CSCI 265 Wrap-up: 2021

- Hopefully the course has raised your awareness of different aspects of software engineering
- The task automation possibilities provided by scripting
- The types of tools available for support and ways to make use of them: version control tools, debuggers, profilers, automated build tools
- The facilities languages provide through libraries
- Considerations in software design
- Considerations in project management: SDLCs, code inspections, standards, deployment
- The role of software testing in projects

Key topics list

Covered a pretty wide range of topics this term:

- Version control and git
- Basic fluency in linux
- Scripting and bash
- SDLCs (spiral, waterfall, agile)
- Requirements and specifications
- Design concepts (decomposition, coupling, cohesion)
- Compilation and makefiles
- Code reuse, libraries, templates, STL
- Bug reporting and tracking
- Time estimates and tracking
- Code standards
- Debuggers and gdb/valgrind
- Profilers and gprof/valgrind
- localization, internationalization, unicode
- interfaces and gtk/zenity

- code inspections
- service oriented architectures
- design patterns
- product deployment
- product maintenance
- software testing
  - test planning, documentation
  - test automation
  - unit testing, stubs/drivers
  - "big V" test development timeline
  - test cases/development

The final exam

- 2022 run as a take-home exam

- open book, open notes, tool use permitted (make, git, gdb, etc) but it must be (of course!) a *strictly individual effort*

- to be posted 5pm Dec 13th, submission due by 5pm Dec 14th

- made available through VIULearn and through git

  - VIULearn version takes form of quiz you can return to multiple times over the 24 hour period

  - git version distributed by our usual lab process, repo name is FinalExam, will contain a pdf with the exam questions, answers can be submitted in repo as .txt or .pdf file (don't forget your git add/commit/push!)

Exam questions/topics

- questions can be based on lecture material, practice exercises, past quizzes, labs, and course project

- questions will be a mix of applied and theoretical

- 9 equally weighted questions, meant to take roughly three hours to complete in all

- crucial that you read the questions carefully, answer the question asked, and explain/justify your answers

    – remember: the goal is to convince the instructor that you genuinely understand the relevant choices/options and the implications of the way you've chosen to apply them

Prepping for the exam

- past exam questions should be representative, though for a take-home exam questions will tend to ask you to apply knowledge in the context of a very specific scenario

- past exams are available here

  http://csci.viu.ca/~wesselsd/courses/csci265/exams.html

- hopefully your project implementation and design is still fresh in your mind, there *will* be questions about it

- I'll have office hours on Zoom Monday 1-3pm, otherwise contact by email or on discord

  – unfortunately may be afk 2:30-4 Tuesday afternoon