Zelle 3e Chapter 11 Highlights 1 of 2

- Lists and dictionaries are data collections.
- Lists are mutable, ordered sequences.
- Dictionaries are mutable, unordered maps.
- List entries can be sorted and processed multiple times.
- list.sort() can be be configured with *key* and *reversed* keyword parameters.
- *key* keyword parameter takes either a function or a lambda expression.
- Passing functions is an example of *inversion of control*.
- Lamdas are anonymous functions.

lambda_example.py

UNREGISTERED

lambda_example.py

```
1
2  def main():
3      students = get_student_from_file()
4      students.sort(key=by_last_name_comma_first_name)
5      for student in students:
6          print(student)
7
8
9  def by_last_name_comma_first_name(student):
10     return student.last_name + ', ' + student.first_name
11
12 ...
13
14 ----------------------------------------------------------------
15
16 def main():
17     students = get_student_from_file()
18     students.sort(key=lambda student: student.last_name + ', ' + student.first_name)
19     for student in students:
20         print(student)
21
22 ...
```

Line 22, Column 4 Tab Size: 4 Python

Zelle 3e Chapter 11 Highlights 2 of 2

- Dictionary entries can be retrieved randomly.
- Lists and dictionaries can be accessed quickly.
- Both lists and dictionaries are memory-intensive.
- Specialized collections (see Python documentation):
  - deque – special list – a double-ended queue
  - defaultdict – special dictionary that supplies missing values
  - And more…