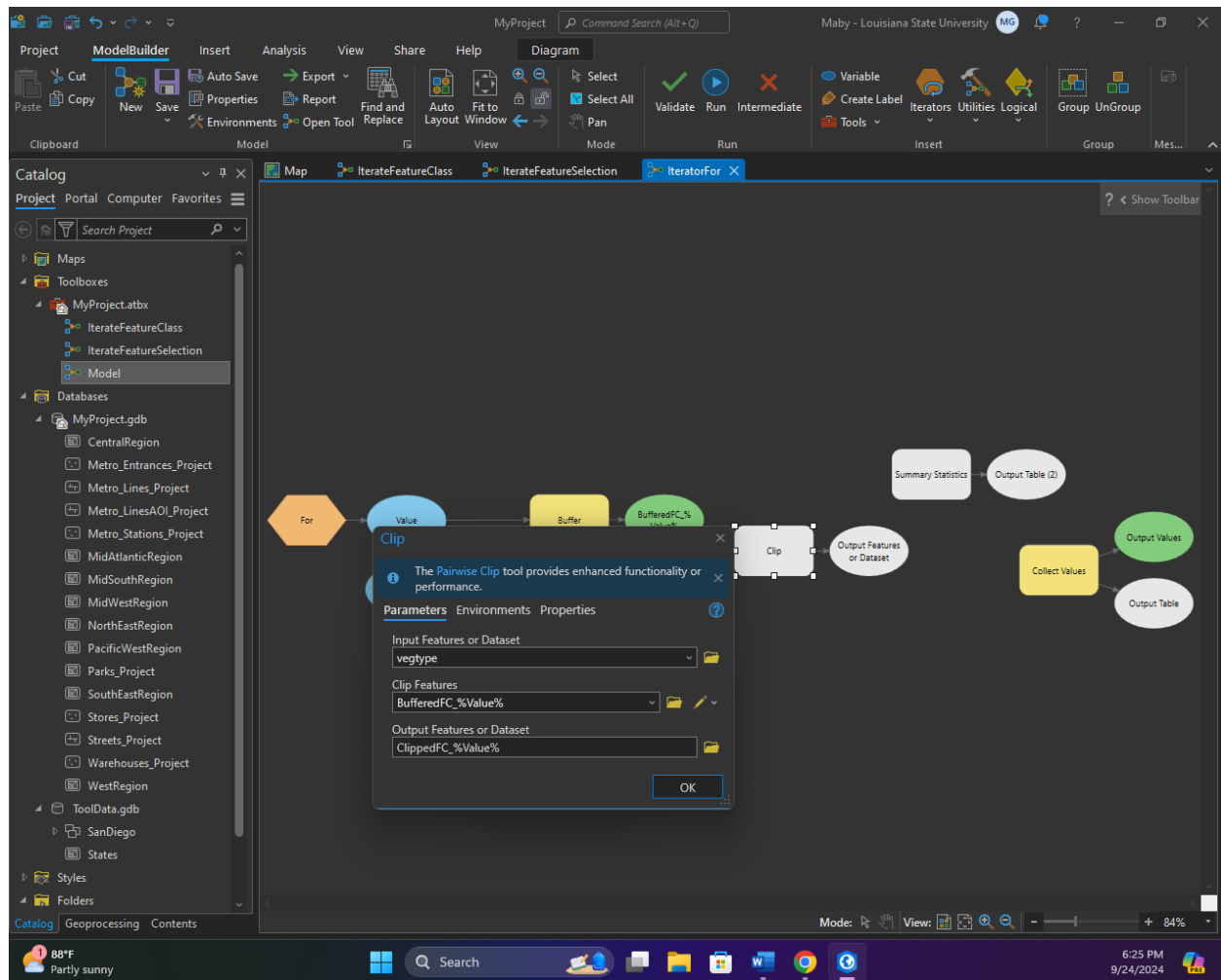
- Input Features: PlanA\_Roads
- Output Feature Class: BufferedFC\_%.Value%
- Distance [value or field]: (empty)
- Linear Unit: US Survey Feet
- Side Type: Full
- End Type: Round
- Method: Planar
- Dissolve Type: No Dissolve

The 'OK' button is visible at the bottom of the dialog. The background workflow diagram includes a 'For' loop connected to a 'Value' variable, which is then connected to a 'Collect Values' tool. The 'Collect Values' tool has two outputs: 'Output Values' and 'Output Table'.

Connecting Vale to buffer:



## Parameters for Clip tool:



## Parameters for Summary stats:

The screenshot displays the ArcGIS ModelBuilder interface. The left pane shows the Catalog tree with the following structure:

- Project
  - Portal
  - Computer
  - Favorites
- Search Project
- Maps
- Toolboxes
  - MyProject.atbx
    - IterateFeatureClass
    - IterateFeatureSelection
    - Model
- Databases
  - MyProject.gdb
    - CentralRegion
    - Metro\_Entrances\_Project
    - Metro\_Lines\_Project
    - Metro\_LinesAOI\_Project
    - Metro\_Stations\_Project
    - MidAtlanticRegion
    - MidSouthRegion
    - MidWestRegion
    - NorthEastRegion
    - PacificWestRegion
    - Parks\_Project
    - SouthEastRegion
    - Stores\_Project
    - Streets\_Project
    - Warehouses\_Project
    - WestRegion
  - ToolData.gdb
    - SanDiego
    - States
- Styles
- Folders

The main workspace shows a model diagram with the following components:

- For** (orange hexagon) connected to **Value** (blue oval).
- PlanA\_Roads** (blue oval) connected to the **Summary Statistics** tool.
- Summary Statistics** (white rectangle) connected to **Output Table (2)** (white oval).
- Collect Values** (yellow rectangle) connected to **Output Values** (green oval) and **Output Table** (white oval).

The **Summary Statistics** tool parameters are displayed in the foreground:

- Parameters** tab is active.
- Input Table:** ClippedFC\_Value%
- Output Table:** AffectedVegetation%Value%
- Statistics Fields:**
  - Field: Shape\_Area [Shape\_Are
  - Statistic Type: Sum
- Case Field:** VEG\_TYPE

The bottom status bar shows the system clock as 6:27 PM on 9/24/2024, with a weather icon indicating 88°F and partly sunny conditions.



Final result:

The screenshot displays the ArcGIS ModelBuilder interface. The left pane shows a project catalog with a database named 'MyProject.gdb' containing various feature classes like 'AffectedVegetation500', 'BufferedFC\_500', and 'ClippedFC\_500'. The main workspace shows a workflow diagram for an 'IteratorFor' model. The workflow starts with a 'For' loop, followed by a 'Value' tool, a 'Buffer' tool, a 'Clip' tool, a 'Summary Statistics' tool, and an 'AffectedVegetation' tool. The final output is 'Output Values' and 'Output Table'. A console window at the top right shows the execution log, indicating the model was executed successfully on Tuesday, September 24, 2024, at 6:29:02 PM. The console text includes: 'Done (00:11.69)', 'C:\Users\mgav113\Downloads\CursosISU\GISProgramming4057\assign', 'Start Time: Tuesday, September 24, 2024 6:29:00 PM', 'Succeeded at Tuesday, September 24, 2024 6:29:01 PM (Elapsed Time: 0.02 seconds)', 'Executing (For): IterateCount 500 1500 500', 'Start Time: Tuesday, September 24, 2024 6:29:02 PM', and 'Succeeded at Tuesday, September 24, 2024 6:29:02 PM (Elapsed Time: 0.02 seconds)'. The bottom status bar shows the temperature as 88°F, the date as 9/24/2024, and the time as 6:30 PM.

