

Intro

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CPSC 212 Data Structures & Alg. Analysis in C++

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<http://andrewd.ces.clemson.edu/courses/cpsc212/fall09>

↳ has syllabus

schedule (tentative; ever changing)

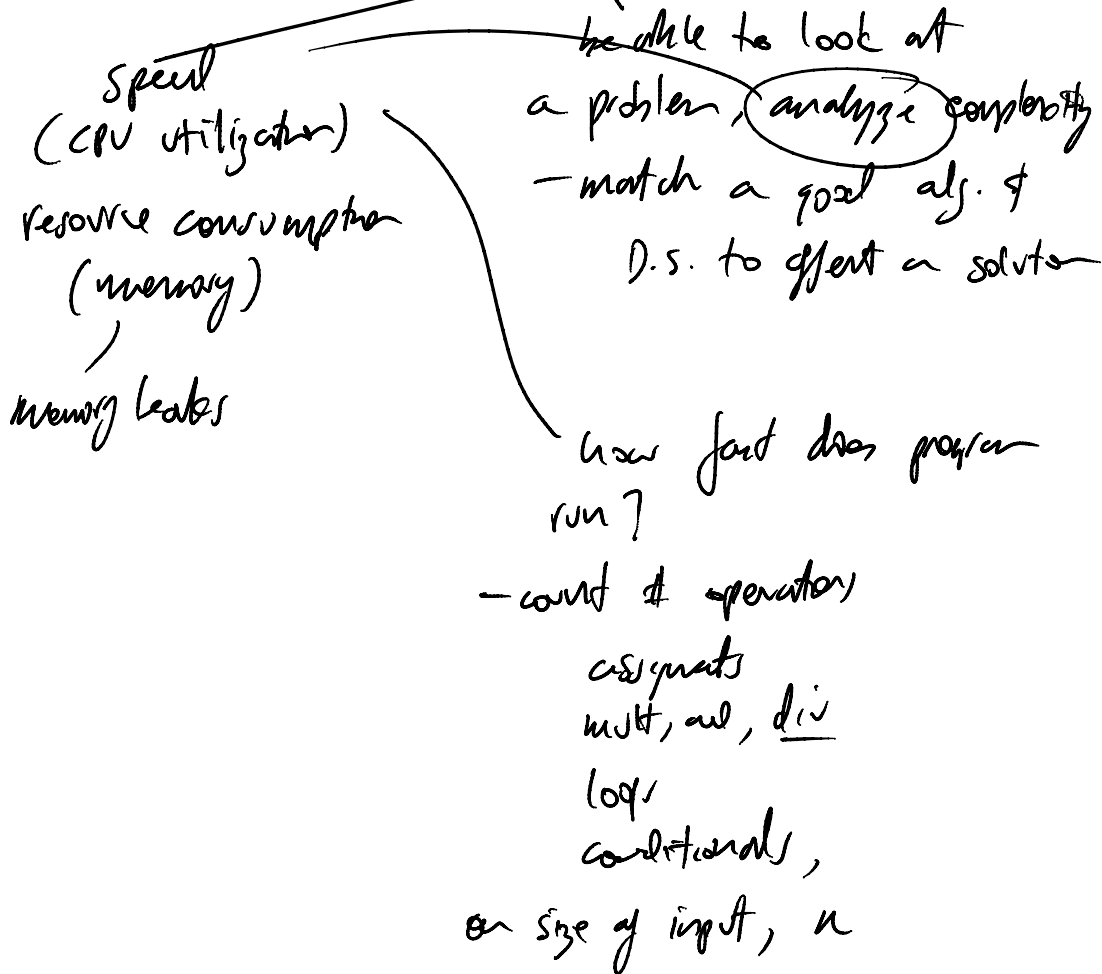
assignments (will have)

↳ THESE WILL CHANGE

(they're 10 yrs old, under constr.)

- Goal: to write efficient programs (Program Design)

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process data quickly



- typical example: sorting

- e.g., given n items,

$x_i = \{ a, c, d, f, g \}$, $n = 5$

to print this list,

```
for (i=0; i < n; i++)
```

```
  cout << x[i];
```

} 5 operators
O(n)

- Besides this analysis, implement in C++

what is this `cout << x[i]`

standard out (stdout) ?

kind of function
operator of the ostream object

`cout << x[i]`

≡

`cout.ostream << (x[i])`

overloading an operator

the `[]` is an operator too

- one of our first tasks:

build C++ objects to hold lists

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C++ "array" class

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data:

a list of numbers

operator:

member functions

arrays
(dynamically allocated)

linked lists

- We need: C++ object syntax: (Chp. 1.4.1, 1.5)

for now (ignore vectors, trigonometry)

then dive into Chap. 3