

# Implementazione di pattern (template)

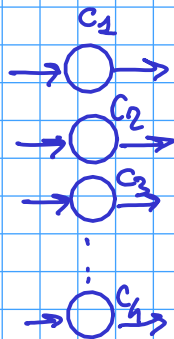
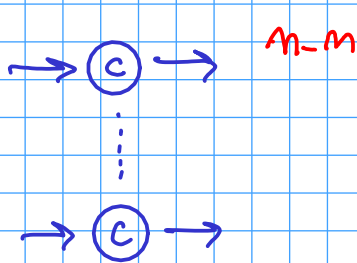
design pattern

template

Mechanismi

calcolo  
coordinamento  
wrapping

Calcolo 1-1

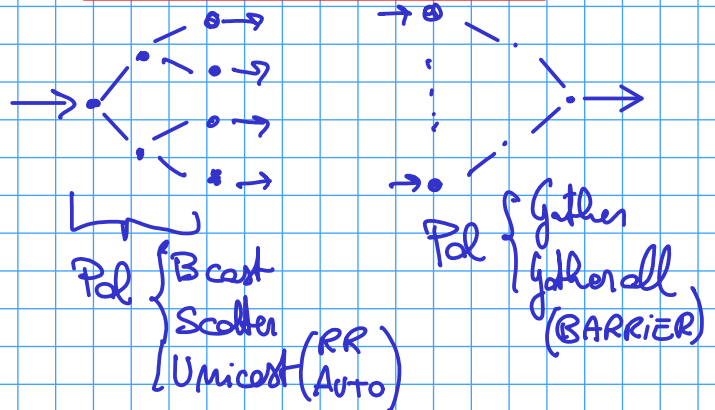


COORDINAMENTO

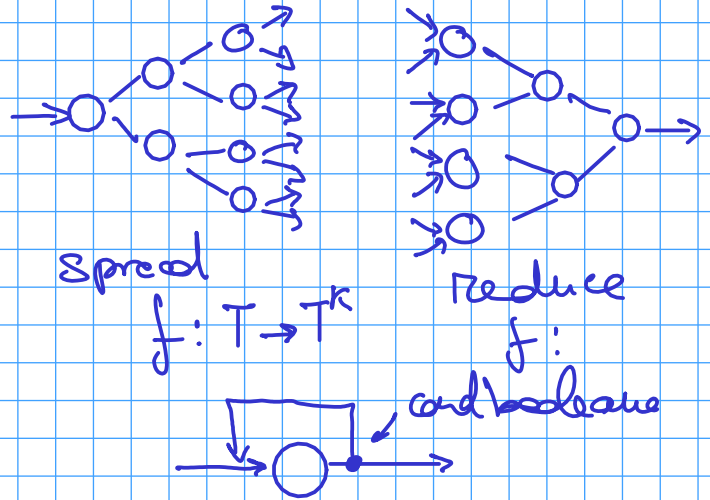
1-1

M-1

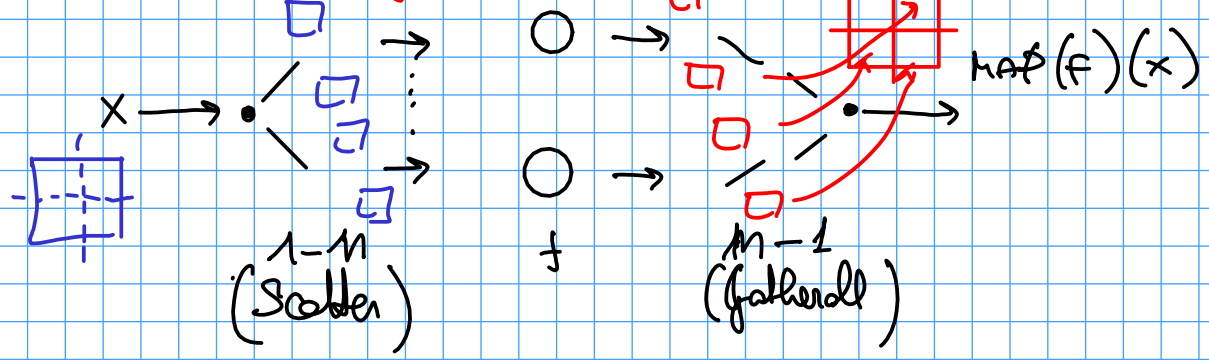
Comunicazioni ad albero



COMPUTAZIONI ad ALBERO



PATTERN : MAP (f)



Processi (scatter)

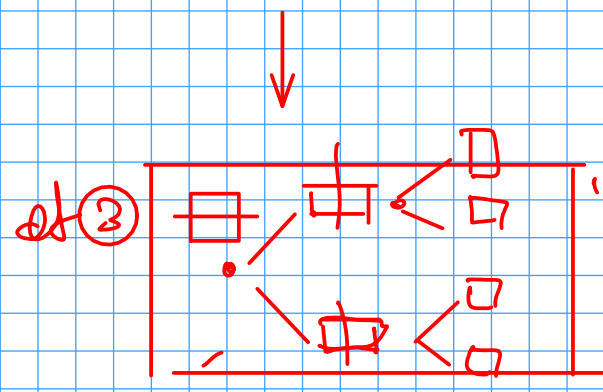
Processi SW macchine us rete

Posix TCP/IP (COW/NOW)

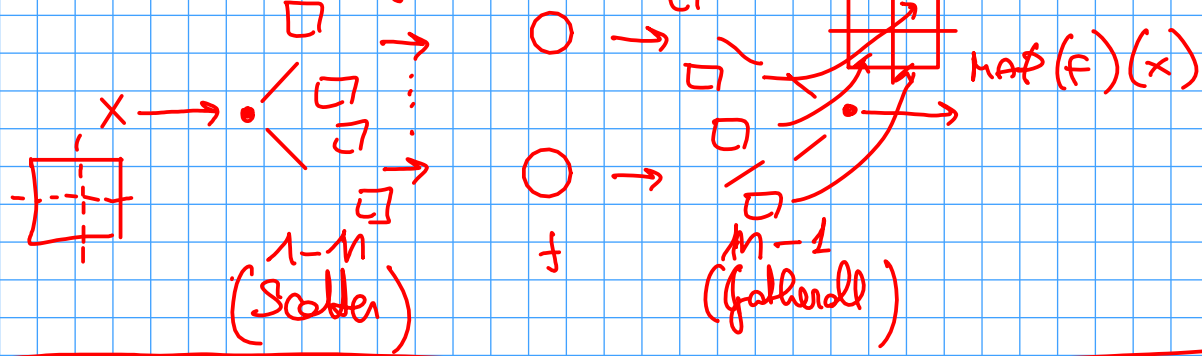
alt ① BROADCAST (UDP)  
+ "indice" di macchina  
(SPMD)

alt ② N CONN PUNTO A PUNTO (TCP)  
grazie alla "PARTIZIONE" giusta

alt ②.1 1) Pool di TASK  
2) algoritmo "cerca e trova" "pesca" del Pool



PATTERN : MAP (f)

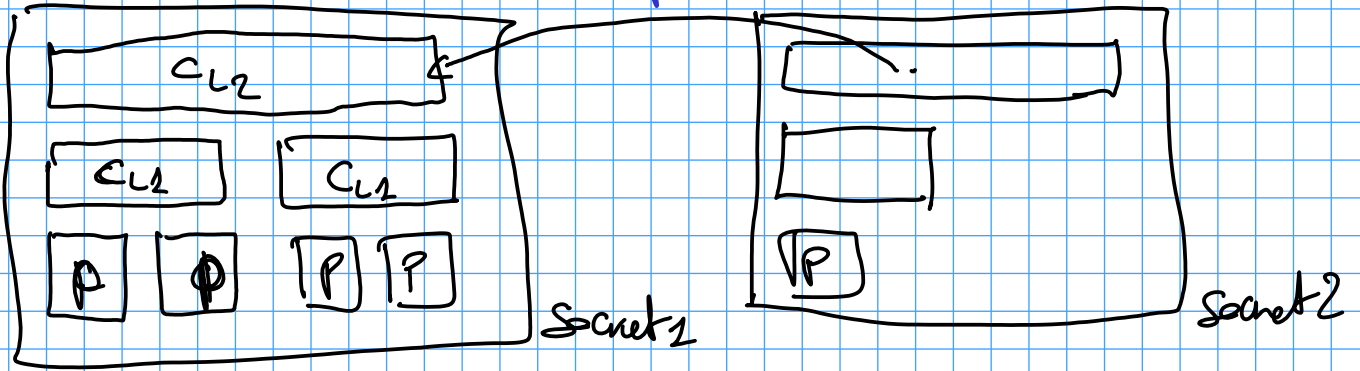


alt ①

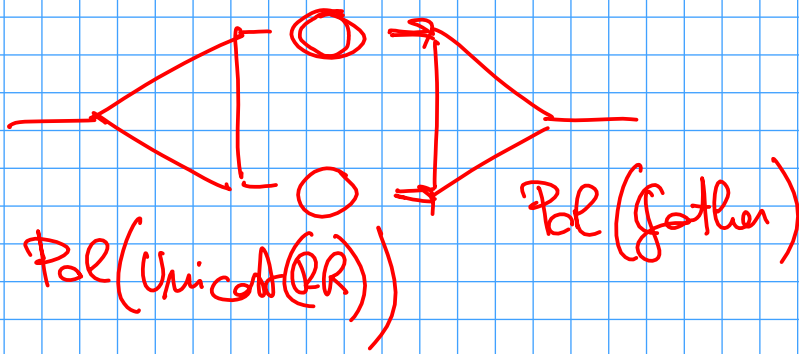
network in broadcast ("gato")

multicore a men condiz

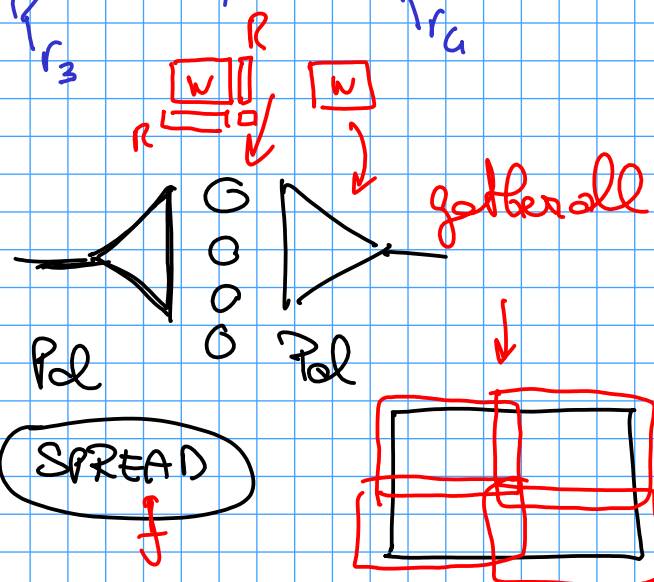
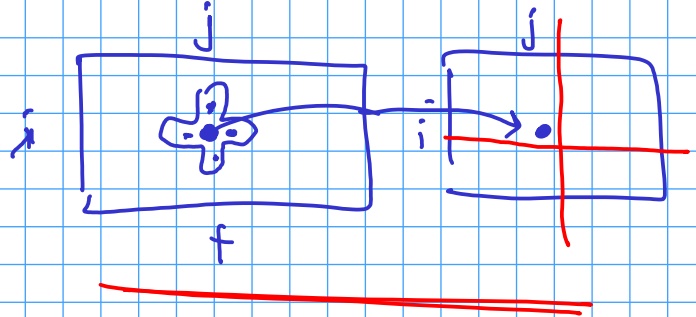
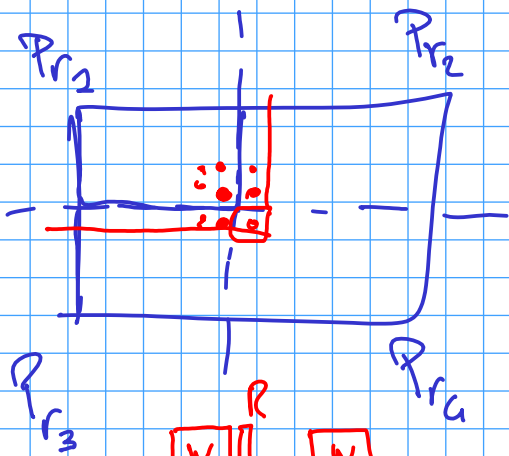
n pinto = pinto  
x dire "n" queto do processore



PATTERN: FAAM (f)



# PATTERN : STENCIL

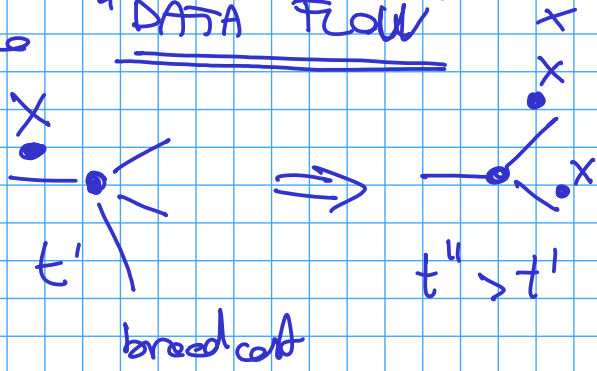


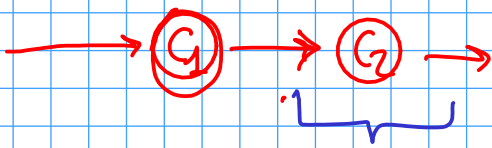
$$f: \text{Mat} \rightarrow \text{Mat} \times \text{Mat} \times \text{Mat} \times \text{Mat}$$

Semantics

"DATA FLOW"

intrinsic mechanism





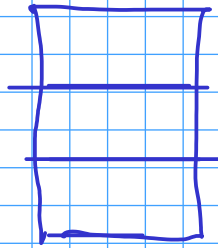
Calcolare  $f$

ricevuti ricercati dello stadio precedente  
 spedire il risultato allo stadio successivo

COW  
 NOW

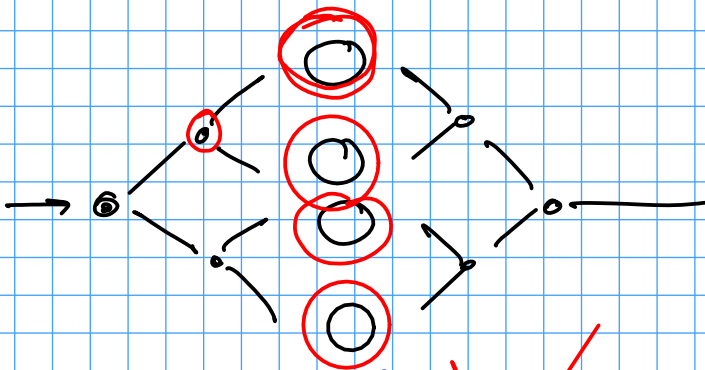
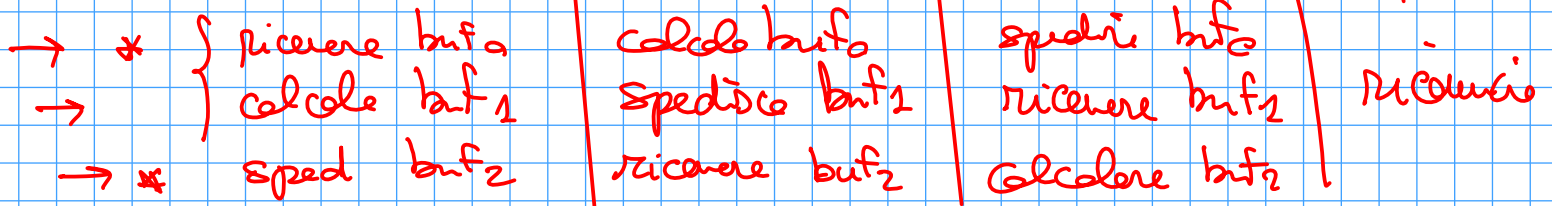
double / triple buffering

buf0  
 buf1  
 buf2

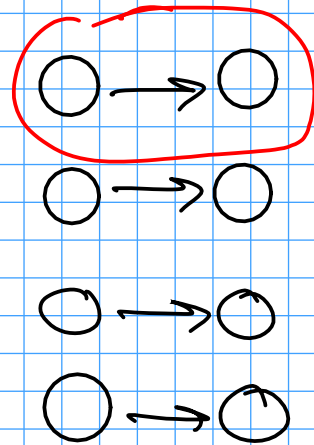


1 un input  
 1 un output  
 0 unione di lavoro

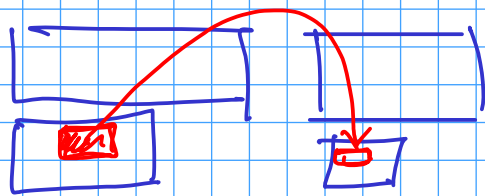
t



~~$(T_f + T_{comm})$~~



# Multicore SYSTEM



P

P

C<sub>1</sub>

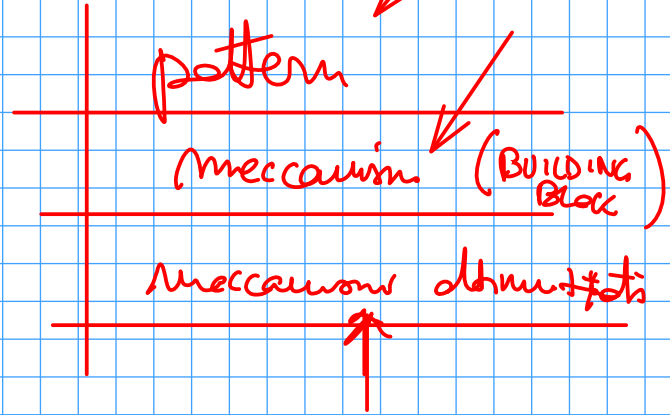
C<sub>2</sub>

ris t<sub>1</sub>

t<sub>1</sub>  
Calcolo



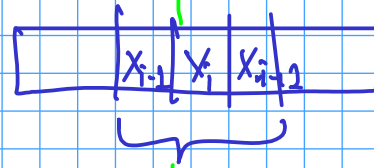
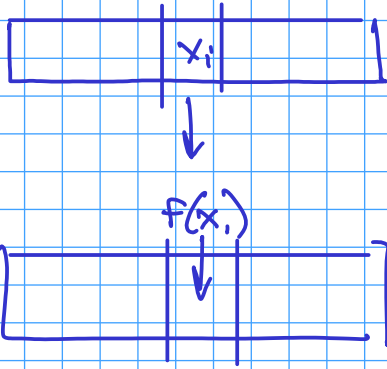
linea di cache



# MAP

# STENCIL

MC - SHMEM



Leftwze

