**Geographical Information Systems**

Assignment 4

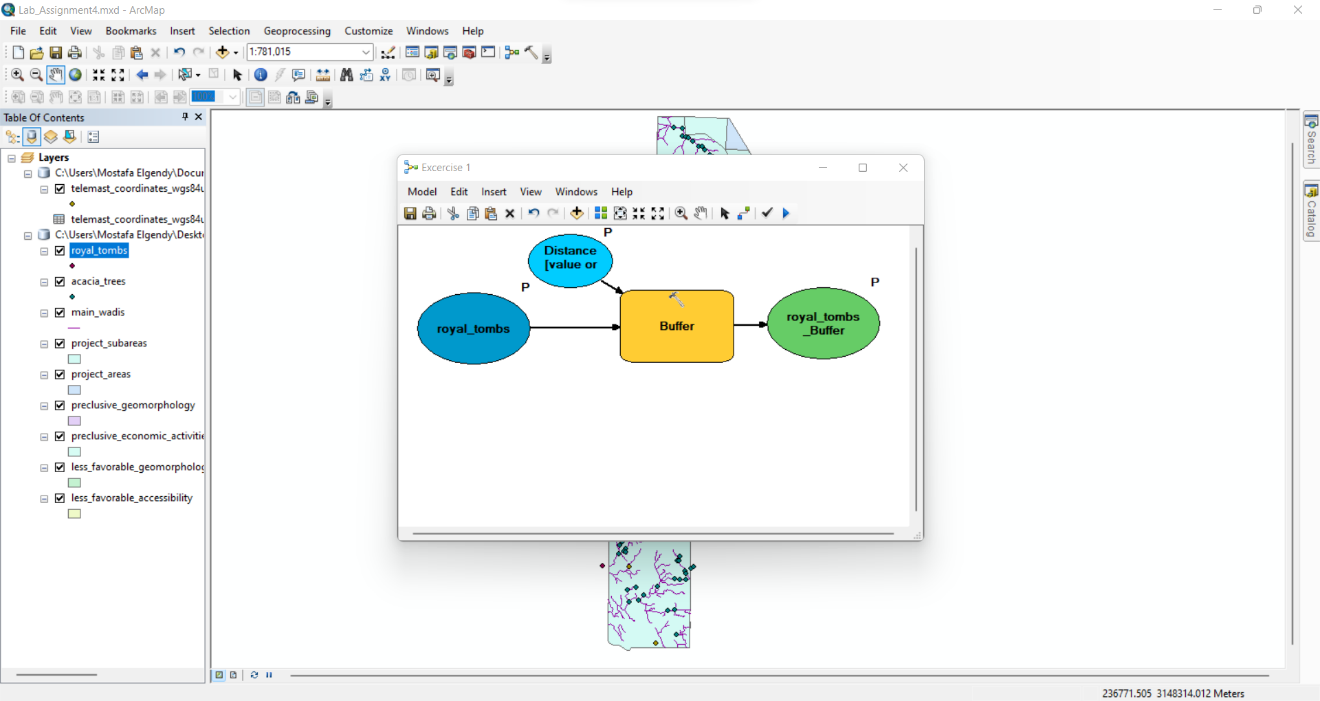
**Student Name:** Mostafa Mohamed Mostafa Elgendy

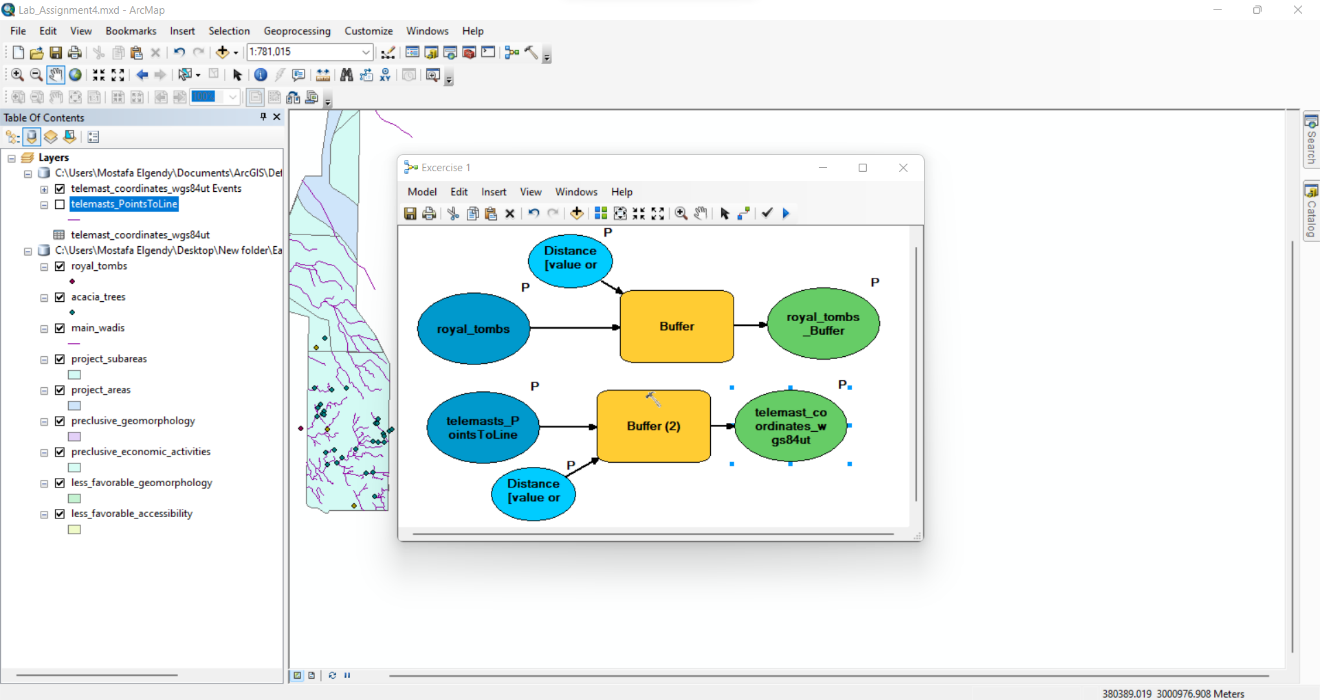
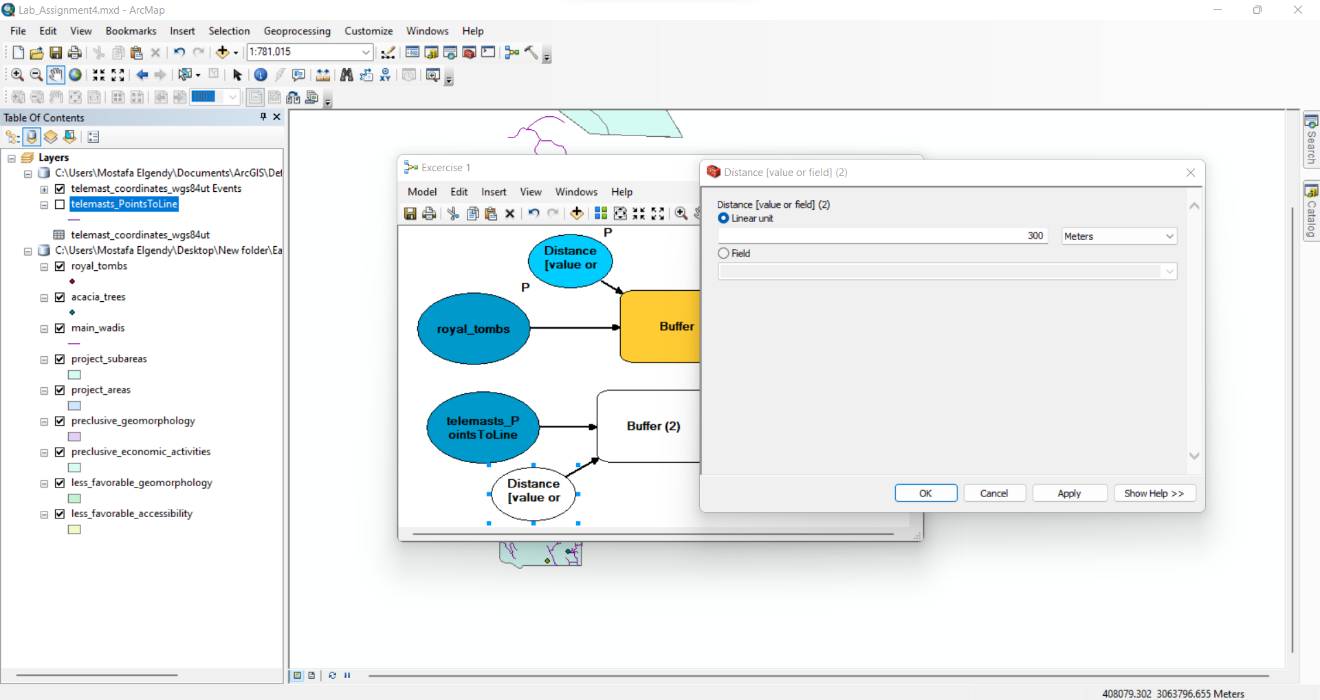
**Student ID:** 20190543

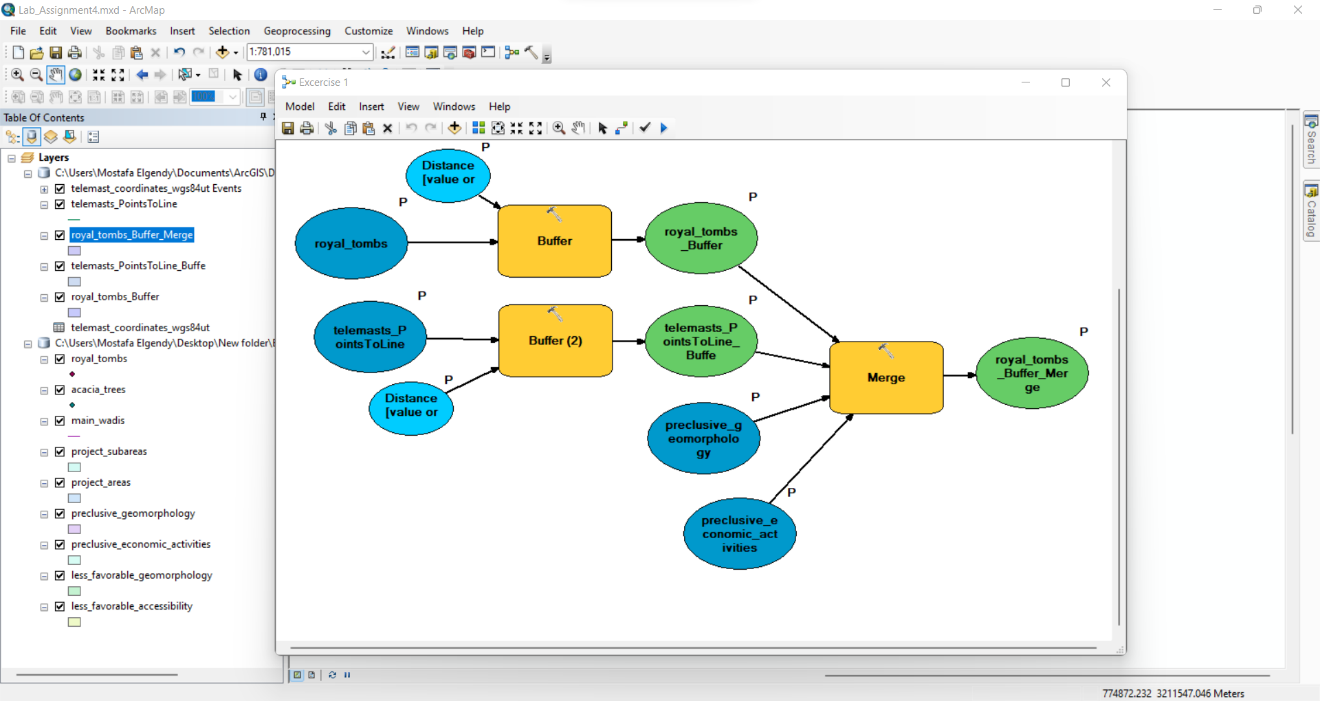
**Group No.:** IS-S1

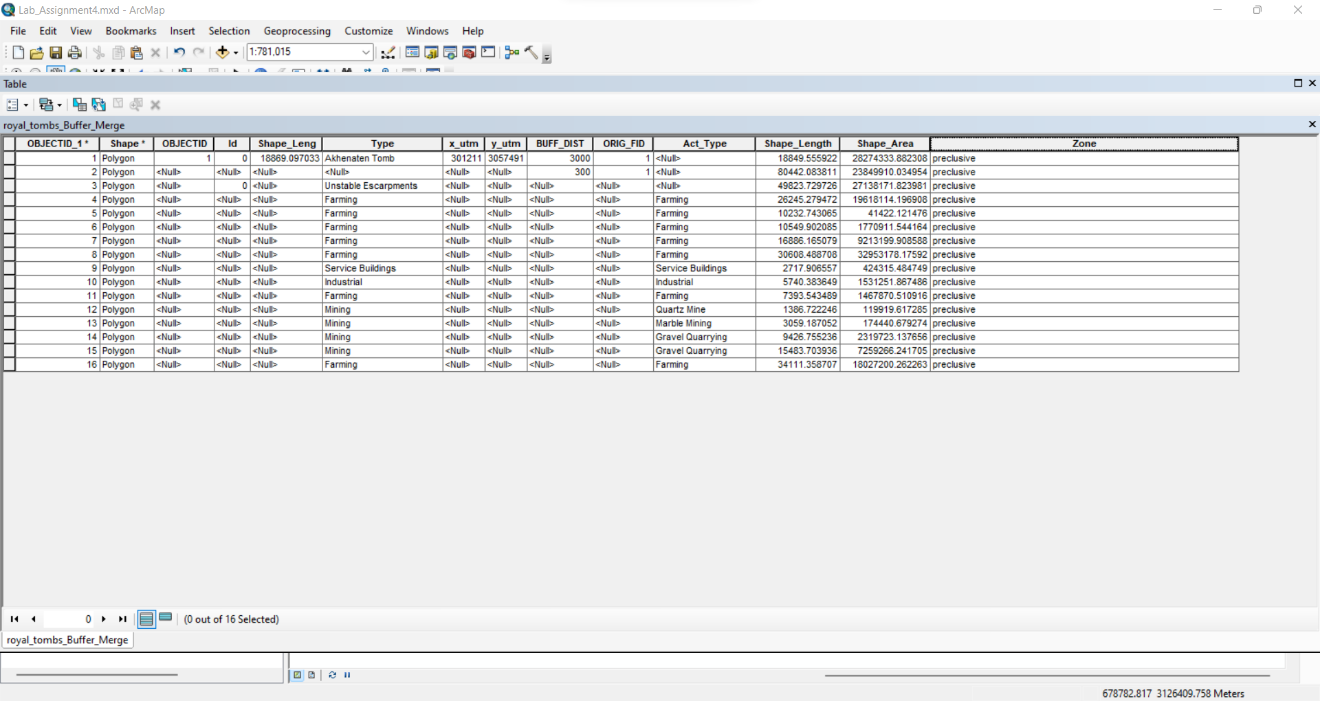
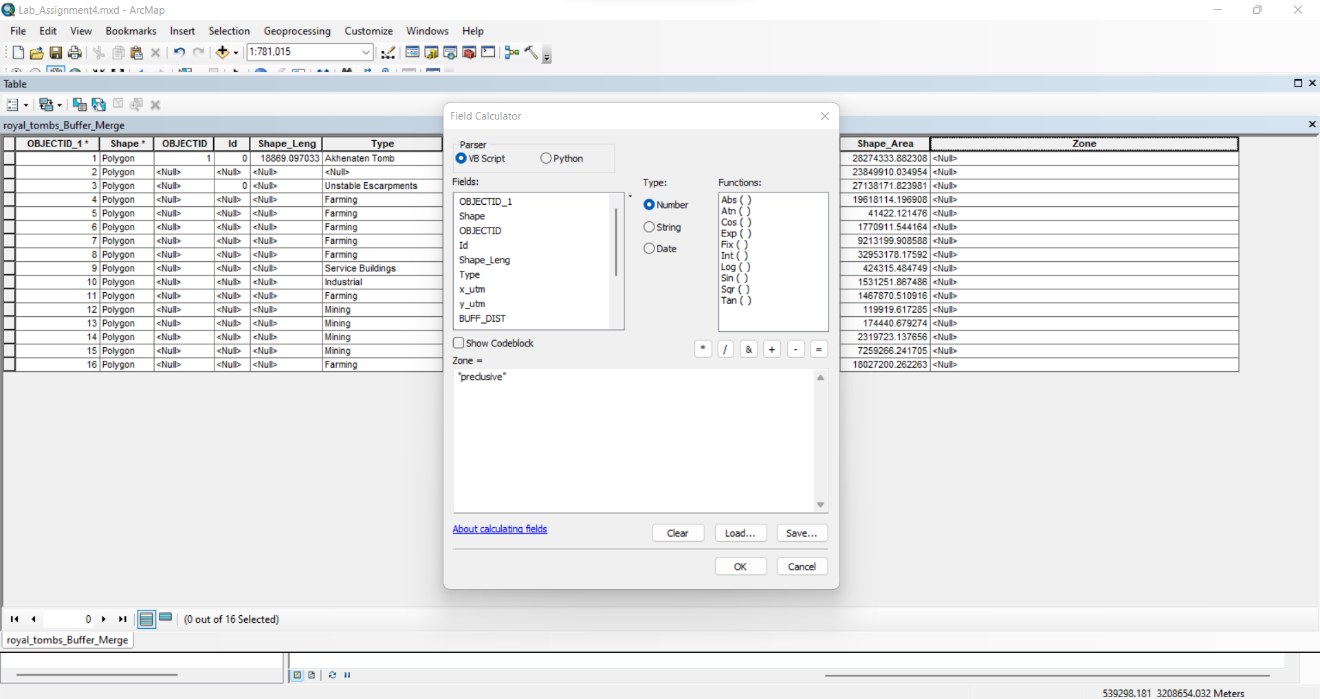
**Exercise 1: Create a tool to obtain a feature class with preclusive areas.**

* **“royal\_tombs”** buffered with **3000 m**

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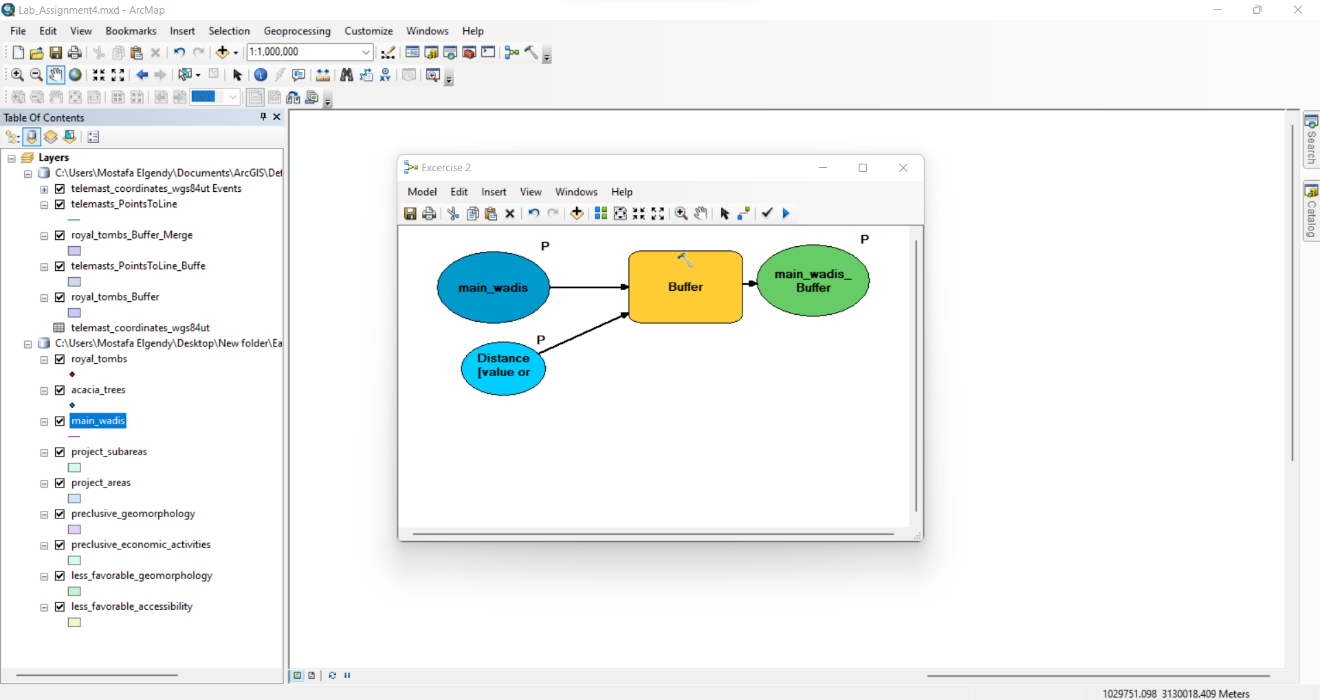
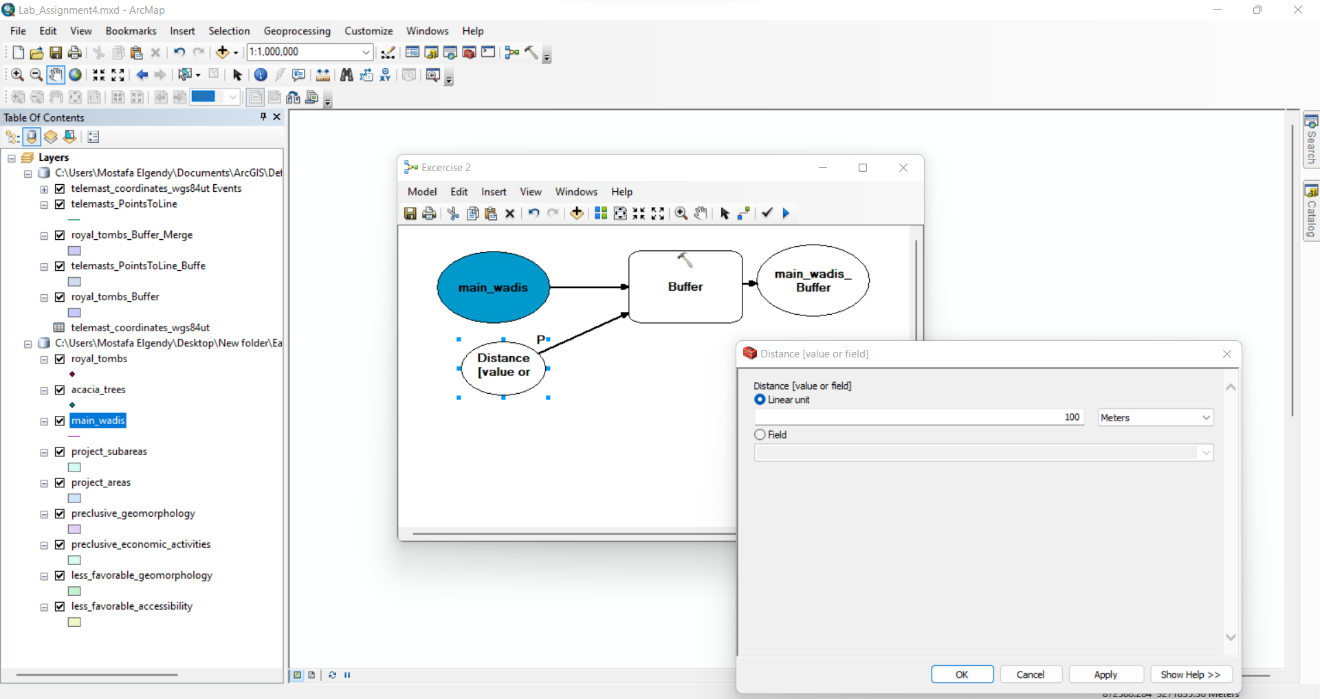
* **“telemasts\_PointsToLine”** buffered with **300 m**
* the both **Output Datasets** should be overlayed with the **“*Merge*”** tool together with the datasets **“preclusive\_geomorphology”** and **“preclusive\_economic\_activities”**



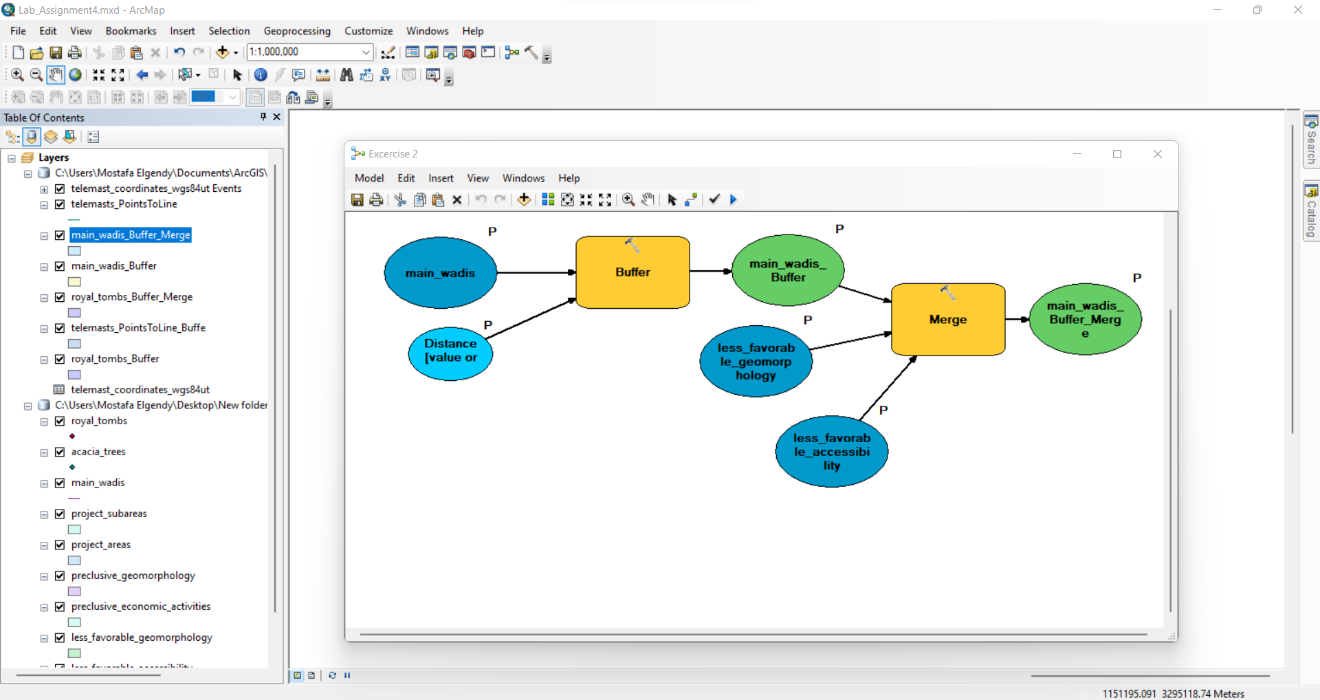
* ***Add Field*** to the Merge Output Dataset named **“Zone”**
* Use the ***“Calculate Field”*** function to **attribute all features** with **“preclusive”** (field “Zone”). 

**Exercise 2: Create a tool to obtain a feature class with unfavorable areas**

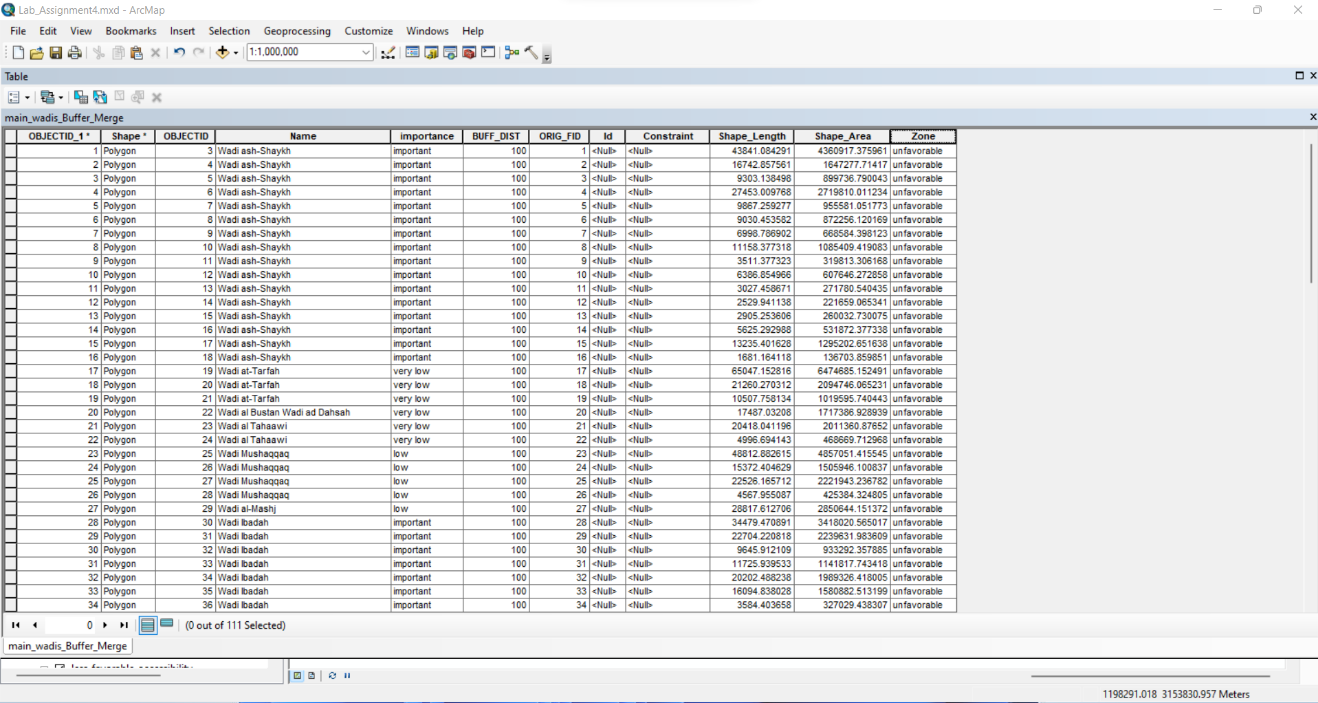
* “main\_wadis\_of\_importance” buffered with 100 m



* “Merge” the Output Dataset with the datasets “less\_favorable\_geomorphology” and “less\_favorable\_accessibility”

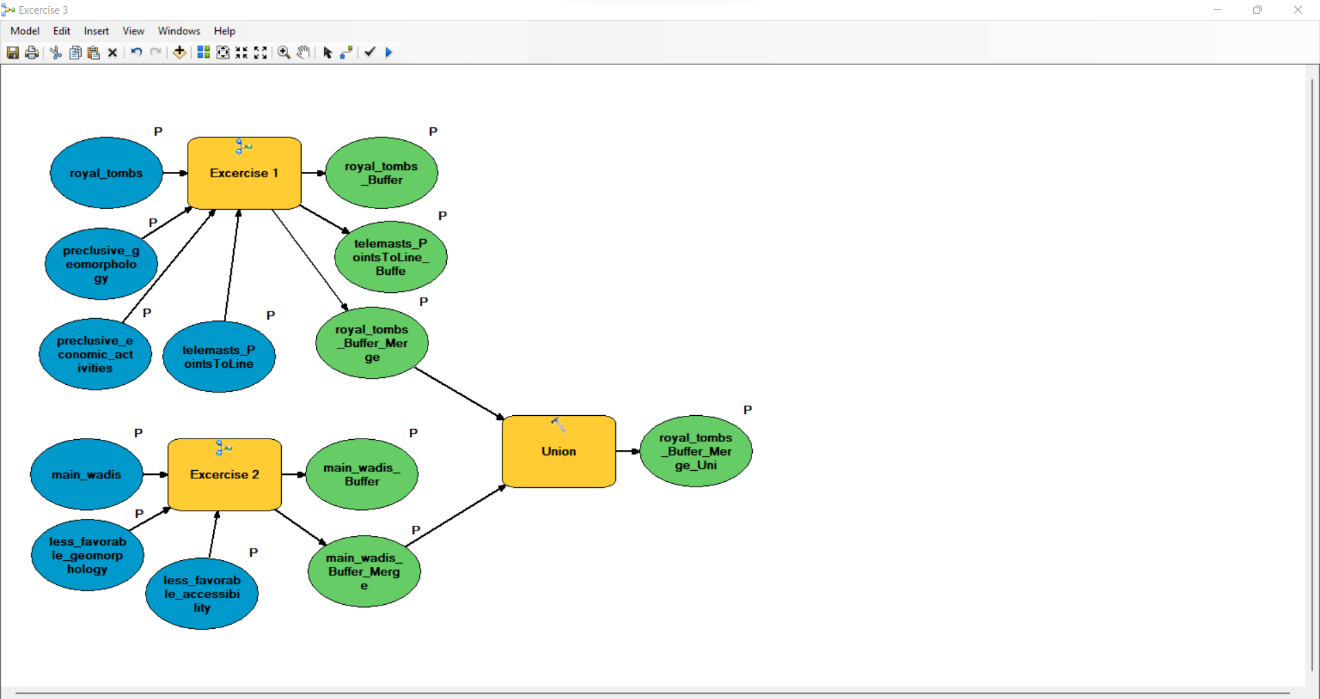


* Add Field to the Merge Output Dataset named “Zone”
* Use the “Calculate Field” function to attribute all features with “unfavorable” (field “Zone”)

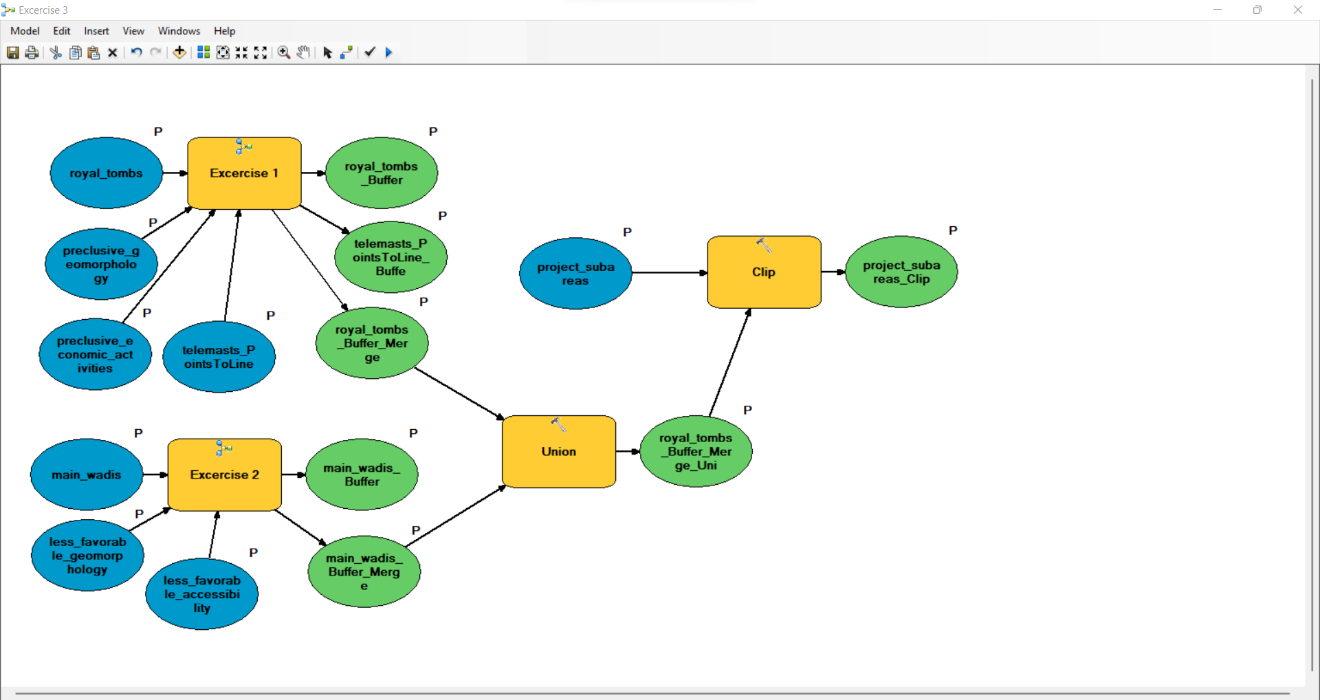


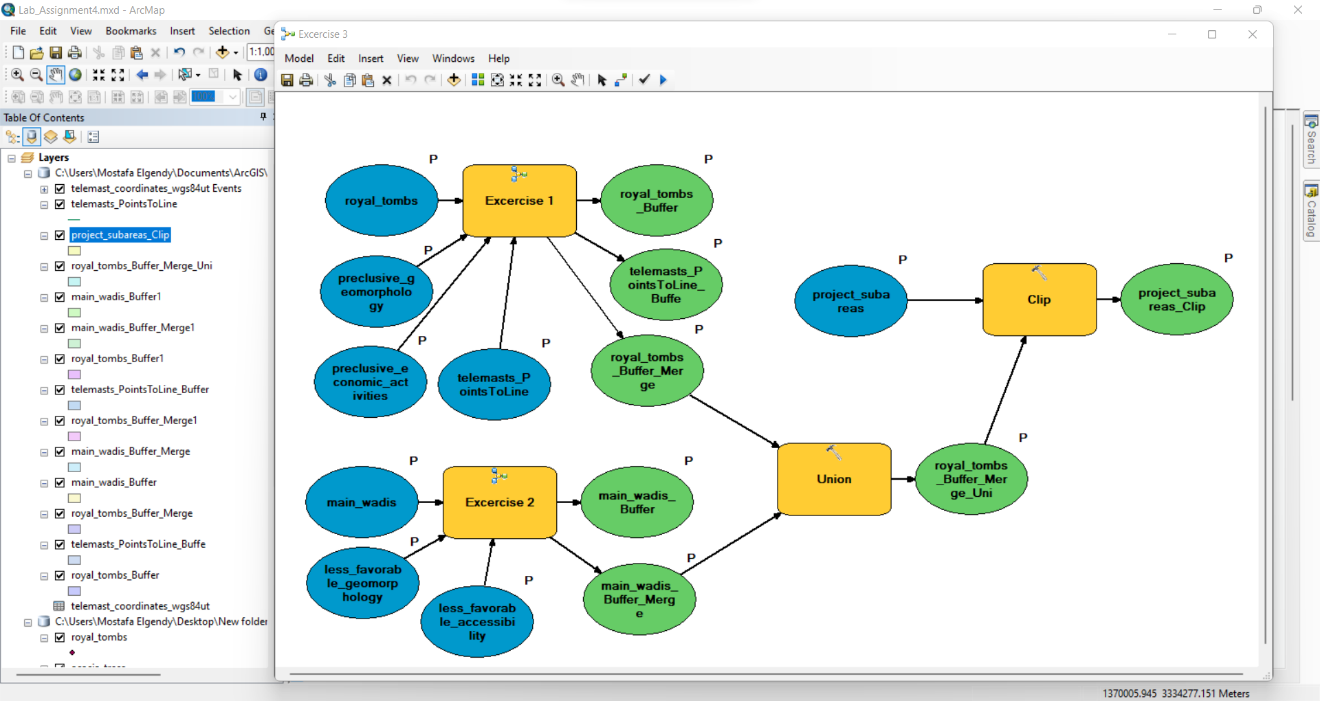
**Exercise 3: Integrating a model within a model Create a tool to obtain a feature class with all preclusive & unfavorable areas:**

* Overlay the Output Datasets of both previous models using the tool “Union”



* Clip the Union Output Dataset to the “project\_subareas”





* Erase

