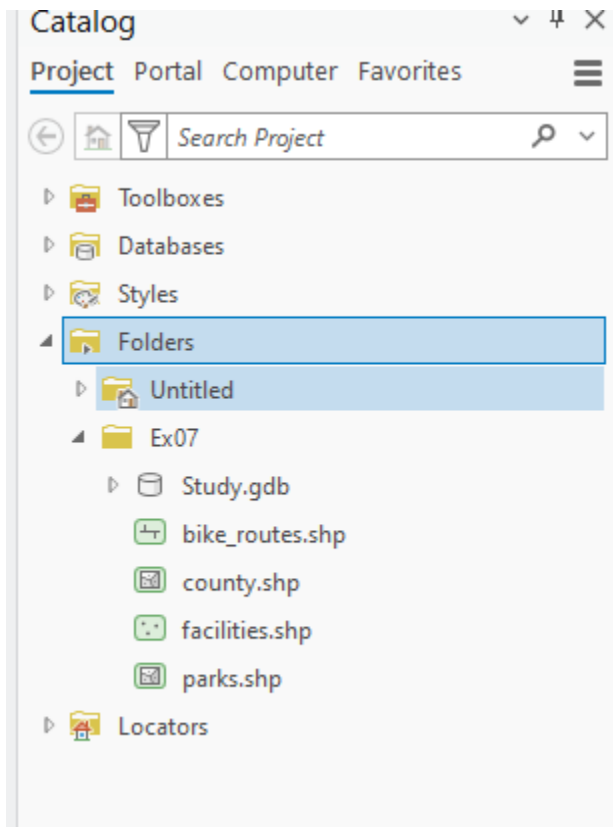


Week 10 Chapter 7

Lab materials saved on GitHub in [GISC2335_ProgrammingForGIS/WeeklyContent/week10](#)

Lab 7: Debugging and error handling

Examine syntax errors and exceptions



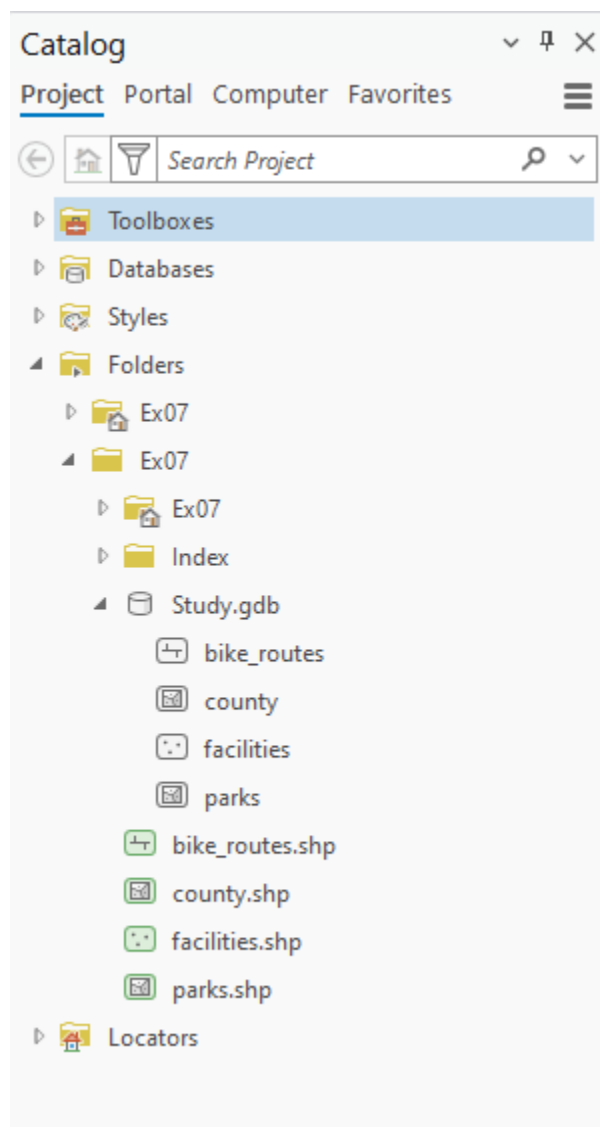
```
fc_list.py 1 x
data > Ex07 > fc_list.py > ...
1 import arcpy
2 arcpy.env.workspace = "C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07"
3 fclist = arcpy.ListFeatureClasses()
4 for fc in fclist:
5     desc = arcpy.da.Describe(fc)
6     print(f'{desc["baseName"]}: {des["shapeType"]}')
7

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/python.exe" c:/ProgrammingProjects/GISC2335_ProgrammingForGIS/WeeklyContent/week10/data/Ex07/fc_list.py
File "c:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\fc_list.py", line 4
    for fc in fclist
    ^
SyntaxError: expected ':'
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/python.exe" c:/ProgrammingProjects/GISC2335_ProgrammingForGIS/WeeklyContent/week10/data/Ex07/fc_list.py
Traceback (most recent call last):
  File "c:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\fc_list.py", line 5, in <module>
    desc = arcpy.da.describe(fc)
    ^^^^^^^^^^^^^^^^^^^^^^^^^
AttributeError: module 'arcpy.da' has no attribute 'describe'. Did you mean: 'Describe'?
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/python.exe" c:/ProgrammingProjects/GISC2335_ProgrammingForGIS/WeeklyContent/week10/data/Ex07/fc_list.py
Traceback (most recent call last):
  File "c:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\fc_list.py", line 6, in <module>
    print(f'{desc["baseName"]}: {des["shapeType"]}')
    ^^^
NameError: name 'des' is not defined. Did you mean: 'desc'?
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10>
```

```
fc_list.py x
data > Ex07 > fc_list.py > ...
1 import arcpy
2 arcpy.env.workspace = "C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07"
3 fcList = arcpy.ListFeatureClasses()
4 for fc in fcList:
5     desc = arcpy.da.Describe(fc)
6     print(f'{desc["baseName"]}: {desc["shapeType"]}')
7

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Python + - - - - -
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/python
.exe" c:/ProgrammingProjects/GISC2335_ProgrammingForGIS/WeeklyContent/week10/data/Ex07/fc_list.py
File "c:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\fc_list.py", line 4
    for fc in fcList
    ^
SyntaxError: expected ':'
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/python
.exe" c:/ProgrammingProjects/GISC2335_ProgrammingForGIS/WeeklyContent/week10/data/Ex07/fc_list.py
Traceback (most recent call last):
  File "c:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\fc_list.py", line 5, in <module>
    desc = arcpy.da.describe(fc)
            ^^^^^^^^^^^^^^^^^
AttributeError: module 'arcpy.da' has no attribute 'describe'. Did you mean: 'Describe'?
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/python
.exe" c:/ProgrammingProjects/GISC2335_ProgrammingForGIS/WeeklyContent/week10/data/Ex07/fc_list.py
Traceback (most recent call last):
  File "c:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\fc_list.py", line 6, in <module>
    print(f'{desc["baseName"]}: {des["shapeType"]}')
            ^^^
NameError: name 'des' is not defined. Did you mean: 'desc'?
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/python
.exe" c:/ProgrammingProjects/GISC2335_ProgrammingForGIS/WeeklyContent/week10/data/Ex07/fc_list.py
bike_routes: Polyline
county: Polygon
facilities: Point
parks: Polygon
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10>
```

Handle exceptions



```
copy_fcs.py X
data > Ex07 > copy_fcs.py > ...
4  arcpy.env.overwriteOutput = True
5  fgdb = "Demo.gdb"
6  try:
7      fclist = arcpy.ListFeatureClasses()
8      for fc in fclist:
9          desc = arcpy.da.Describe(fc)
10         outfc = os.path.join(fgdb, desc["baseName"])
11         arcpy.CopyFeatures_management(fc, outfc)
12
13     except arcpy.ExecuteError:
14         print(arcpy.GetMessages(2))
15
16     except:
17         print("There has been a nontool error.")
18 fclist = arcpy.ListFeatureClasses()
19 for fc in fclist:
20     desc = arcpy.da.Describe(fc)
21     outfc = os.path.join(fgdb, desc["baseName"])

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Python + - [ ] [ ] ... ^ X

except arcpy.ExecuteError:
^^^^^
SyntaxError: invalid syntax
PS C:\ProgrammingProjects\GIS2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/python.exe" c:/ProgrammingProjects/GIS2335_ProgrammingForGIS/WeeklyContent/week10/data/Ex07/copy_fcs.py
File "c:\ProgrammingProjects\GIS2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\copy_fcs.py", line 12
except arcpy.ExecuteError:
^^^^^
SyntaxError: invalid syntax
PS C:\ProgrammingProjects\GIS2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/python.exe" c:/ProgrammingProjects/GIS2335_ProgrammingForGIS/WeeklyContent/week10/data/Ex07/copy_fcs.py
ERROR 000210: Cannot create output Demo.gdb\bike_routes
Failed to execute (CopyFeatures).

Traceback (most recent call last):
  File "c:\ProgrammingProjects\GIS2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\copy_fcs.py", line 22, in <module>
    arcpy.CopyFeatures_management(fc, outfc)
  File "C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\management.py", line 6549, in CopyFeatures
    raise e
  File "C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\management.py", line 6540, in CopyFeatures
    gp.CopyFeatures_management(
  File "C:\Program Files\ArcGIS\Pro\Resources\ArcPy\arcpy\geoprocessing_base.py", line 532, in <lambda>
    return lambda *args: val(*gp_fixargs(args, True))
    ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
arcgisscripting.ExecuteError: ERROR 000210: Cannot create output Demo.gdb\bike_routes
Failed to execute (CopyFeatures).
```

End of exercise 7