

Review, lectures 23-32

19 Nov 2008

CMPT14x

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Quiz08

- Contrast: **alias**, **shallow** copy, **deep** copy.
 - Draw or describe an **example** highlighting the differences
- What name does Python expect for the **initializer** (**constructor**) method in a user-defined **class**?
- Create a Python **dictionary** with three entries.
- Name at least three **methods** special to **dictionaries**.
- Write a Python code snippet that **throws** and **catches** an **exception**.

Lec23: File I/O

- Working with files: `open()`, `close()`
 - File handles / file objects
- Input: `read()`, `readline()`, `readlines()`
- Output: `write()`, `flush()`
- The file position pointer: `seek()`, `tell()`
- Standard I/O channels: `sys.stdin`, `stdout`, `stderr`
- Python standard `math` library

Lec24: Storage issues

- Number bases:
 - Binary
 - Hexadecimal (0xBEEF)
 - Octal (0115)
- Units of measure of **memory**:
 - Bits, nibbles, bytes, words, pages
- Units of measure for **hard disks**:
 - C/H/S geometry
- SI **units** vs binary units, KB vs. Kb, etc.

Lec25-27: Sets, Records, OO

- Set operators: union, intersection, diff, symdiff
 - Bitsets
- Records
- Object-oriented programming paradigm
- Objects, methods, attributes, classes, instances
 - Alias vs. shallow copy vs. deep copy
- Writing a class
 - Methods, `__init__()`, `self`
 - Overloading operators: `__add__()`, etc.

Lec28-29 (Py tut 8): Exceptions

- Exceptions:
 - Handling
 - Raising
 - `else`
 - `finally`
 - User-defined exceptions
 - Passing `auxiliary` data with an exception

Lec30: Dictionaries

- Dictionaries
 - Keys and values
 - Basic dictionary methods:
 - ◆ `.keys()`, `.values()`, `.items()`
 - Iterating through dictionaries
 - Other dictionary methods:
 - ◆ `len()`, `del`, `in`, `.get()`, `.copy()`
 - Application: hinting
 - ◆ Fibonacci example

Lec31: Namespaces and Scope

- Types of namespaces:
 - Default, global, local (may be nested)
- Scope and search order
- New names add to local scope
- Use of the “global” directive