

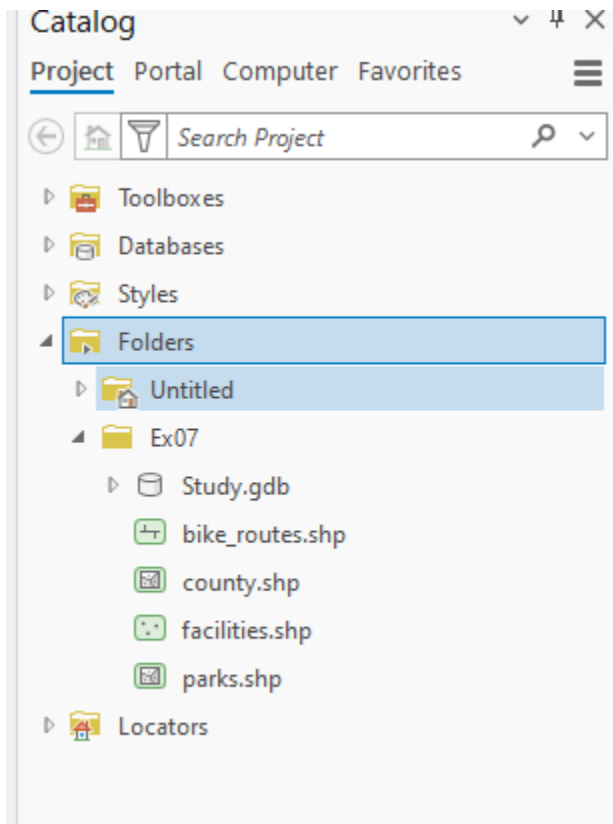
Week 10 Chapter 7

Lab materials saved on GitHub in GISC2335_ProgrammingForGIS/WeeklyContent/week10

https://github.com/crystaljhollis/DallasCollege_Portfolio/tree/main/GISC2335_ProgrammingForGIS/WeeklyContent/week10

Lab 7: Debugging and error handling

Examine syntax errors and exceptions



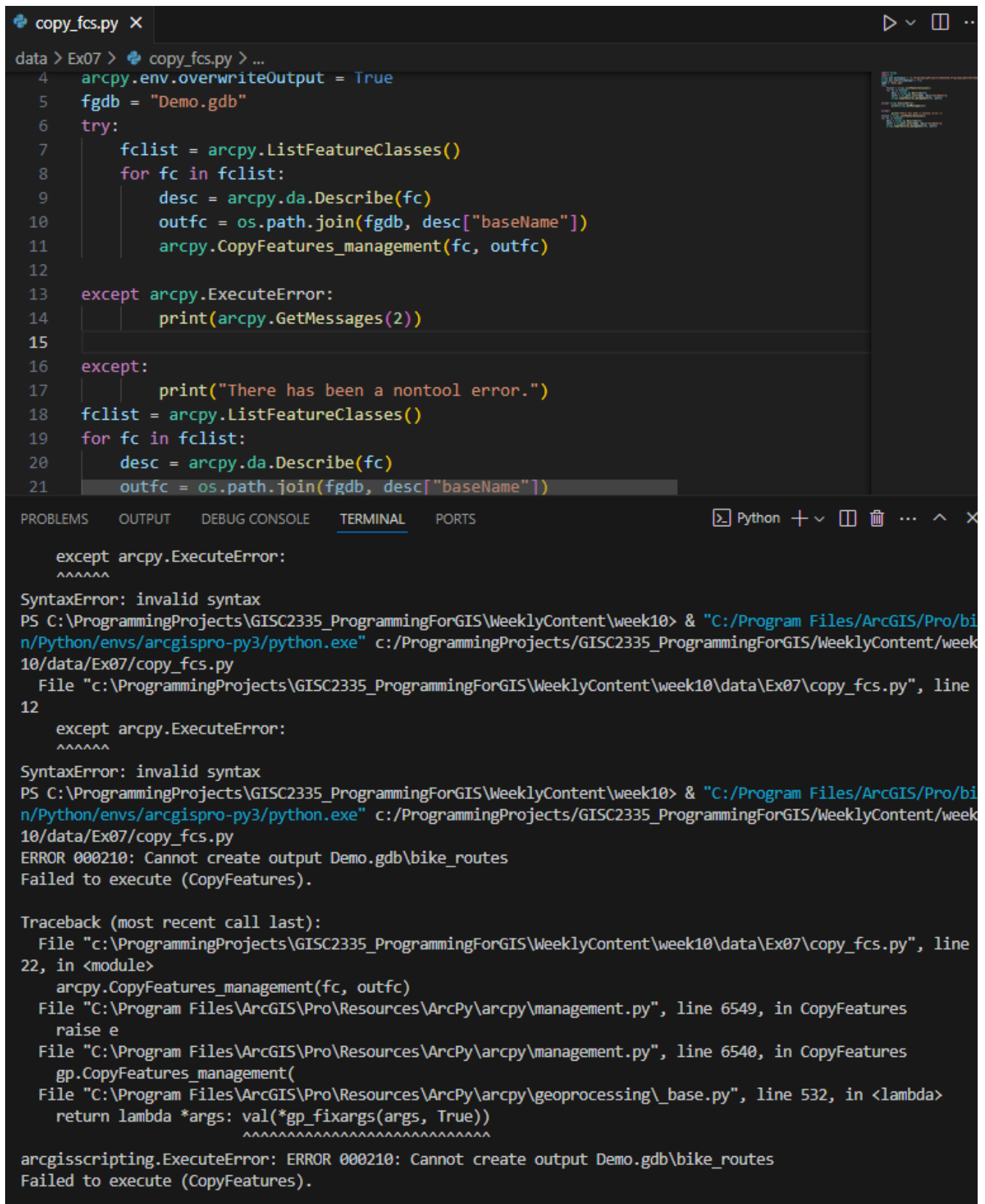
```
fc_list.py 1 x
data > Ex07 > fc_list.py > ...
1 import arcpy
2 arcpy.env.workspace = "C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07"
3 fclist = arcpy.ListFeatureClasses()
4 for fc in fclist:
5     desc = arcpy.da.Describe(fc)
6     print(f'{desc["baseName"]}: {des["shapeType"]}')
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\GIS2335_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\GIS2335_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\GIS2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\fc_list.py", line 4
    for fc in fcList
    ^
SyntaxError: expected ':'
PS C:\ProgrammingProjects\GIS2335_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\GIS2335_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\GIS2335_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\GIS2335_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\GIS2335_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\GIS2335_ProgrammingForGIS\WeeklyContent\week10>
```

The image shows a screenshot of a Python script editor and a terminal window. The script, named `copy_fcs.py`, is written in Python and uses the `arcpy` module. It attempts to list feature classes in a geodatabase, describe them, and copy them to a new location. The script has a `try` block for the main logic and an `except` block for `arcpy.ExecuteError`. The terminal window shows the command prompt running the script, followed by a `SyntaxError: invalid syntax` message pointing to line 12. The error message indicates that the `except` block is not properly closed. The terminal also shows the command prompt running the script again, followed by a `Traceback (most recent call last):` message showing the error in the `arcpy.CopyFeatures_management` function.

```
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 + v [] [] ... ^ 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/GISC2335_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/GISC2335_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