Procedural programming

Functional programming

Object Oriented Programming

- ✓ **Video:** Introduction to Object Oriented Programming
  5 min
- ✓ **Reading:** OOP Principles
  20 min
- ✓ **Video:** Python classes and instances
  4 min
- ✓ **Reading:** Exercise: Define a Class
  30 min
- ✓ **Reading:** Define a Class - solution
  10 min
- ✓ **Practice Quiz:** Self-review: Define a Class
  4 questions
- ✓ **Video:** Instantiate a custom Object
  4 min
- ✓ **Reading:** Exercise: Instantiate a custom Object
  30 min
- ✓ **Reading:** Instantiate a custom Object - solution
  10 min
- ✓ **Practice Quiz:** Self-review: Instantiate a custom Object
  4 questions
- ✓ **Video:** Instance methods
  4 min
- ✓ **Video:** Parent classes vs. child classes
  6 min
- ✓ **Reading:** Inheritance and Multiple Inheritance
  30 min
- ✓ **Reading:** Exercise: Classes and object exploration
  30 min
- ✓ **Video:** Abstract classes and methods
  4 min
- ✓ **Practice Quiz:** Abstract classes and methods
  5 questions
- ✓ **Programming Assignment:** Abstract Classes and Methods
  3h
- ✓ **Video:** Method Resolution Order
  5 min
- ✓ **Reading:** Working with Methods: Examples
  20 min
- ✓ **Reading:** Exercise: Working with Methods
  30 min
- ✓ **Reading:** Working with Methods - solution
  10 min
- **Practice Quiz:** Self-review: Working with Methods
  6 questions
- **Video:** Module summary: Programming paradigms
  2 min
- **Quiz:** Module quiz: Programming Paradigms
  8 questions
- **Reading:** Additional resources
  5 min

Exercise: Working with Methods

1. Guess the output for the following block of code and try running the code once you have a solution in mind:

```
 1   class A:
 2       def b(self):
 3           return "Function inside A"
 4
 5   class B:
 6       pass
 7
 8   class C:
 9       def b(self):
10           return "Function inside C"
11
12   class D(B, C, A):
13       pass
14
15   class D(C):
16       pass
17
18   d = D()
19   print(d.b())
```

Run

Reset

```
Function inside C
```

2. Guess the output for the following block of code and try running the code once you have a solution in mind:

```
 1   class A:
 2       def c(self):
 3           return "Function inside A"
 4
 5   class B(A):
 6       def c(self):
 7           return "Function inside B"
 8
 9   class C(A,B):
10       pass
11
12   class D(C):
13       pass
14
15   d = D()
16   print(d.a)
```

Run

Reset

```
Error on line 9:
    class C(A,B):
TypeError: Cannot create a consistent method resolution
order (MRO) for bases A, B
```

3. Guess the output for the following block of code and try running the code once you have a solution in mind:

```
 1   class A:
 2       pass
 3
 4   class B(A):
 5       pass
 6
 7   class C(B):
 8       pass
 9
10
11   c = C()
12   print(c.a())
```

Run

Reset

```
Error on line 12:
    print(c.a())
AttributeError: 'C' object has no attribute 'a'
```

✓ **Completed**   **Go to next item**

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