

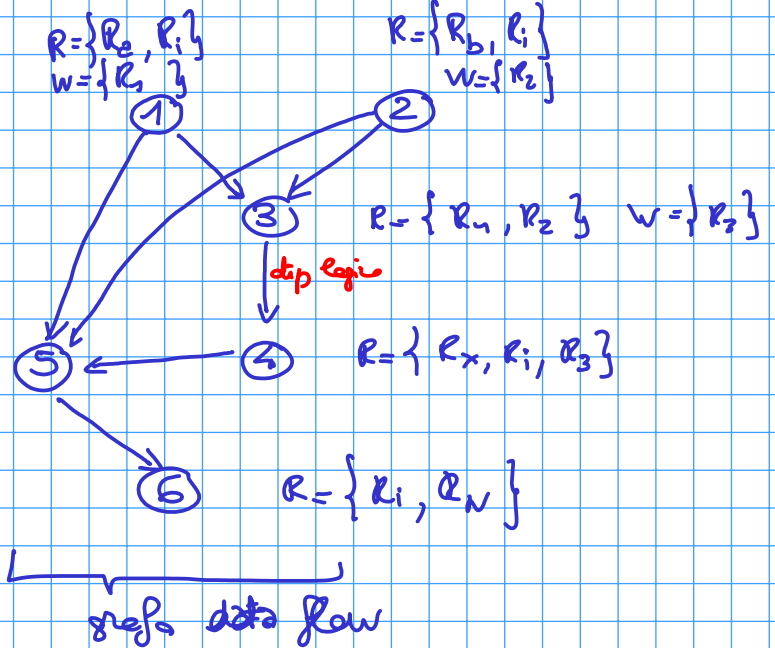
$$x[i] = a[i] + b[i]$$

- loop: ① LOAD R_2, R_i, R_1
 ② LOAD R_b, R_i, R_2
 ③ ADD R_1, R_2, R_3
 ④ STORE R_x, R_i, R_3
 ⑤ INC R_i
 ⑥ IF $_c$ $R_i, R_N, loop$

$a[i]$

$b[i]$

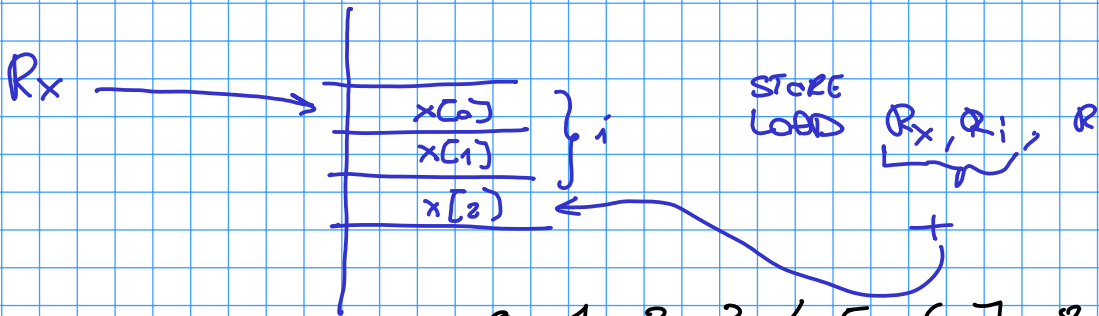
$R = \{R_i\}$
 $w = \{R_i\}$



- ②
①
③
④
⑤
⑥

Calcola lo stesso simultaneamente

Utilizzare un Registro base modificato (decrementato di 1)



- loop: ① LOAD R_2, R_i, R_1
 ② LOAD R_b, R_i, R_2
 ③ ADD R_1, R_2, R_3
 ④ STORE R_x, R_i, R_3
 ⑤ INC R_i
 ⑥ IF $_c$ $R_i, R_N, loop$
- 6t $\epsilon = \frac{6}{10}$

	0	1	2	3	4	5	6	7	8	9	10	11
in	L	L	A	S			I	IF $_c$			L	
IU		L	L	A	S		S	I	IF $_c$	IF $_c$	X	L
DM			L	L			S	S				L
EU				L	L	A			I			L

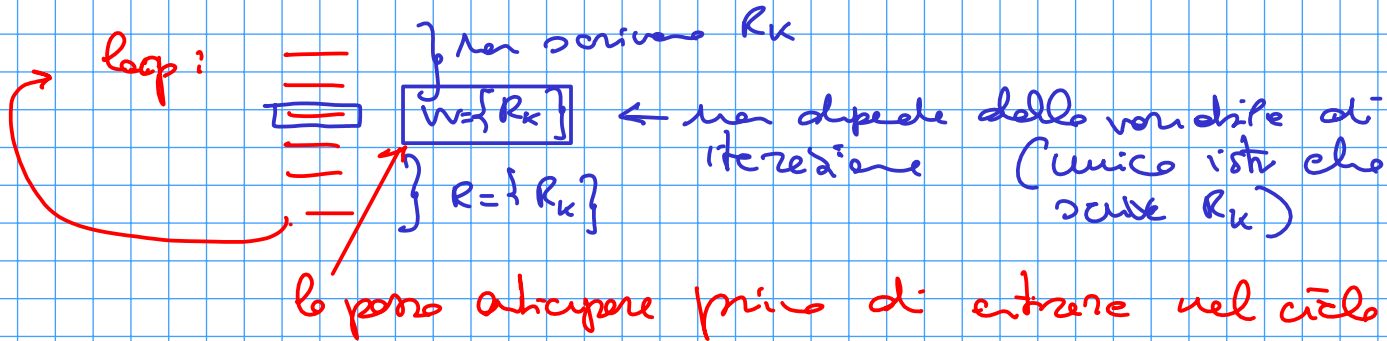
10t

- loop: LOAD
 LOAD
 ADD
 INC R_i
 IF $_c$ $R_i, R_N, loop$, delayed
 STORE R_x, R_i, R_3
- 6t $\epsilon = \frac{6}{8} = \frac{3}{4}$

	0	1	2	3	4	5	6	7	8	9	10	11
in	L	L	A	I	IF $_c$			ST	L			
IU		L	L	A	I	IF $_c$		IF $_c$	ST	L		
DM			L	L						ST	L	
EU				L	L	A	I					L

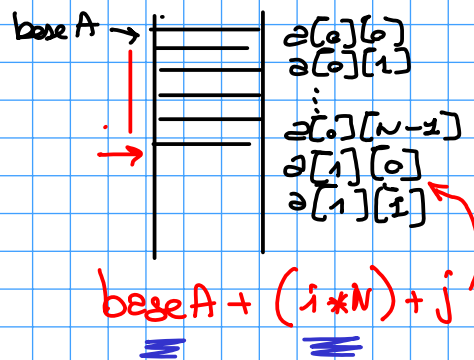
8t

Rimozione degli INVARIANTI



```

for(i ..... )
  for(j ..... )
    c[i][j] = 0
    [
      for(k ..... )
        c[i][j] += a[i][k] * b[k][j];
    ]
  
```



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

```

loop:
  MUL R1, RN, Rai
  ADD Rai, RbaseA, Rai
  LOAD Rai, Rk, R2
  MUL Rk, RN, Rbk
  ADD Rbk, RbaseB, Rbk
  LOAD Rbk, Rj, R2
  MUL R1, R2, R3
  MUL R1, RN, Rci
  ADD Rci, RbaseC, Rci
  LOAD Rci, Rj, R4
  ADD R4, R3, R4
  STORE Rci, Rj, R4
  INC Rk
  IF< Rk, RN, loop
  
```

