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#####  
# Description:  
# This is script used to create a script tool that will allow the user to specify inputs and also  
# outputs.  
#  
# Prints a simple message and an example of how a script should be formatted.  
#  
# Name: Assign1_KatieChute.py  
# Created by: Katie Chute  
# Spring 2012  
# Updated Fall 2015  
#  
# Geoprocessing and Problem Solving 1 - Week 5  
#  
#####  
# This is an example of a commented line  
# imports the the arcpy site package.  
  
import arcpy  
  
arcpy.AddMessage ("Import acrpy")  
  
# This script was created by Katie Chute  
  
arcpy.env.workspace = "D:/Python/Data"  
  
workspace= arcpy.GetParameter(0)  
  
#Imports ArcGIS Enviroment Settings  
from arcpy import env  
  
#Modifies env setting to overwrite existing files  
env.overwriteOutput = True  
  
arcpy.AddMessage("Setting to overwrite existing files")  
  
clip_in_features= arcpy.GetParameter(1)  
clip_features= arcpy.GetParameter(2)  
  
# Replace a layer/table view name with a path to a dataset (which can be a layer file) or create  
# the layer/table view within the script  
# The following inputs are layers or table views: "dss_v3_ns", "AnnapolisRoyal_Clip2015"  
arcpy.Clip_analysis(in_features="AnnaRoyal_BIG_C.shp", clip_features="AnnapolisRoyal_Clip2015.shp",  
out_feature_class="D:/Python/Data/AnnaRoyalC_Bedrock.shp")  
  
arcpy.AddMessage("Clip Complete")  
  
# Replace a layer/table view name with a path to a dataset (which can be a layer file) or create  
# the layer/table view within the script  
# The following inputs are layers or table views: "AnnaRoyal_BIG_C"  
arcpy.AddField_management(in_table="AnnaRoyalC_Bedrock.shp", field_name="Area_ha", field_type="LONG",  
field_precision="9")  
  
arcpy.AddMessage("Add Field Complete")  
  
# Replace a layer/table view name with a path to a dataset (which can be a layer file) or create  
# the layer/table view within the script  
# The following inputs are layers or table views: "AnnaRoyalC_Bedrock"
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arcpy.CalculateField_management(in_table="AnnaRoyalC_Bedrock.shp", field="Area_ha", expression=
"([Area_ha]*100)/13759", expression_type="VB")

arcpy.AddMessage("Calculate Field Complete")

arcpy.Select_analysis("AnnaRoyalC_Bedrock.shp", "D:/Python/Data/Sedimentary.shp", "UNIT_DESC LIKE
'%sand%'")

arcpy.AddMessage("Select Completed")

# Replace a layer/table view name with a path to a dataset (which can be a layer file) or create
the layer/table view within the script
# The following inputs are layers or table views: "AnnaRoyalC_Bedrock"
arcpy.Select_analysis("AnnaRoyalC_Bedrock.shp", "D:/Python/Data/Igneous.shp", "UNIT_DESC LIKE
'%gran%' or UNIT_DESC LIKE '%basalt%')

arcpy.AddMessage("Select Completed")

arcpy.Statistics_analysis("AnnaRoyalC_Bedrock.shp", "D:/Python/Data/AnnaRoyal_Sum.dbf", [{"Area_ha",
"SUM"}])

# Replace a layer/table view name with a path to a dataset (which can be a layer file) or create
the layer/table view within the script
# The following inputs are layers or table views: "Sedimentary"
arcpy.Statistics_analysis("Sedimentary.shp", "D:/Python/Data/Sedimentary_Sum.dbf", [{"Area_ha", "SUM"
}])

arcpy.AddMessage("Statistic Analysis Complete")

# Replace a layer/table view name with a path to a dataset (which can be a layer file) or create
the layer/table view within the script
# The following inputs are layers or table views: "Igneous"
arcpy.Statistics_analysis(in_table="Igneous.shp", out_table="D:/Python/Data/Igneous_Sum.dbf",
statistics_fields=[["Area_ha", "SUM"]])

arcpy.AddMessage("Statistic Analysis Complete")

# Replace a layer/table view name with a path to a dataset (which can be a layer file) or create
the layer/table view within the script
# The following inputs are layers or table views: "Igneous_Statistics"
arcpy.CalculateField_management("Igneous_Sum.dbf", "SUM_Area_h", "([SUM_Area_h]*100)/13759", "VB")

arcpy.AddMessage("Calculate Field Igneous Complete")

# Replace a layer/table view name with a path to a dataset (which can be a layer file) or create
the layer/table view within the script
# The following inputs are layers or table views: "Igneous_Statistics"
arcpy.CalculateField_management(in_table="Sedimentary_Sum.dbf", field="SUM_Area_h", expression=
"([SUM_Area_h]*100)/13759", expression_type="VB")

arcpy.AddMessage("Calculate Field Sedimentary Complete")

arcpy.AddMessage("Script Complete")
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