Review, lectures 23-32

19 Nov 2008
CMPT14x
Dr. Sean Ho
Trinity Western University

TRINITY
WESTERN
UNIVERSITY

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

TRINITY
WESTERN
UNIVERSITY

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.

TRINITY
WESTERN
UNIVERSITY

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.

TRINITY
WESTERN
UNIVERSITY

Lec28-29 (Py tut 8): Exceptions

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

TRINITY
WESTERN
UNIVERSITY

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