Continuing Education CE95929
Programming in C

Welcome to the University of Waterloo Continuing Education course CE95929 — Programming in C.

Structure

The course is one night per week for five weeks. Each class is three hours, and will consist primarily of classroom lectures and demonstrations. Computing lab time will be provided each evening to let you "try out" lecture material and experiment with a C development system.

Instructor information

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Please feel free to contact me if you have questions about the course material or suggestions about topics of interest. Please leave a voice-mail message if I do not answer your call. For those who have access to Internet electronic mail, e-mail is often a more reliable way to contact me.

Week-by-week Curriculum

The curriculum outlined here is tentative and may not be followed exactly:

Week 1:

- Introduction. Course outline, lab procedures. History and development of C.
- A first program. Program structure, variables, comments, loops, expressions. Simple output.
- Arithmetic operators. Integers-equivalent types. Constants. Integer operators. Priority. Conversion.

Week 2:

- Strings. Storage representation. String constants, operations.
- Input and output. Printf, scanf. Textfiles.

Week 3:

- Control structures. If, switch, if-elseif, while, do-while, for, break, continue.
- Program structures. Functions, "main". Parameters. Return, return-values. Modularization and scope.
- Arrays. Storage representation. Subscripting. Multiple dimensions. Initialization.

Week 4:

- Pointers, strings and characters.
- Enumerated, structure and union types. User-defined types.
- Dynamic variables and memory. Standard library features. Use with pointers.

Week 5:

- Design example. "Stepwise refinement".
- Summary. What's next.
- Course evaluation.

Document reference: Curriculum for Programming in C
Filename: C:\Users\owner\Documents\teaching\CONT-ED\archive\c\ce95929\HANDOUT1.DOC
Revised: 1995-11-20 16:29