Crystal Hollis   1
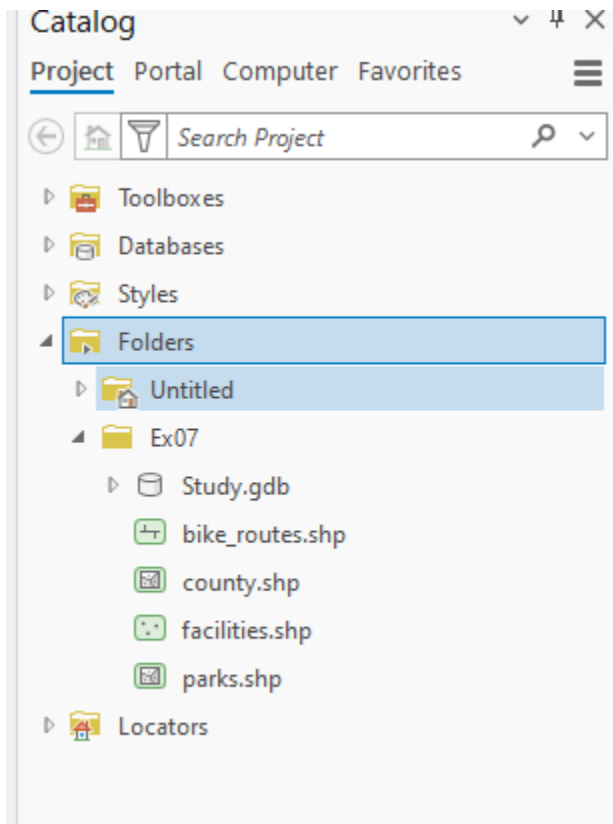GISC 2335 GIS Programming
4/18/2025

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
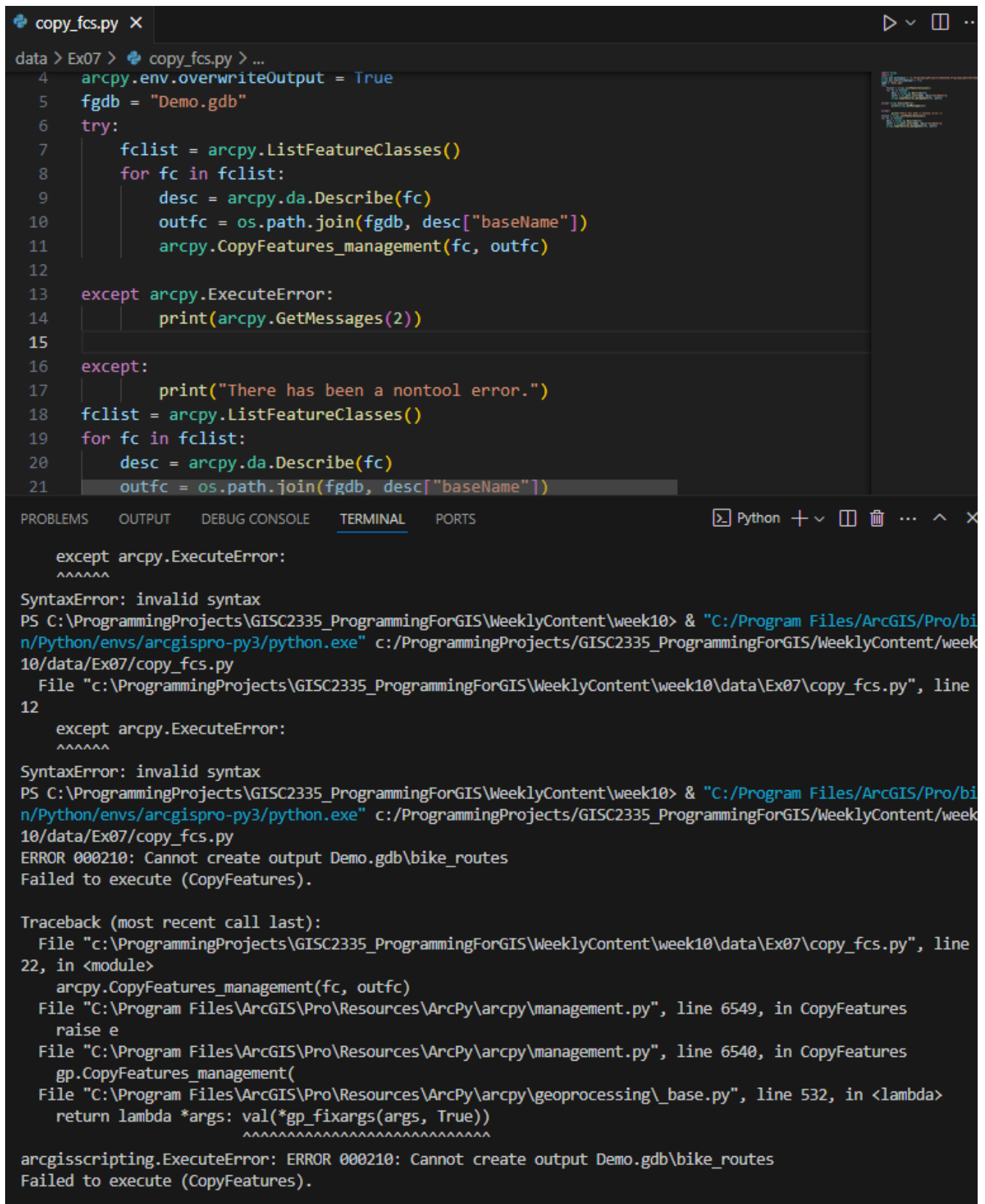
Examine syntax errors and exceptions

```python
import arcpy
arcpy.env.workspace = "C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07"
fclist = arcpy.ListFeatureClasses()
for fc in fclist:
    desc = arcpy.da.Describe(fc)
    print(f'{desc["baseName"]}: {des["shapeType"]}')
```

```
PROBLEMS 1   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS                                        Python + ∨ □ 🗑 ⋯ ∧ ×

PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bin/Python/envs/arcgispro-py3/pytho
.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/pytho
.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/pytho
.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>
```

```python
import arcpy
arcpy.env.workspace = "C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07"
fclist = arcpy.ListFeatureClasses()
for fc in fclist:
    desc = arcpy.da.Describe(fc)
    print(f'{desc["baseName"]}: {desc["shapeType"]}')
```

```
PROBLEMS    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> & "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

```python
copy_fcs.py ×

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\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bi
n/Python/envs/arcgispro-py3/python.exe" c:/ProgrammingProjects/GISC2335_ProgrammingForGIS/WeeklyContent/week
10/data/Ex07/copy_fcs.py
  File "c:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10\data\Ex07\copy_fcs.py", line
12
    except arcpy.ExecuteError:
    ^^^^^^
SyntaxError: invalid syntax
PS C:\ProgrammingProjects\GISC2335_ProgrammingForGIS\WeeklyContent\week10> & "C:/Program Files/ArcGIS/Pro/bi
n/Python/envs/arcgispro-py3/python.exe" c:/ProgrammingProjects/GISC2335_ProgrammingForGIS/WeeklyContent/week
10/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\GISC2335_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