CMPT 140, 141, 143, 145: Introduction to Programming

7 Sep 2006
CMPT14x
Dr. Sean Ho
Trinity Western University

- *Please sit in left half of room*
- *Pick up syllabus*

TRINITY WESTERN UNIVERSITY

http://cmpt14x.seanho.com/

Outline for today

- Course information
  - Course website
  - Syllabus
  - Schedule
- Programming as problem-solving
  - Tools, toolsmiths, toolboxes
  - Top-down vs. bottom-up design
  - Example: woodcutting
- Demo of our Python programming environment

About CMPT 140, 141, 143, 145

- Everyone meets MWF 14:35-15:50
  - 140,145: also meet R 13:10-14:00
- 141,143 run the whole semester
  - 140 runs the first six weeks only (to 26Oct)
  - 145 runs the last six weeks (but see assignments)
- Credit hours: 140=3, 141=4, 143=2, 145=2
- The usual sequence for most students is 140+145 (total of 5 credits), unless you're not planning to go further.

Course website

- http://cmpt14x.seanho.com/
- Also linked from eCourses

- Note exam chs1-7 on W-Th 25-26Oct:
  - All attend (even those who don't regularly attend Th section)
  - This serves as the final for CMPT140, midterm for 141/143

Lab sections

- Three 4hr sections: MTW 6-10pm (sign up)
- At the main computing lab in Neufeld9
- Turn in your labs to your TA during your lab section
- Feel free to work in the lab at any open time
  - You have priority over other students when you're doing CMPT classwork
- Non-14x lab assistants are not prepped to answer your 14x questions
  - But they can handle printing problems, etc.

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The Art of the Toolsmith

- Computers and software are tools; Computing scientists are toolsmiths
- The success of the tool is evaluated by the user, not by the toolmaker!

```
+   threadfn = create->threadfn;
+   data = create->data;
+
+   /* Block and flush all signals (in case we're not from keventd). */
+   sigfillset(&blocked);
+   sigprocmask(SIG_BLOCK, &blocked, NULL);
+   flush_signals(current);
+
+   /* By default we can run anywhere, unlike keventd. */
+   set_cpus_allowed(current, mask);
+
+   /* OK, tell user we're spawned, wait for stop or wakeup */
+   __set_current_state(TASK_INTERRUPTIBLE);
+   complete(&create->started);
+   schedule();
+
+   if (!kthread_should_stop())
+       ret = threadfn(data);
+
+   /* It might have exited on its own, w/o kthread_stop.  Check. */
+   if (kthread_should_stop()) {
+       kthread_stop_info.err = ret;
+       complete(&kthread_stop_info.done);
+   }
+   return 0;
```

$\neq$

"the code is so beautiful!"

"does it do the job?"

TODO items

- Make sure you're registered for the right course:
  140+145, or 141, or 143
- Familiarize yourself with the course website:
  cmpt14x.seanho.com
- Do the Python/IDLE intro by the end of your first lab section next week
- Read ch1 of the M2 text
- Quiz ch1 next Mon at start of class