



Change direction Change the world

Computer science is everywhere

Everything is influenced or transformed by Computer Science ... this poster was drawn in *Lineform*, an award-winning program, written by one of our own students.

Interesting and exciting careers

The demand for qualified computing professionals has *doubled* but the number of graduates has *fallen by a third*.

Computing Science

Saturday Science & Engineering events

March 2010

Who we are?



Ben Daubney



Dan Craggs



Parisa Eslambolchilar



Richard Byrne



Richard Snow

What is Computing Science?

- Computing Science is **not** a science.
- Its significance has **little** to do with computers.

Hmm, so what is Computing Science then?

- Computation provides a framework for dealing precisely with notions of "how to" where mathematics provides a framework for dealing precisely with notions of "what is"

Example

- How do you add two numbers together?

$$3 + 2 = 5 \text{ 😊}$$

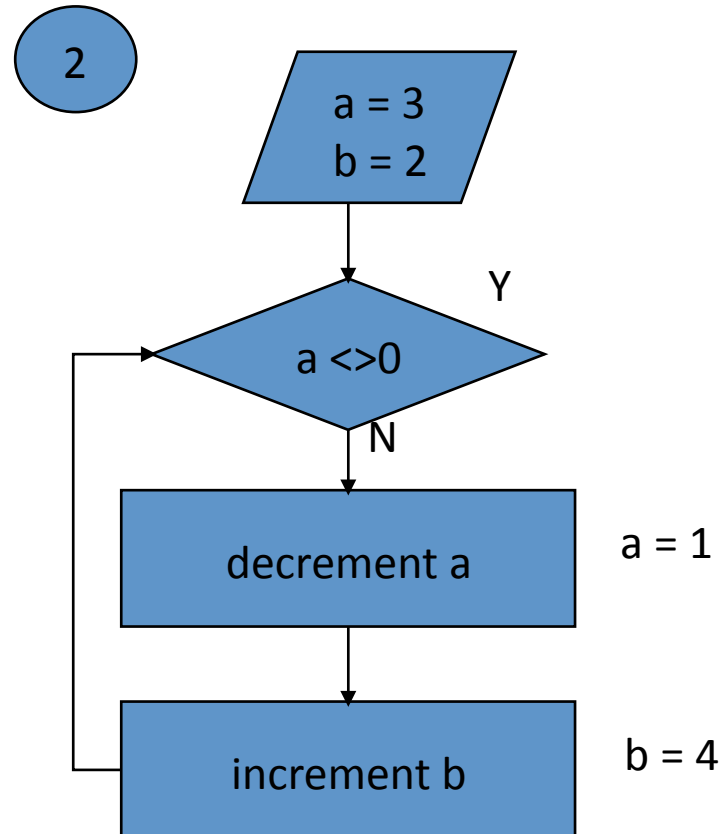
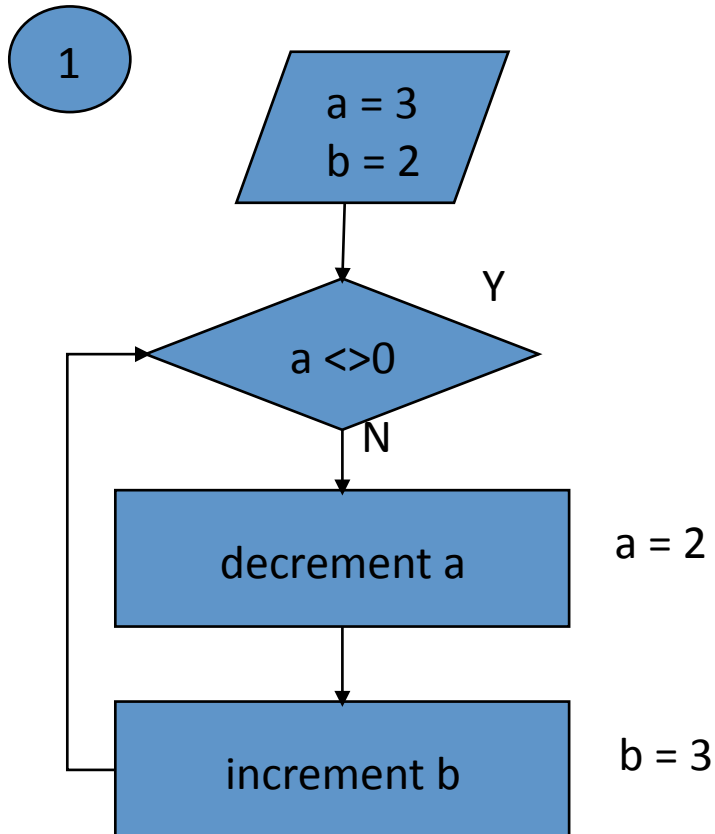
$$3 \text{ 🍏} + 2 \text{ 🍏} = 5 \text{ 🍏}$$

How do you tell a computer to add two numbers?

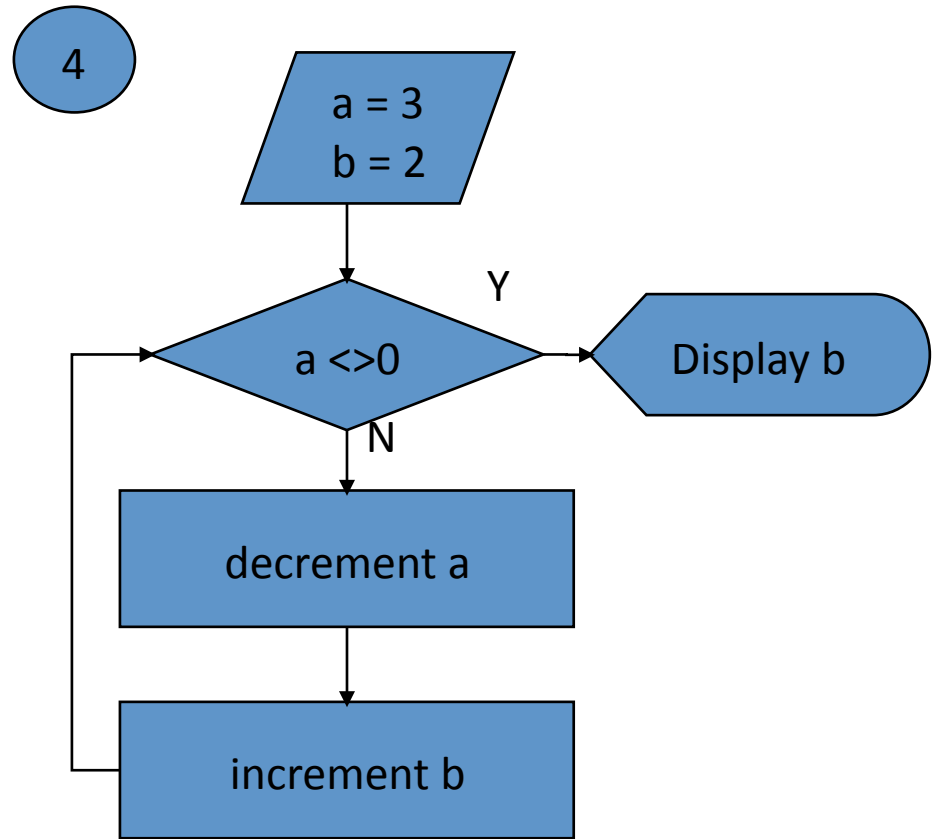
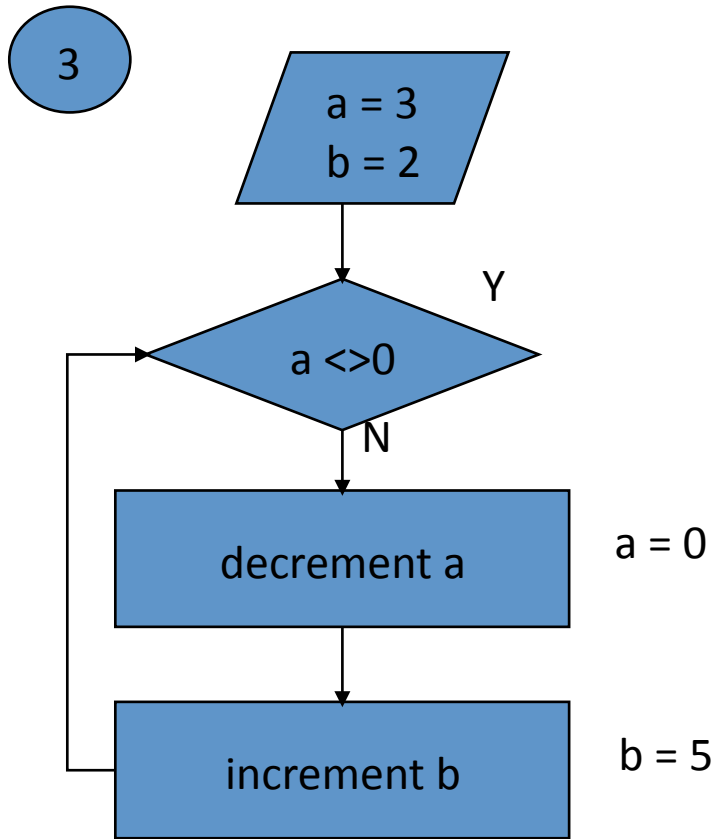
- Computers have no clue how to add two numbers. You have to tell them. In another word you have to teach them.

3+2 = ?

- Computers can only increment or decrement a number!



$$3 + 2 = ?$$



So...

- Computing Science is telling the computer (machine) how to do something. For this:
- Identify the problem
- Decompose the problem into small parts
- Work on small parts and complete the solution for the problem

There are other problems ☹️



... computing scientists are ready
to tackle problems 😊



Today...

- Dan/Richard S--- > How we navigate ...
- Ben --- > Challenges in Visualisation
- Break
- Richard B --- > How we walk
- Dan/Richard S--- > Talk about projectors
- Dan/Richard S--- > How Robots walk
- Finish!