

## Assessments

Midterm - 27 Sep (12-2pm)

Final - 25 Nov (5-7pm)

PE 1 - 2 Oct (9am-12pm)

PE 2 - 6 Nov (9am-12pm)

## What is a program?

Sequence of step-by-step instructions to process data and perform certain tasks.

Machine Code - Instructions sent from memory to the CPU  
Represented by a sequence of 0s and 1s

Assembly language - Uses mnemonic to represent instructions in a more human-readable way

Higher-level language - Allows programmer to express an operation closer to their intention.

Compiler - "Compiles" / Converts a high-level language to machine code

Computational problems:

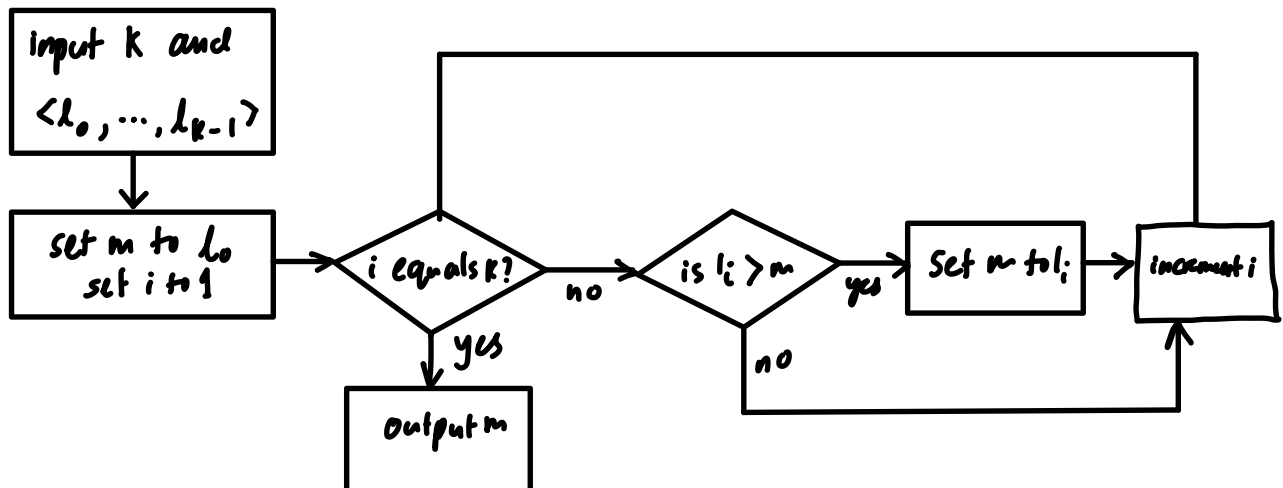
- Problems that can be solved step-by-step by the computer
- They must have well-defined inputs, outputs, constraints and conditions that need to be satisfied.

## Types of problems

- decision problem (y/n)
- search problem
- counting problem (# of solutions)
- optimization problem (best possible solution)

Algorithm - Set of steps a computer can take to solve a problem

## Flowchart representation of an algorithm



## Homework

- Post-lecture diagnostic quiz (due on Wednesday)
- Problem set 1.1 to 1.3 (due on Week 3)
- Read the policies
- Setup accounts