Tute 2

COMP1511 22T3

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content

- operators
- types
- planning your code

operators

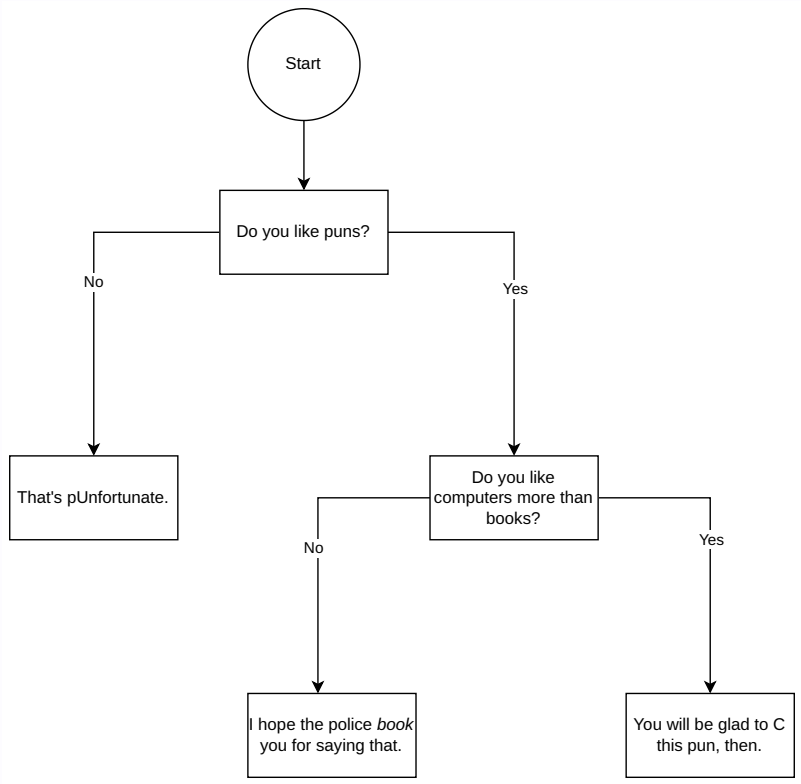
In groups: think of all the operators you've seen in C so far

Type of Operator	Operators
Arithmetic	`+` `-` `*` `/` `%`
Logic	`&&` `||` `!`
Comparison	`<` `>` `<=` `>=` `!=` `==`
Assignment	`=`

also bitwise, increment/decrement, shortcut assignment operators but not necessary for 1511

flow charts

we don't directly assess you on these, but very useful



leap year flow chart

- Years divisible by 4 are leap years. (e.g. 1904 was a leap year)
- Except, years divisible by 100 are not leap years. (e.g 1900 was NOT a leap year)
- Except, years divisible by 400 are always leap years. (e.g. 2000 was a leap year)

types

what have we seen so far?

how would you scan a value into these types with scanf?

Type	format specifier
`int`	`%d`
`char`	`%c`
`double`	`%lf`
`void`	N/A

expressions

"math / conventional" result (if it makes sense)?
result in C and what type does it have?

- `(7/2)`
- `(3.0 / 2) + 1`
- `'a' + 5`
- `'F' - 'A' + 'a'`

Expression	Math	C	C type
`(7/2)`	3.5	3	integer
`(3.0 / 2) + 1`	2.5	2.5	double
`'a' + 5`	?	'f'	char
`'F' - 'A' + 'a'`	?	'f'	char

programming

- Scans in two integers (`a` and `b`).
- If the first integer is less than the second, prints out a short error message using a procedure.
- If the second integer is 0, prints out a short error message.
- If the first integer is larger than the second, prints `a / b` and `(a * 1.0) / (b * 1.0)` .