



COMP1511

Tutorial 2

arithmetic | flowcharts | if/else



What C operators have we seen so far?

Arithmetic: + - * / %

Logic: && || !

Comparison: < > <= >= != ==



C Data Types

int: Stores the value of an integer

double : Stores the value of some fractional/decimal number

char: Stores an integer from 0 - 127, mostly used to represent ascii characters



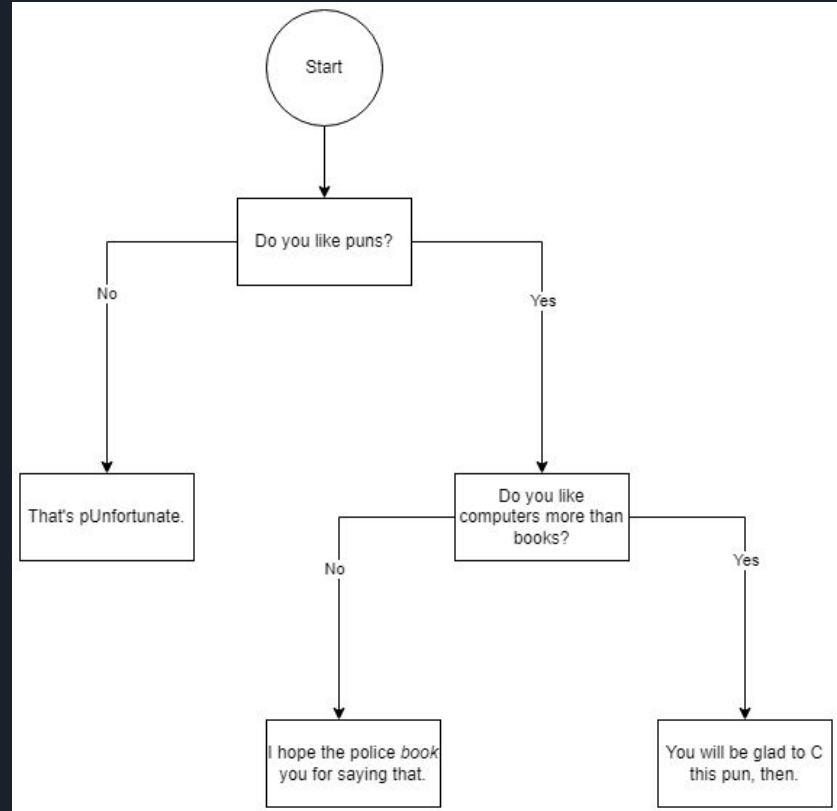
C Arithmetic quirks

What are the values of:

- A. $(7 / 2)$
- B. $(3.0 / 2) + 1$
- C. $(3 / 2) + 1.0$
- D. $'a' + 5$
- E. $'F' - 'A' + 'a'$

Leap years and flowcharts

- Years divisible by 4 are **leap years**
- Except if they're also divisible by 100 they're **common years**
- Except if they're also divisible by 400 they're **leap years**





Programming Exercise

Scan in 2 integers **a** and **b**

If the **a** is less than the **b**, print an error (using procedure)

If the **b** is 0, print an error

If **a** is larger than **b**, print the value of **a** divided by **b** (as an integer and as a double)



Pseudocode example

```
// C style pseudocode example.  
// Prints out "Hurrah!" if the entered number is 5  
  
int n = 0  
print "Enter a number"  
scan a number into n  
if n == 5 {  
    print "Hurrah!"  
}
```

Programming Demo

Code will be uploaded to: github.com/patchambers/23t1-comp1511