Review / Quiz

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CMPT14x
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Stonybrook M2 environment

- The Stonybrook M2 software is installed on TWU lab PCs (Start->Programs->Computing)
- Stonybrook orientation:
  http://twu.seanho.com/05fall/cmpt14x/stonybrook/
- Start with an empty project file:
  http://twu.seanho.com/05fall/cmpt14x/stonybrook/M2Projec
- You can have multiple programs and libraries in one project; all modules in the same project can import from one another
- Create a new program module in this project:
  - File->New Module: Program module type

Quiz05 (10 mins, 20 pts)

- In C, why should you always allocate strings (arrays of char) to be at least one char longer than the longest string you'll need to store?
  - What could happen if you don't?
- Convert 1100 1011 from binary to both hexadecimal and octal, in Python form.
- Express 2Mb/sec in bytes/sec (binary units, not SI)
    - (you may express your answer in powers of 2)
- Write a Python function that returns a random integer between -100 and 100, inclusive.

Quiz05: answers #1-2

- In C, why should you always allocate strings (arrays of char) to be at least one char longer than the longest string you'll need to store?
  - Need to store null character to terminate string
  - If don't, won't know when to stop when reading string; may overwrite other memory when writing
- Convert 1100 1011 from binary to both hexadecimal and octal, in Python form.
  - hex: 0xCB
  - oct: 0313

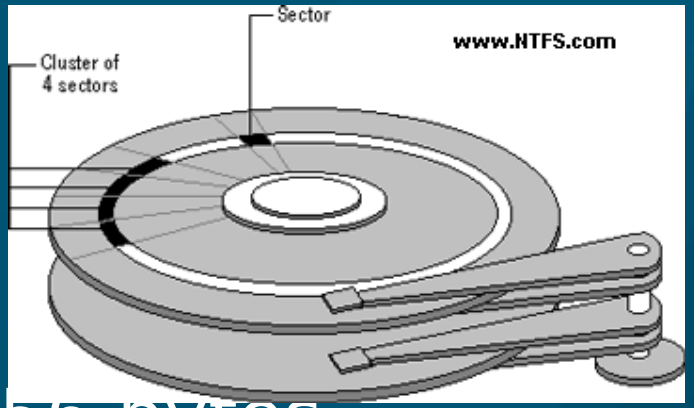
Quiz05: answers #3-4

- Express 2Mb/sec in bytes/sec (binary units, not SI)
  - 2^{18} bytes/sec
- Write a Python function that returns a random integer between -100 and 100, inclusive.
    - def randint():

      from random import random

      return 200*int(random.random()) - 100

Storage



- A page of memory is generally 256 bytes
- A sector is a unit of disk storage, also commonly 256 bytes (but sometimes 512 bytes)
- A block of disk storage is usually 512 bytes
- Hard disks are made up of platters, accessed by magnetic heads on movable arms
- The platters have concentric tracks that (across all heads) make up cylinders
- Hard drive geometry is often expressed in C/H/S: # cylinders / # heads / # sectors per track