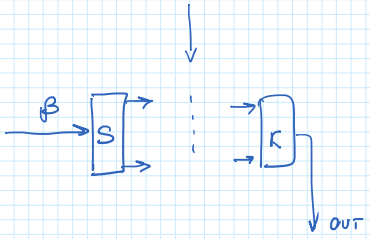
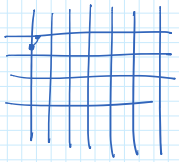
MEMORIA MODULARE

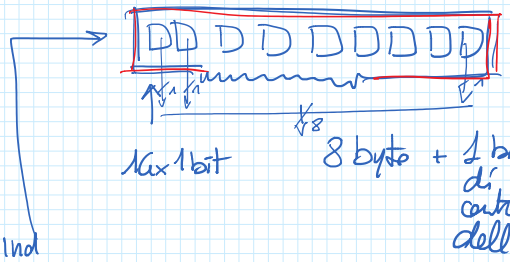
venerdì 21 ottobre 2016 11:12



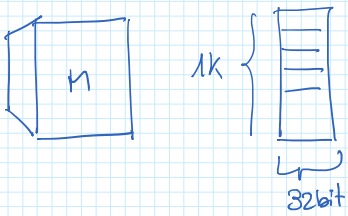


1G x 1bit

1G x 32bit

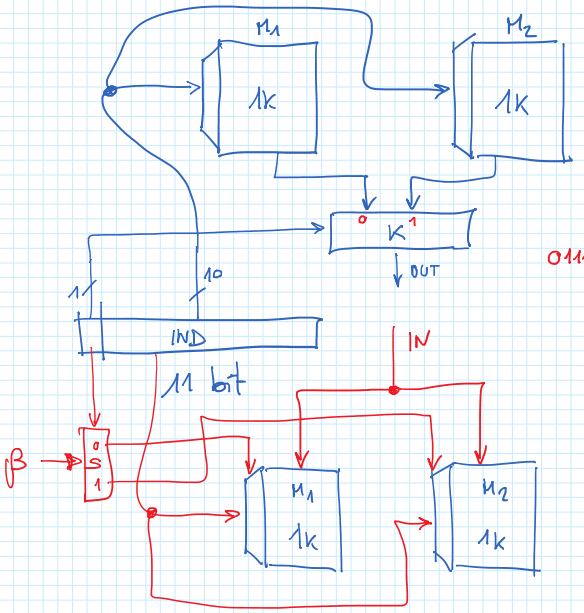


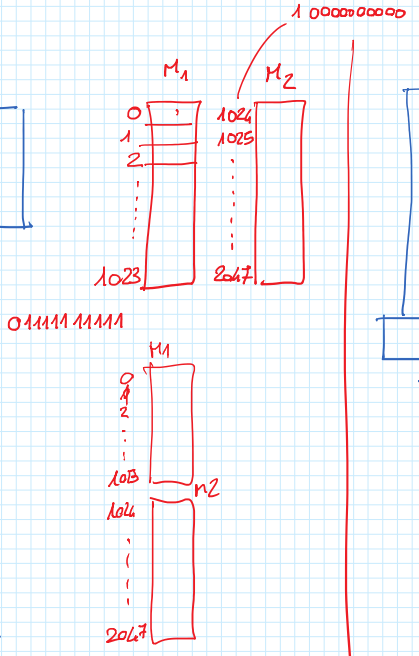
componenti : 1k x 1parola (32 bit)



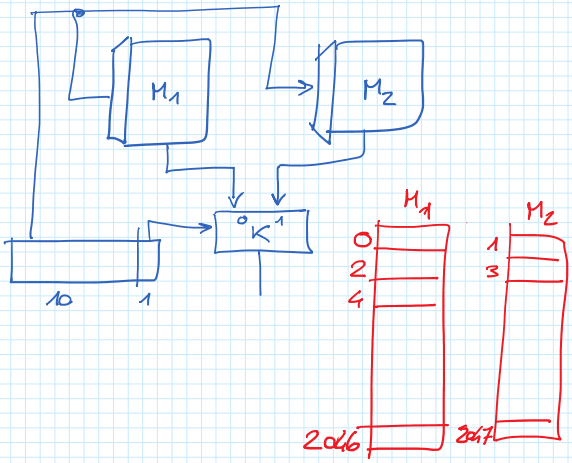
2 componenti : 2k x 32bit ?

SOLUZIONE 1

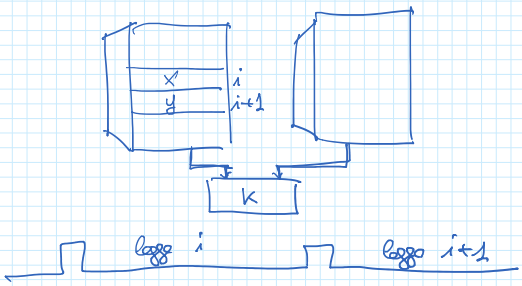


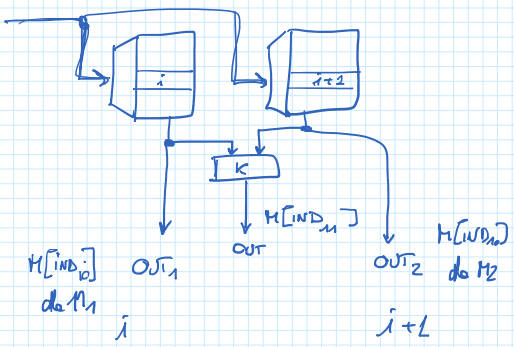


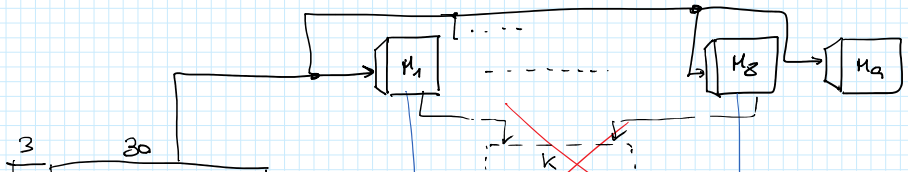
SOLUZIONE 2

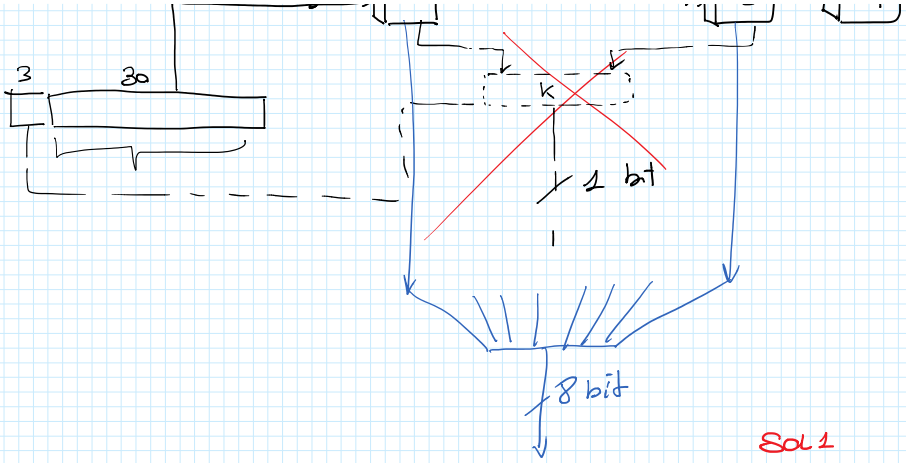


Supponiamo che l'op binaria sia la lettura delle celle di memoria (i, i+1) con i pari





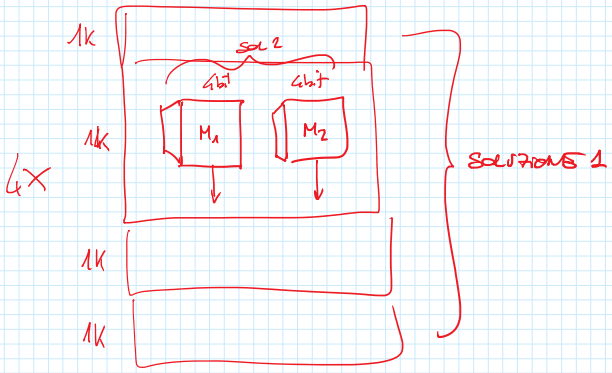




Sol 1

MODULARE SEQUENZIALE

1K x 4bit 4K byte

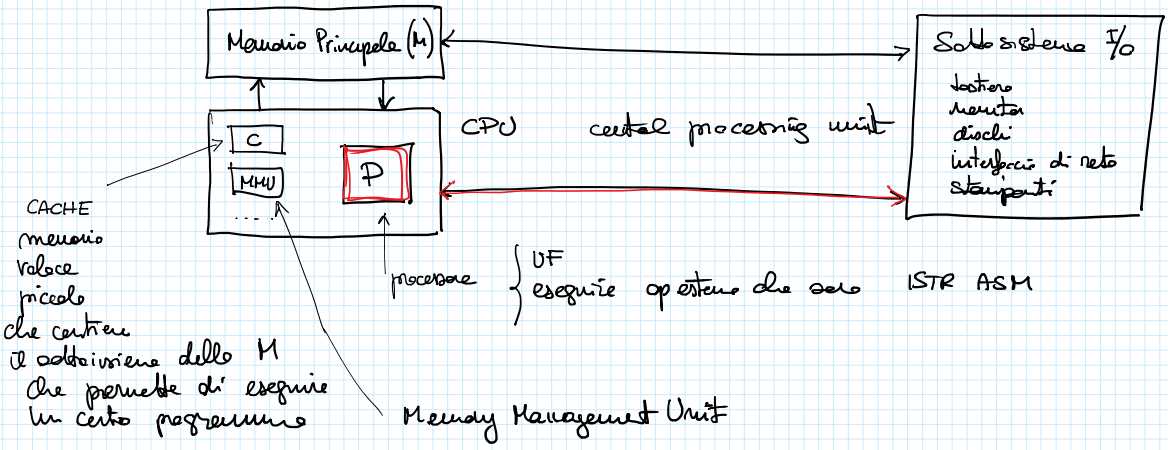


Sol 2

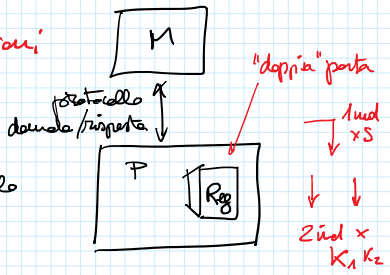
MODULARE INTERALLACCIATA

MACCHINA ASSEMBLER

venerdì 21 ottobre 2016 11:43

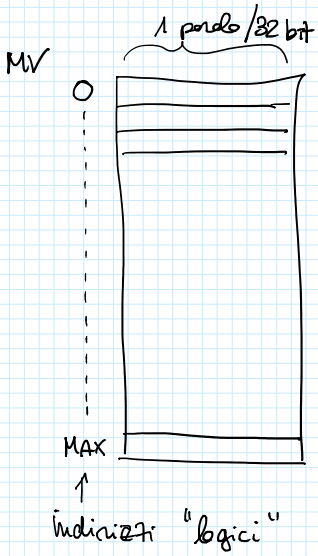


P :: while (true) { legge l'istruzione che si trova all'indirizzo IC (PC)
decodifica l'istruzione
esegue l'istruzione
aggiorna il IC
gestione delle interruzioni / eccezioni
}

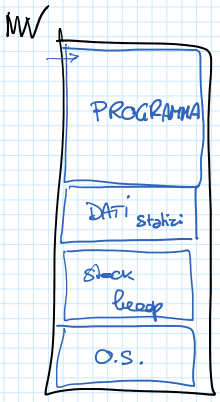


Istruzione asm — operandi:
- Registri generali { pochi, lunghi una parola, veloci }
- Locazioni di Memoria { molte, lente, lunghe 1 parola }

tipi di istruzione
- "operative" $operando_1$ op_x $operando_3$ → $operando_3$
- "accesso alla memoria" lettura/scrittura M → Reg, Reg → M
- "salto" < condizionali (cond sui Reg), incondizionali



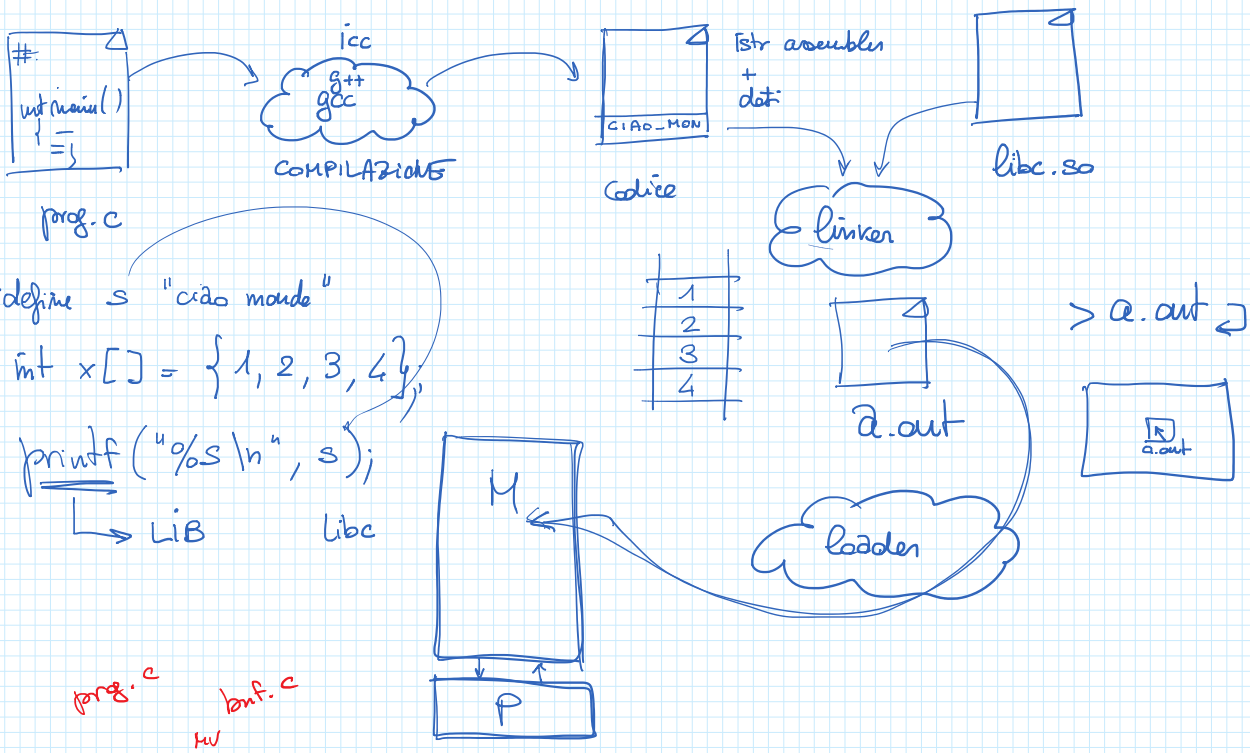
∀ programma ASM vede uno spazio di indirizzamento "logico"
MEMORIA VIRTUALE (MV)

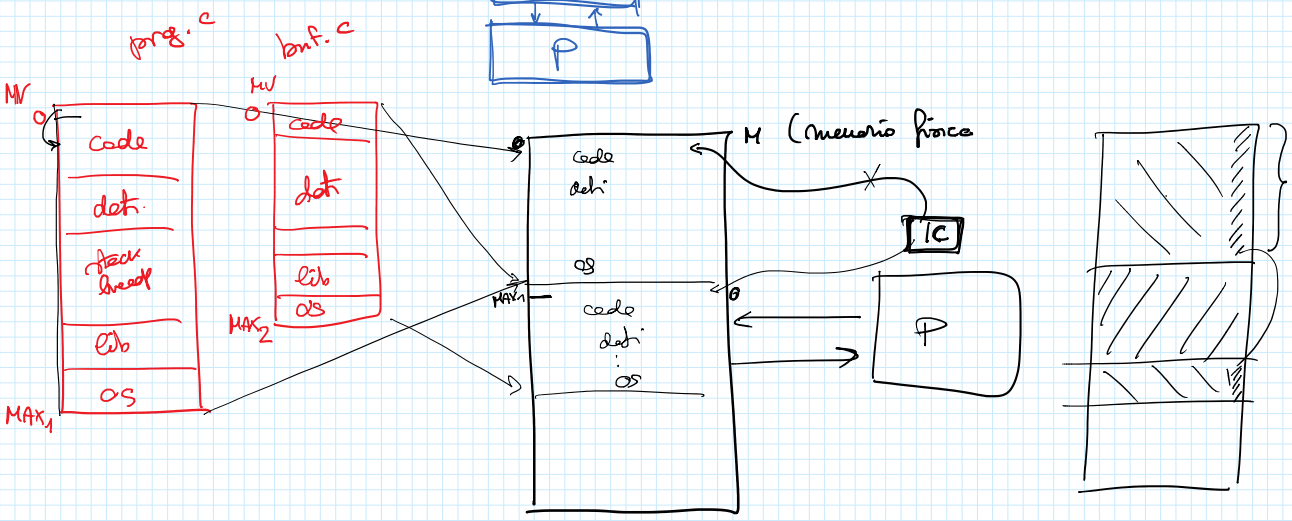


→ in esecuzione e diventa un processo

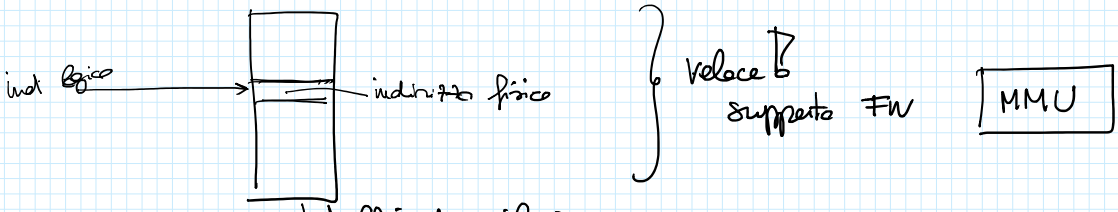
PROGRAMMI / PROCESSI

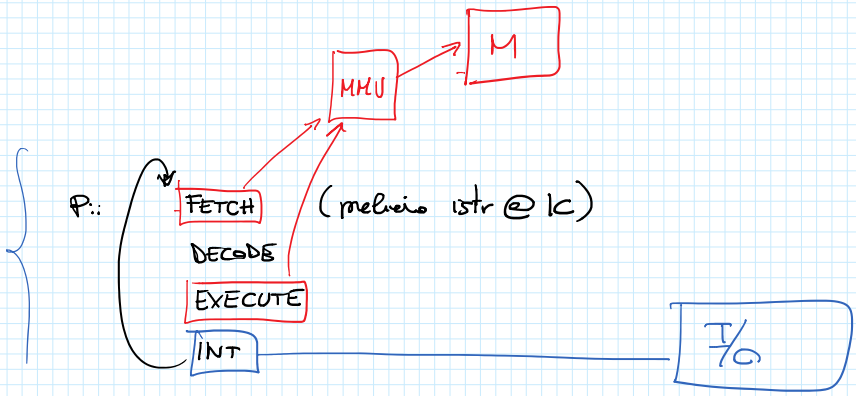
venerdì 21 ottobre 2016 12:25





traduzione degli indirizzi logici → indirizzi fisici



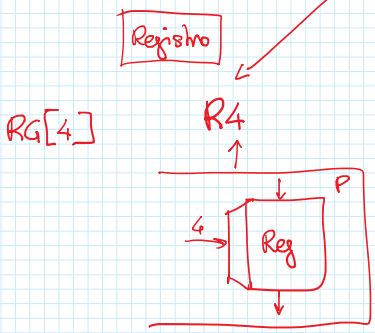


MODALITÀ di INDIRIZZAMENTO (della "memoria")

venerdì 21 ottobre 2016 12:47

modo x esprimere dove si trova un operando (delle istr. asm)

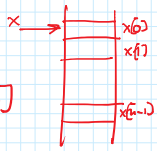
INC ⊗ incrementa di un valore intero



memoria

- esattamente quello indirizzo di memoria (assoluto)
  (Ri) MEM[RG[i]]
- (base + indice)
  Ri (Rj) MEM[RG[i] + RG[j]]
- (relativo (al IC/PC))
  Ri MEM[IC + RG[i]]

int x[10]



Tipi istr asm	Operandi
operative	registro
memoria	base + indice
salto	assoluto relativo