LAB: 3

Deliverable 1: List of errors, with corrections and a brief explanation. (5points)

import arcpy (1)

arcpy.env = "C:\Project" (2)

in_features = "parks.shp"(3)

out_featureclass = "parks_centroid.shp"

if ProductInfo == "ArcInfo": (6)

     Arcpy.FeatureToPoint_management(in_features out_featureclass)(5)

Else(4)

print "An ArcInfo license is not available."

Errors:
(1)Env package not imported : from arcpy import env
(2) wrong \ for path: replace it by "/"
(3) full path for input features class not inserted(files should be available in the workspace)(optional)- runtime error
(4) no ':' to display indentation else:
(5)no ", " between in_feature and out_feature:
Arcpy.FeatureToPoint_management(in_features, out_featureclass)
(6) no package for productinfo mentioned : if arcpy.ProductInfo() == "ArcInfo":
(7) Arcpy.FeatureToPoint_management(in_features out_featureclass) : arcpy shouldn't have Capital "A"(optional) Package names should be all lower case

Deliverable 2: List of errors, with corrections and brief explanation. (5 points)

import arcpy

from arcpy import environment(1)

workspace = "C:/Data/study.mdb"(2)

fclist = arcpy.ListFeatureClasses(3)

arcpy.CreateFileGDB_management("C:\Data", "newstudy.gdb")(4)

for fc in fclist:

desc = arcpy.Describe(fclist)(5)

if desc.ShapeType = "Polygon"(6)(7)(8)

arcpy.Copy(fc, "C:/Data/newstudy.gdb/" + fc)

else:

print "{0} is not a polygon feature class".format(desc)

(1) ImportError: cannot import name environment: replace it with env
(2) workspace is a folder from env package so cannt retrieve without full path :
env.workspace = "C:/Data/study.mdb"
(3) ListFeatureClasses is a function so we should have "ListFeatureClasses()"
(4) wrong "\"for path use "/":arcpy.CreateFileGDB_management("C:/Data", "newstudy.gdb")
(5)wrong parameter send(fclits is all feautres listed): desc = arcpy.Describe(fc)
(6)ShapeType should not have S capital as it is a variable, only Class name follows the
UpperCaseCamelCase convention : if desc.shapeType == "Polygon":
(7) '=' is not considered as equal to condition in if ..else : "=="
(8) Condition is after ':' is mandatory
(9) Copy is not a function : arcpy.Copy_management (fc, "C:/Data/newstudy.gdb/" + fc)
AttributeError: 'module' object has no attribute 'Copy'
(10) format(value[, format_spec]) -> string Returns value.__format__(format_spec)
format_spec defaults to "": format(desc.shapeType)

Deliverable 3: Copy and paste the content of you Module names should be all lower caser script for Challenge Exercise 1 as text into your report. Also include a screen capture of your data frame in ArcMap that shows the newly created polygon. (15 points)

```
import arcpy
from arcpy import env
env.overwriteOutput = True
env.workspace = "H:/GEOM73/DATA/Exercise08/Results"
fc = "poly.shp"
arcpy.CreateFeatureclass_management("H:/GEOM73/DATA/Exercise08/Results", fc, "Polygon")
<Result 'H:\\GEOM73\\DATA\\Exercise08\\Results\\poly.shp'>
cursor = arcpy.da.InsertCursor(fc, ["shape@"])
array = arcpy.Array()
coor =[[0, 0], [0, 1000], [1000, 1000], [1000, 0]]
```

```
for x, y in coor:
    point = arcpy.Point(x,y)
    array.append(point)

polygon = arcpy.Polygon(array)
cursor.insertRow([polygon])
OL
delcursor
```
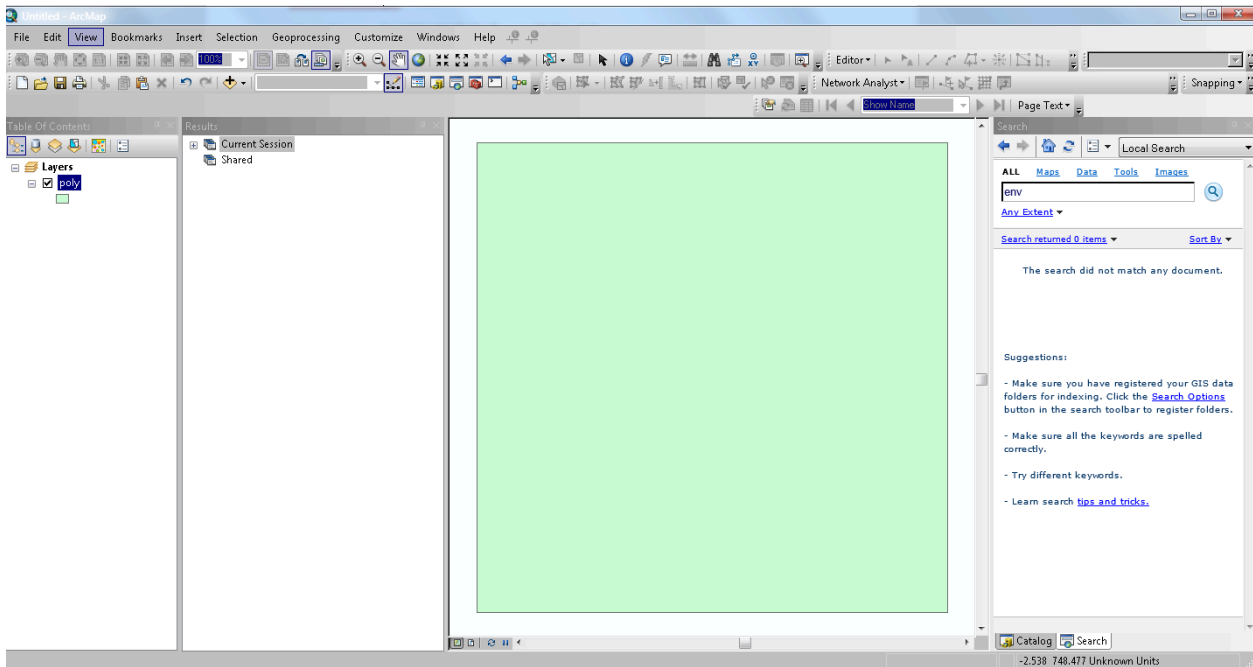

Deliverable 4: Copy and paste the content of your script for Challenge Exercise 2 as text into your report. Also include a screen capture of the results printed to the interactive window. (15 points)

```
import arcpy

from arcpy import env

env.workspace = " H:/GEOM73/DATA/Exercise08/Results "

env.workspace = " H:/GEOM73/DATA/Exercise08"

fc = "Hawaii.shp"

shp = "Results/Hawaii_single.shp"

cursor = arcpy.da.SearchCursor(fc, ["OID@","SHAPE@"])
```

for row in cursor :

print("Feature {0}: ".format(row[0]))

partnum = 0

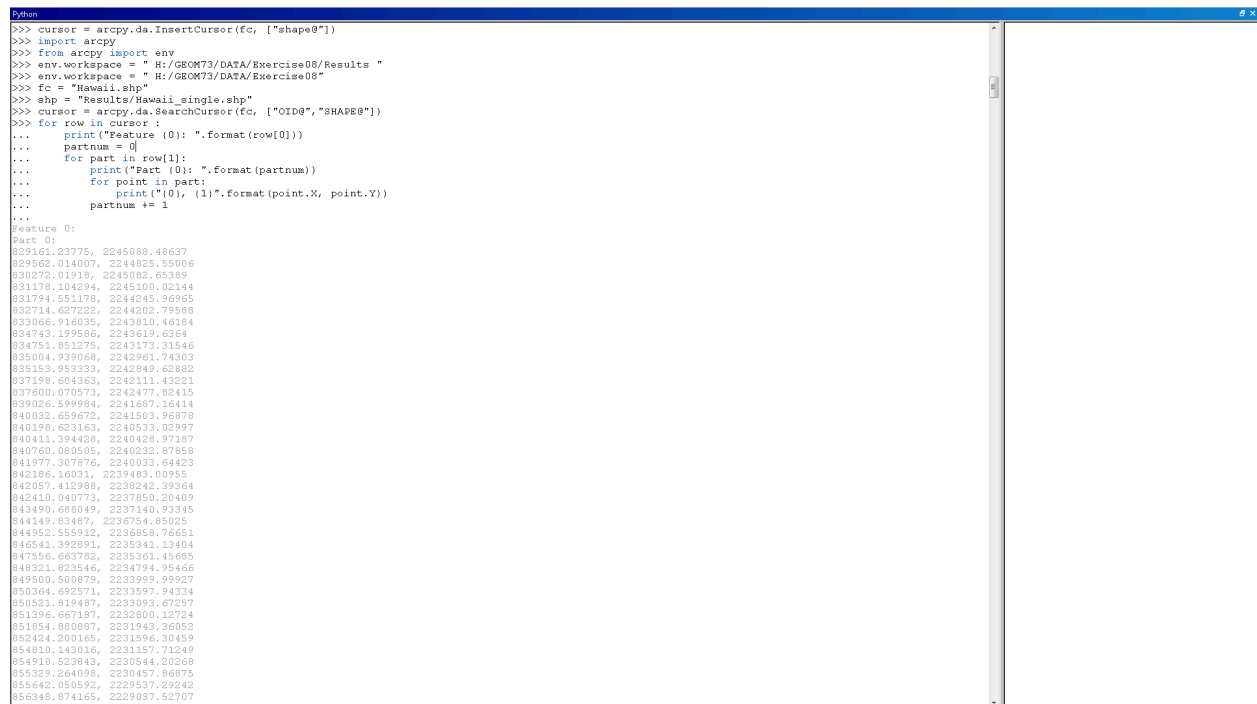*for part in row[1]:*

print("Part {0}: ".format(partnum))

for point in part:

print("{0}, {1}".format(point.X, point.Y))

partnum += 1

```
Python                                                                                                    a x
>>> cursor = arcpy.da.InsertCursor(fc, ["shape@"])
>>> import arcpy
>>> from arcpy import env
>>> env.workspace = " H:/GEOM73/DATA/Exercise08/Results "
>>> env.workspace = " H:/GEOM73/DATA/Exercise08"
>>> fc = "Hawaii.shp"
>>> shp = "Results/Hawaii_single.shp"
>>> cursor = arcpy.da.SearchCursor(fc, ["OID@","SHAPE@"])
>>> for row in cursor :
...     print("Feature {0}: ".format(row[0]))
...     partnum = 0
...     for part in row[1]:
...         print("Part {0}: ".format(partnum))
...         for point in part:
...             print("{0}, {1}".format(point.X, point.Y))
...         partnum += 1
...
Feature 0:
Part 0:
829161.23775, 2245088.48637
829562.014007, 2244825.55006
830272.01918, 2245082.65389
831178.104294, 2245100.02144
831794.551178, 2244245.96965
832714.627222, 2244202.79588
833066.916035, 2243810.46184
834743.199586, 2243619.6364
834751.851275, 2243173.31546
835004.939068, 2242961.74303
835153.953333, 2242849.62882
837198.604363, 2242111.43221
837600.070573, 2242477.82415
839026.599984, 2241687.16414
840032.659672, 2241503.96878
840198.623163, 2240533.02997
840411.394428, 2240428.97187
840760.080505, 2240232.87858
841977.307876, 2240033.64423
842186.16031, 2239483.00955
842057.412988, 2238242.39364
842410.040773, 2237850.20409
843490.688049, 2237140.93345
844149.83487, 2236754.85025
844952.555912, 2236858.76651
846541.392891, 2235341.13404
847556.663782, 2235361.45685
848321.823546, 2234794.95466
849500.500879, 2233999.99927
850364.692571, 2233597.94334
850521.819487, 2233093.67257
851396.667187, 2232800.12724
851854.880887, 2231943.36052
852424.200165, 2231596.30459
854810.143016, 2231157.71249
854918.523843, 2230544.20268
855329.264098, 2230457.86875
855642.050592, 2229537.29242
856348.874165, 2229037.52707
```

Deliverable 6: Copy and paste your script as text into your report. Also include a screen capture of your data frame in ArcMap that shows the original polygon features and the resulting mean center. (30 points)

import arcpy, os
infc = arcpy.GetParameterAsText(0)
centroids = arcpy.GetParameterAsText(1)
for row in arcpy.da.SearchCursor(infc, ["SHAPE@XY"]):
x, y = row[0]
print("{}, {}".format(x, y))

```
pointArray = []
cursor = arcpy.da.InsertCursor(centroids, ["SHAPE@",'ORIG_ID'])
for row in arcpy.da.SearchCursor(infc, ["SHAPE@",'OID@']):
    cursor.insertRow((row[0].centroid, row[1]))
del row
arcpy.MeanCenter_stats("poly.shp", "MEANCENTER.shp", "NUM_EMP", "#", "#")
arcpy.CreateFeatureclass_management(H:/GEOM73/DATA/Exercise08/Results "", "hab.shp",
"POINT", "dams.shp", "DISABLED", "DISABLED", " ")
arcpy.MeanCenter_stats("habs.shp", "MEANCENTER.shp", "NUM_EMP", "#", "#")
```

Deliverable 7: Copy and paste your script as text into your report. Also include a screen capture of the resulting point feature classes in a data frame in ArcMap. (30 points)

```
import arcpy
arcpy.CreateFileGDB_management("H:/GEOM73/DATA/Exercise08", "new.gdb", "9.2")
```