

CSE 230

Programming Languages

Goal: Obviously No Deficiencies

Readable



Tony Hoare
Turing Award Lecture 1980

*“There are two ways of constructing software.
One way is to make it so simple,
that there are obviously no deficiencies,
The other way is to make it so complicated
that there are no obvious deficiencies.”*

Goal: Obviously No Deficiencies

Reusable

Goal: Obviously No Deficiencies

Modifiable

Goal: Obviously No Deficiencies

Predictable

Goal: Obviously No Deficiencies

Checkable

Goal: Obviously No Deficiencies

Yes, but how?

Goal: Obviously No Deficiencies

Functional Programming(?)

Functional Programming ?

No Assignment.

No Mutation.

No Loops.

So, Who Uses FP ?

PL Researchers.

Functional Programming ?

Readable

Reusable

Modifiable

Predictable

Checkable

Parallelizable

So, Who Uses FP ?

Google

MapReduce

So, Who Uses FP ?



Microsoft[®]

F#

So, Who Uses FP ?

facebook

Erlang

So, Who Uses FP ?



twitter

Scala

So, Who Uses FP ?

Wall Street

...

CSE 230 : Grading

[10%] Class Participation

[60%] Pair Assignments

[30%] Take-home Final

So, Who Uses FP ?

CSE 230

CSE 230 : Outline

Readable }
Reusable } **1. FP & Abstraction**

Modifiable }
Predictable } **2. Types & Analysis**
Checkable }

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