picture I took recently

COMP1511 Week 2!

M13B: 1pm – 4pm || M18A: 6pm – 9pm

Tutors: William (me!) + Vivian || Eli

Tutorial Agenda:

Part 1

What are the three data types we've learnt?

? ? ?

Part 2

Part 3

In groups, note the operators you remember in each category

Arithmetic Operators (basic math) | Logical Operators (conditionals) | Comparison Operators (more conditionals)

Part 4

Let's practice some calculations

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

Part 5

Let's break down this flowchart into pseudocode

Part 6

What are the three data types we've learnt?

?

?

?

What are the three data types we've learnt?

?	?	?
Examples:	1,2,3,4,5	1,2,3,4,5, 6,7,8,9,10	'a', 'b', 'c'

What are the three data types we've learnt?

	int	double	char
Examples:	1,2,3,4,5	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0	'a', 'b', 'c'
Variables:	int age;	double distance;	char grade;

Let’s code it!

In groups, note the operators you remember in each category

Arithmetic Operators
(basic math)

Logical Operators
(conditionals)

Comparison Operators
(more conditionals)

Did you get them all?

Arithmetic Operators
(basic math)

\+ -

* %

/

Logical Operators
(conditionals)

&&

||

!

Comparison Operators
(more conditionals)

< >

<= >=

!= ==

Oh, and what's the difference between these two?

/ vs. %

Let’s practice some calculations

```
7 / 2
```
= ?

```
(3.0 / 2) + 1
```
= ?

```
‘a’ + 5
```
= ?

```
‘F’ – ‘A’ + ‘a’
```
= ?

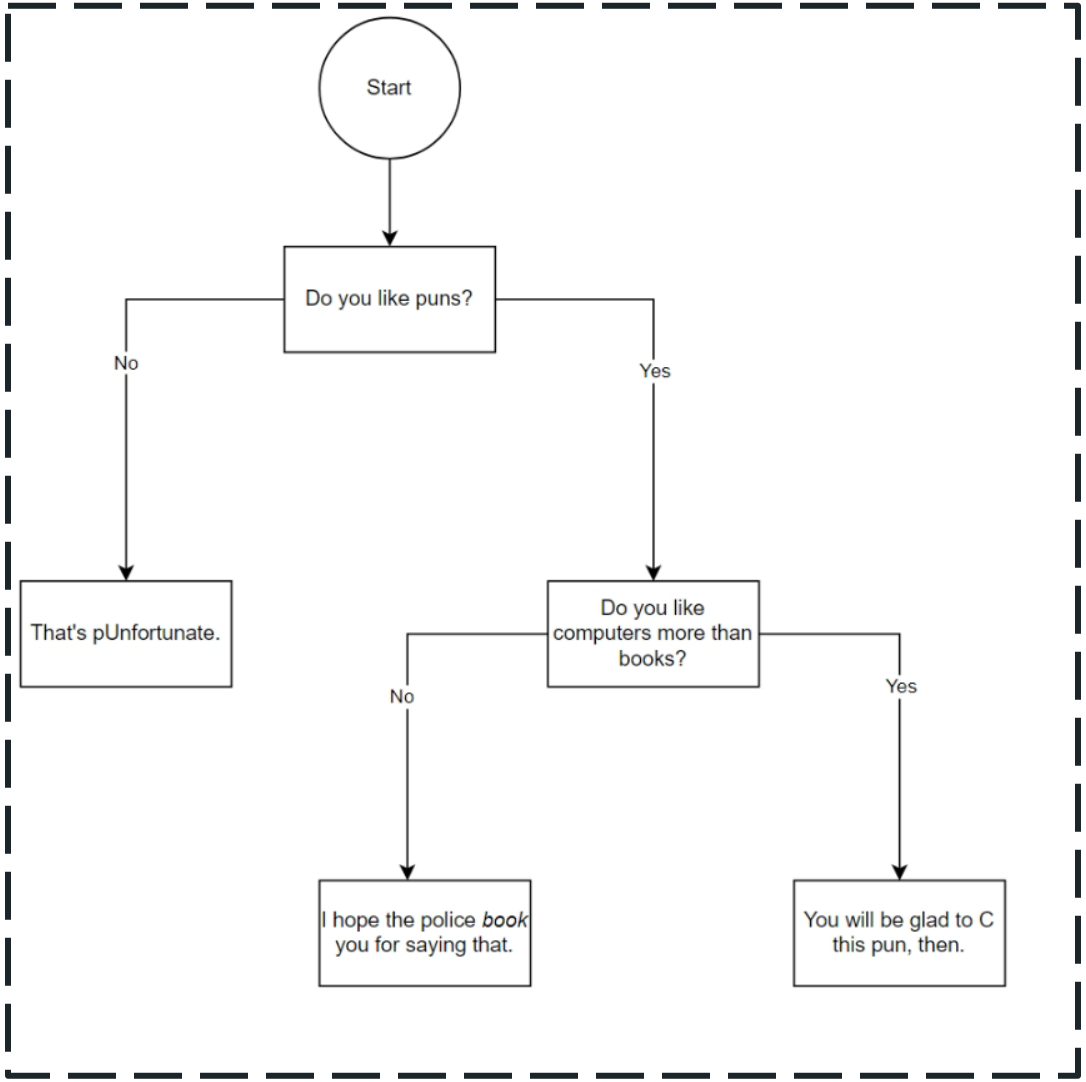
Try it yourself in C!

`7 / 2`	=	3
`(3.0 / 2) + 1`	=	2.5
`‘a’ + 5`	=	‘f’ or 102
`‘F’ – ‘A’ + ‘a’`	=	‘f’ or 102

Just to be clear...

`int`	+	`int`	=	`int`
`char`	+	`int`	=	`int/ char`

Let’s break down this flowchart into pseudocode



Let’s do the opposite and without pseudocode

https://app.diagrams.net/

Let's try making a flowchart for determining leap years…

Rules of leap years:

1. Years divisible by 4 are leap years (e.g. 1904)
2. Except, years divisible by 100 are **NOT** leap years (e.g. 1900)
3. Except, years divisible by 400 are **ALWAYS** leap years (e.g. 2000)

...this is how I would do it.