

Outline for April 2, 2025

Reading: zyBooks text §1, 2.20; Handouts 3, 4

Due: Homework #1, due April 14, 2024

1. Basic types
 - (a) **int**, **long** vs. **short**, **unsigned** vs. **signed**
 - (b) **char**, treated like an **int** that holds 1 character
 - (c) **float**, **double**
 - (d) Type casting
 2. Basic operators
 - (a) arithmetic: **+**, **-**, *****, **/**, **%**
 - (b) **%** defined so that $n \% p = r$ implies $n = ap + r$ for some a
 - (c) $5 \% -2$ can be 1 ($5 = (-2) \times (-2) + 1$) or -1 ($5 = (-3) \times (-2) + (-1)$)
 3. Associativity of operations
 - (a) Difference between associativity of operations and order of evaluation
 4. A more sophisticated Fahrenheit to Celsius temperature converter [*fahr2.c*]
 - (a) `#include <stdio.h>`
 - (b) Macros
 - (c) `float`
 - (d) `for` loop
 5. Debugging: find the error! [*fahr2-buggy.c*]
 6. True and false in C
 7. Relations and conditionals [*log.c*]
 - (a) **<**, **<=**, **>**, **>=**, **==**, **!=**
 - (b) **&&**, **||**, **!**
 8. Conditional statements
 - (a) `if` [*if.c*]
 - (b) `if ...else`
 - (c) Nested `ifs` [*nestedif.c*]
 - (d) The right way to do this [*nestedif2.c*]
 - (e) `switch` [*switch.c*]
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Papers

3. Compiling and Executing Your Program, *compiling.pdf*
4. Writing a Program, *writingprogram.pdf*