

<http://www.di.unipi.it/~marcod>

TUE 4-6 pm B

WED 9-11 am B

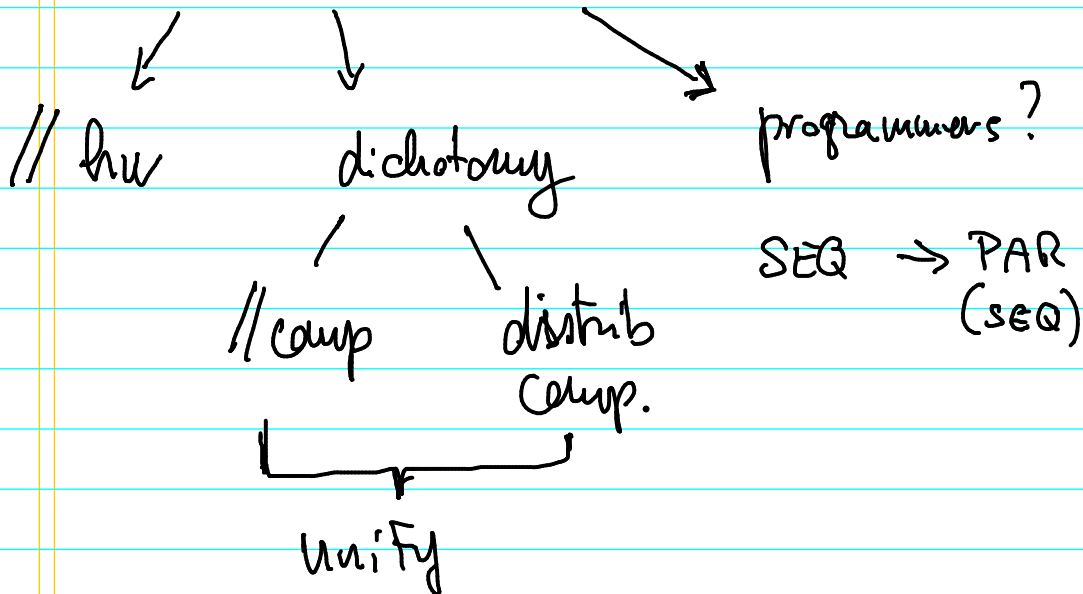
THU 11-B C

Question time WED 3-6 pm

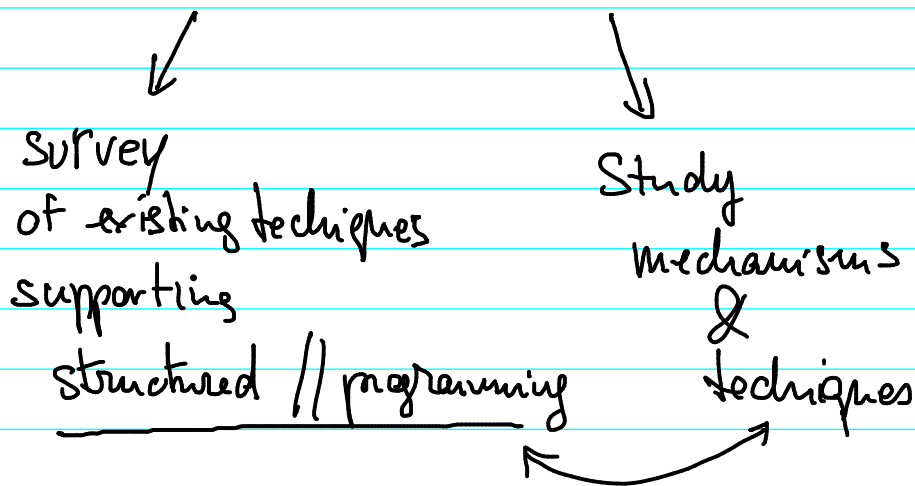
→ marcod@di.unipi.it

→ 050 2212742

# Motivation



## MAIN Aim of COURSE



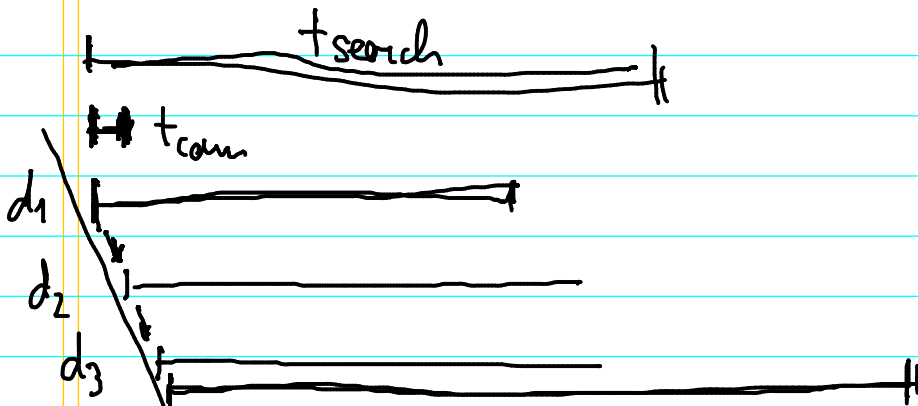
⇒ methodology

- Structured programming models
- unstructured models
- Support mechanisms & technology
  - ↳ wireless networks
  - ↳ P2P techniques
- Overview of environments of 2009-2010

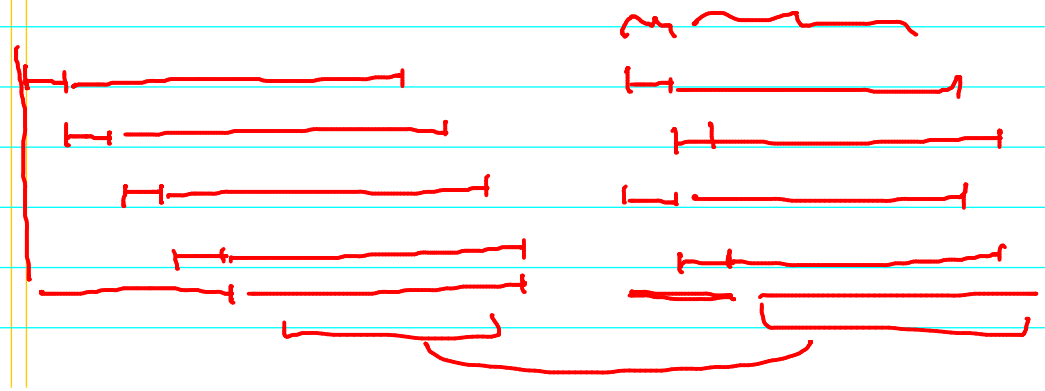
# METHODOLOGY

DESIGN

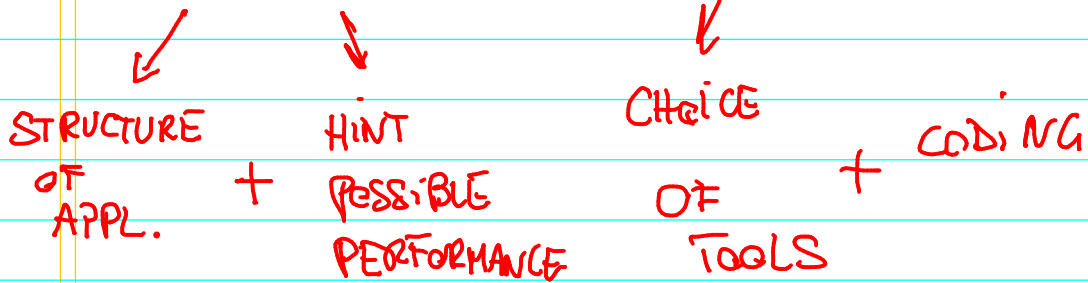
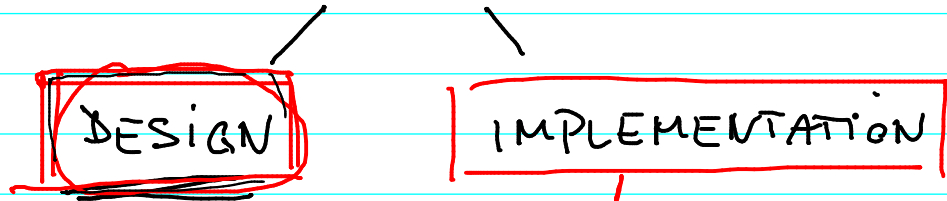
IMPLEMENTATION



$O(m)$  - small constant +  $O(1)$  - large constant  
 $\downarrow$   
 $O(\log m)$

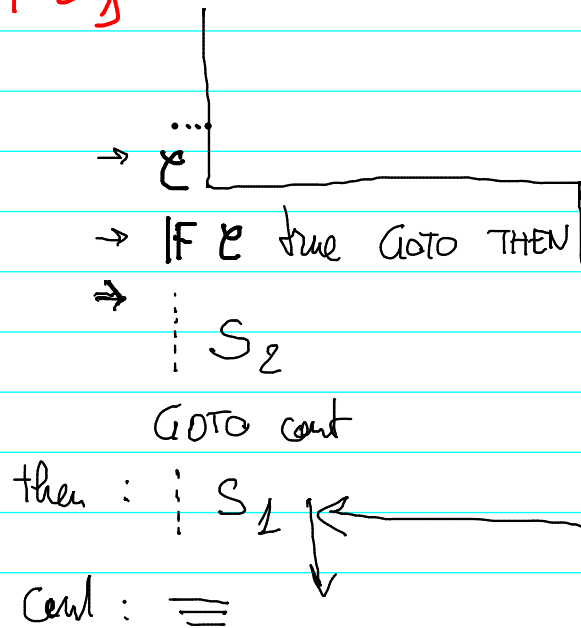


# METHODOLOGY



if (e) then {S<sub>1</sub>}  
else {S<sub>2</sub>}

→ ASM



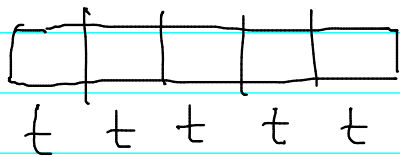
GOOGLE "invented" map reduce

Bird Meertens ← homomorphism

map  $(\alpha f): \langle x_1 \dots x_n \rangle = \langle f(x_1), \dots, f(x_n) \rangle$

reduce  $(\bigvee \oplus): \langle x_1 \dots x_n \rangle = x_1 \oplus x_2 \oplus \dots \oplus x_n$

$(\bigvee \text{id}) \cdot (\alpha \text{ search})$  } per  
 $t_1$   $t_d$



for (V items)  
search (item) } seq

search  
↳

# item · t