

ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

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Informatica di base 2024/2025

## WRAP-UP

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# Sessione di tutoraggio

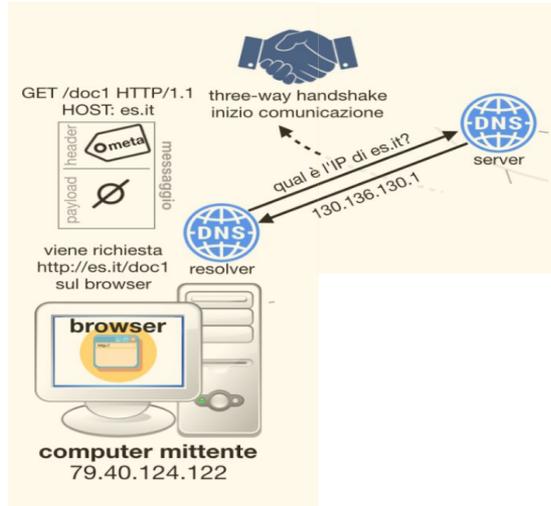
Mercoledì, 7 Maggio

17:00 - 19:00

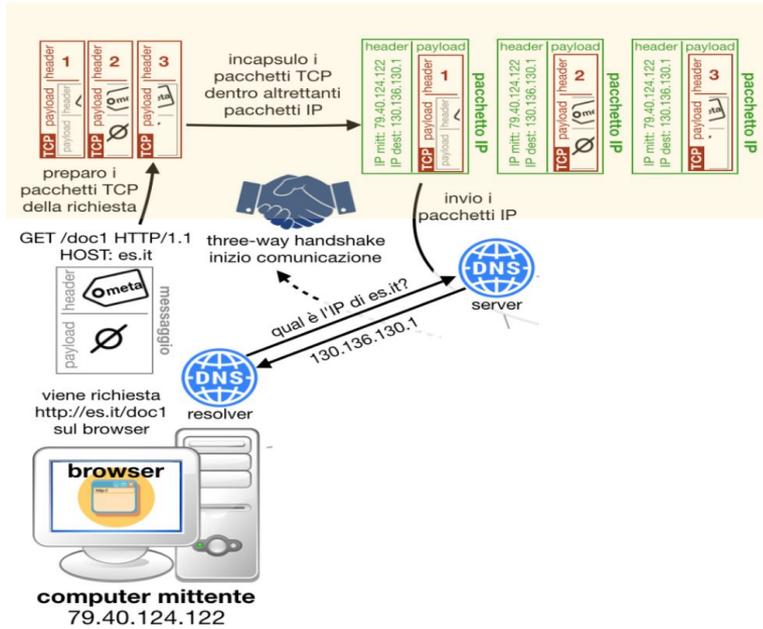
In modalità remota su Teams

(il link sarà comunicato successivamente via email)

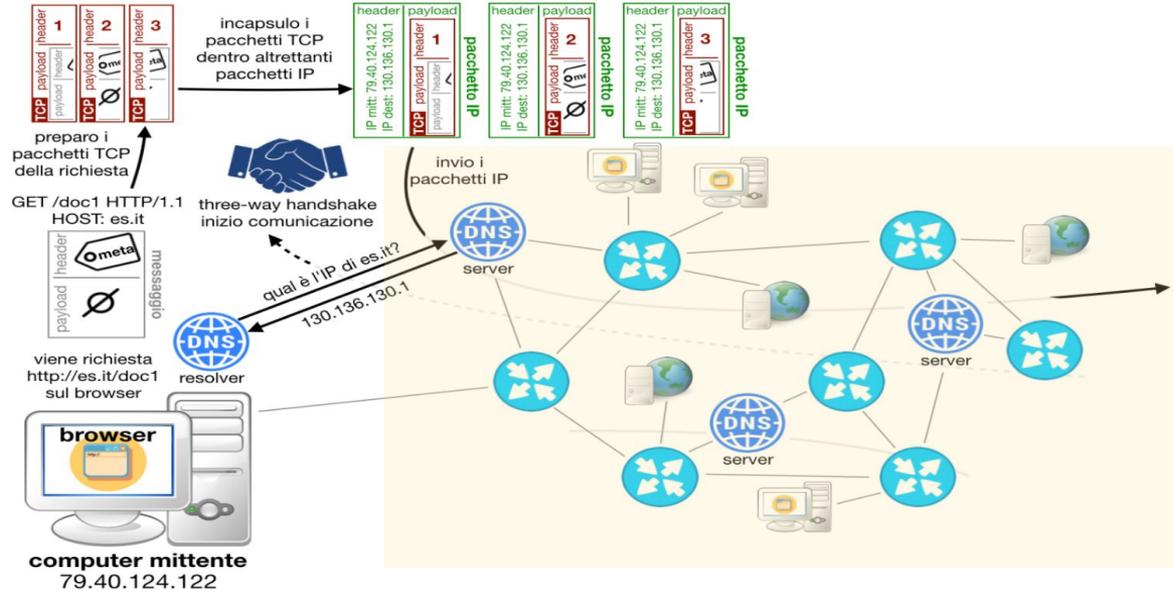
# Riassunto comunicazione client - web server



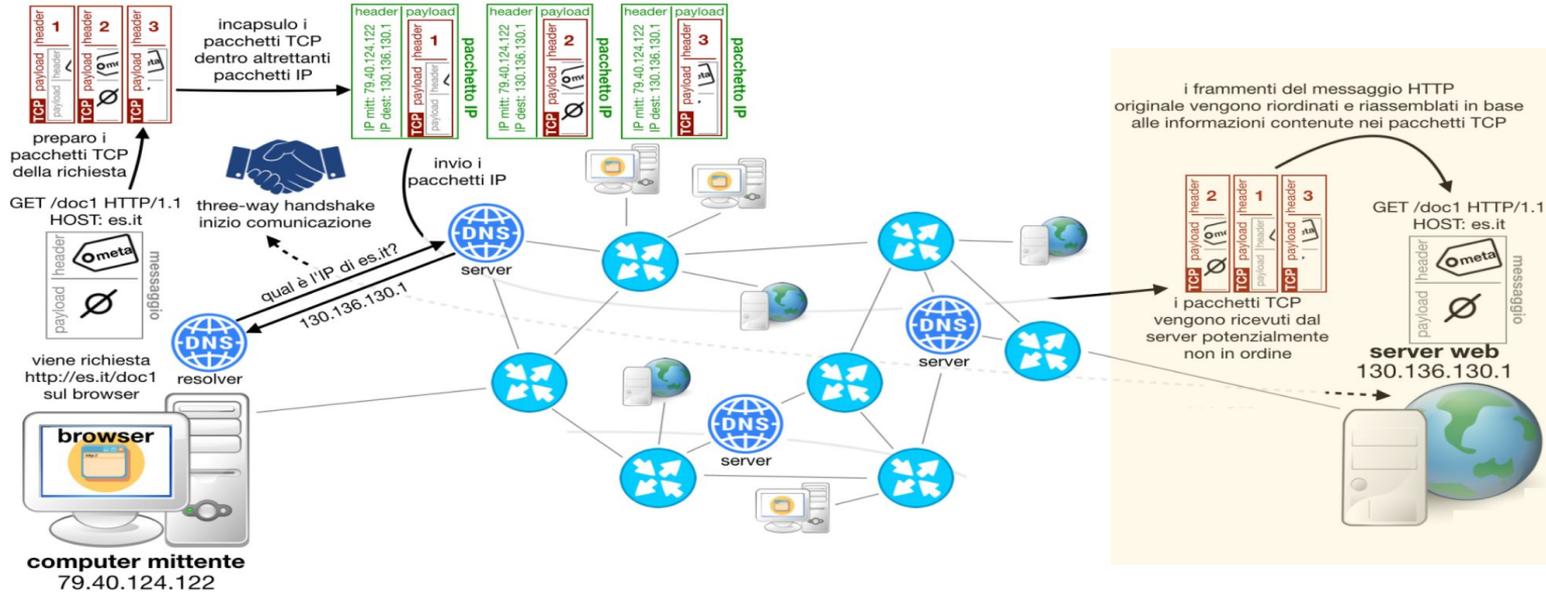
# Riassunto comunicazione client - web server



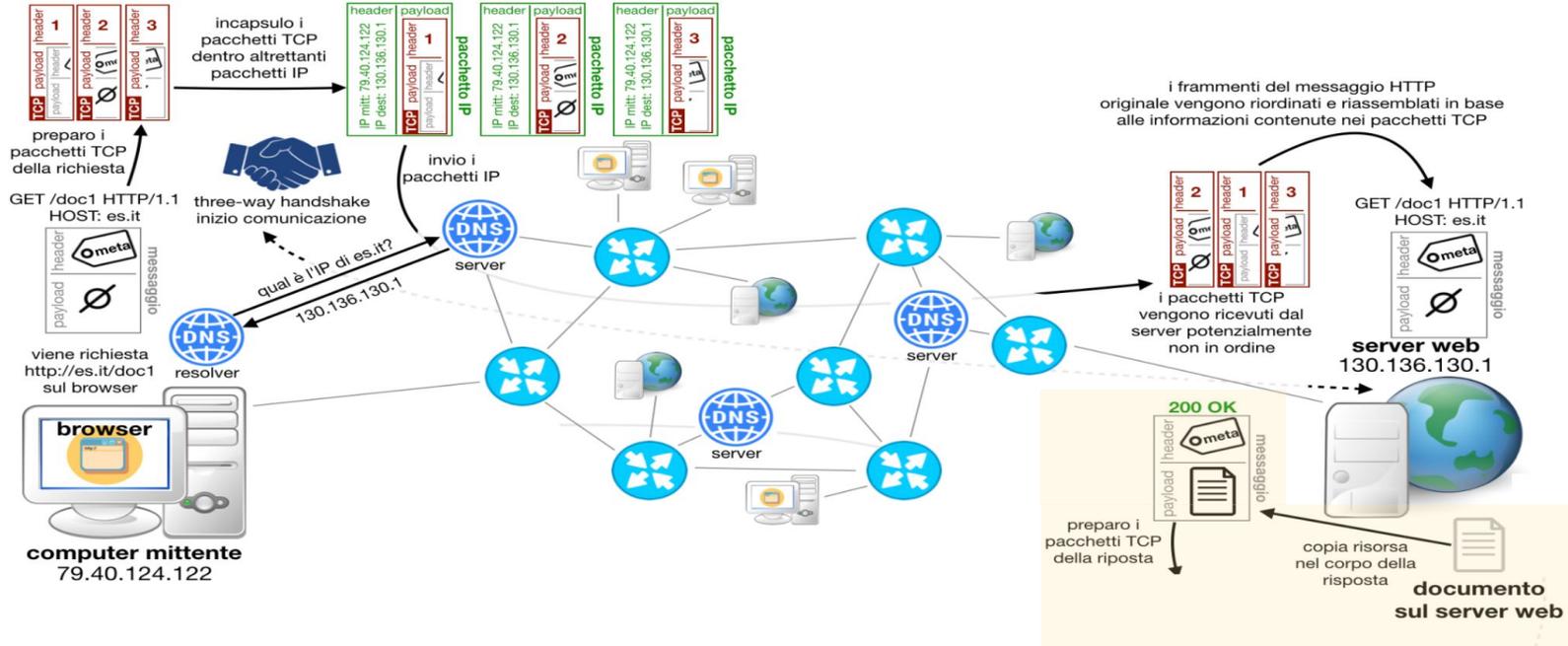
# Riassunto comunicazione client - web server



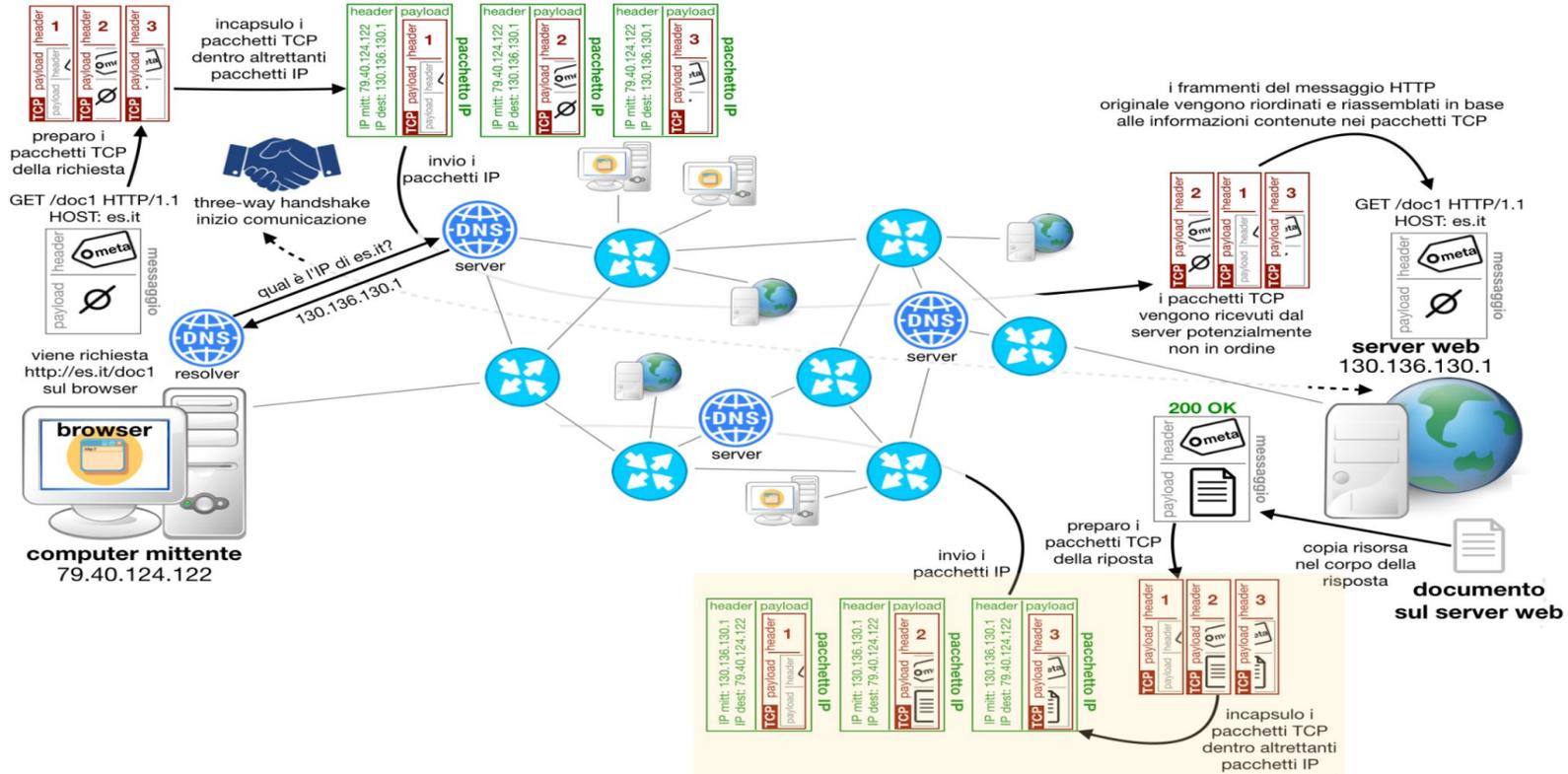
# Riassunto comunicazione client - web server



# Riassunto comunicazione client - web server



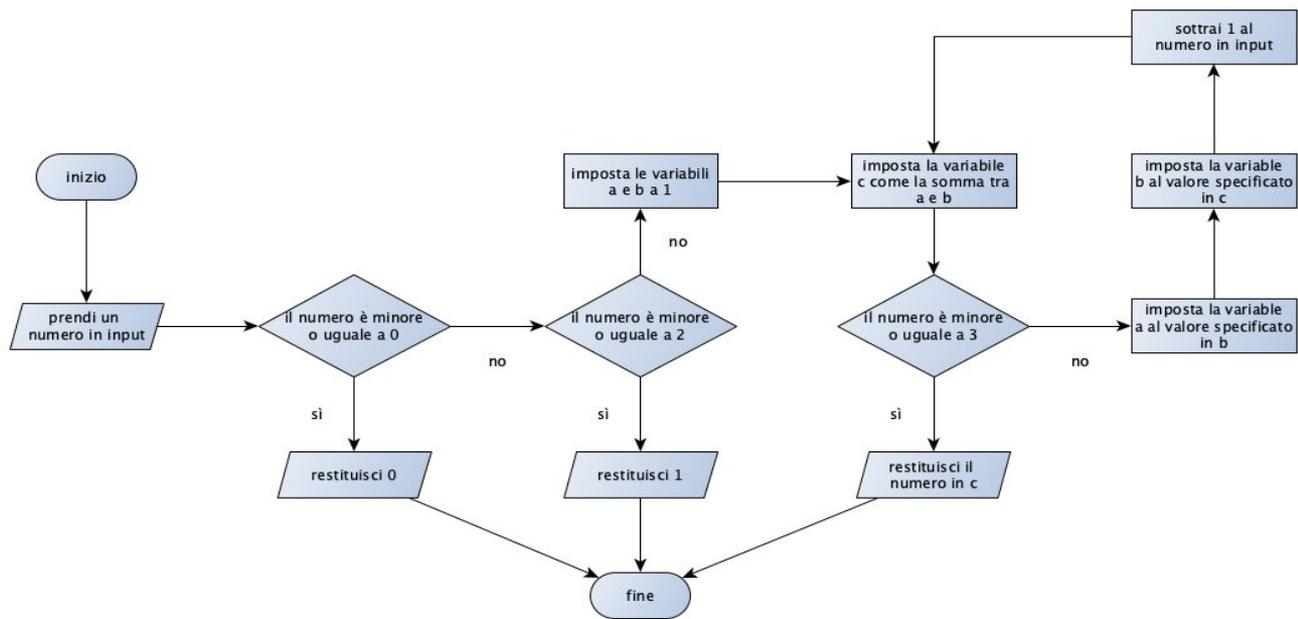
# Riassunto comunicazione client - web server





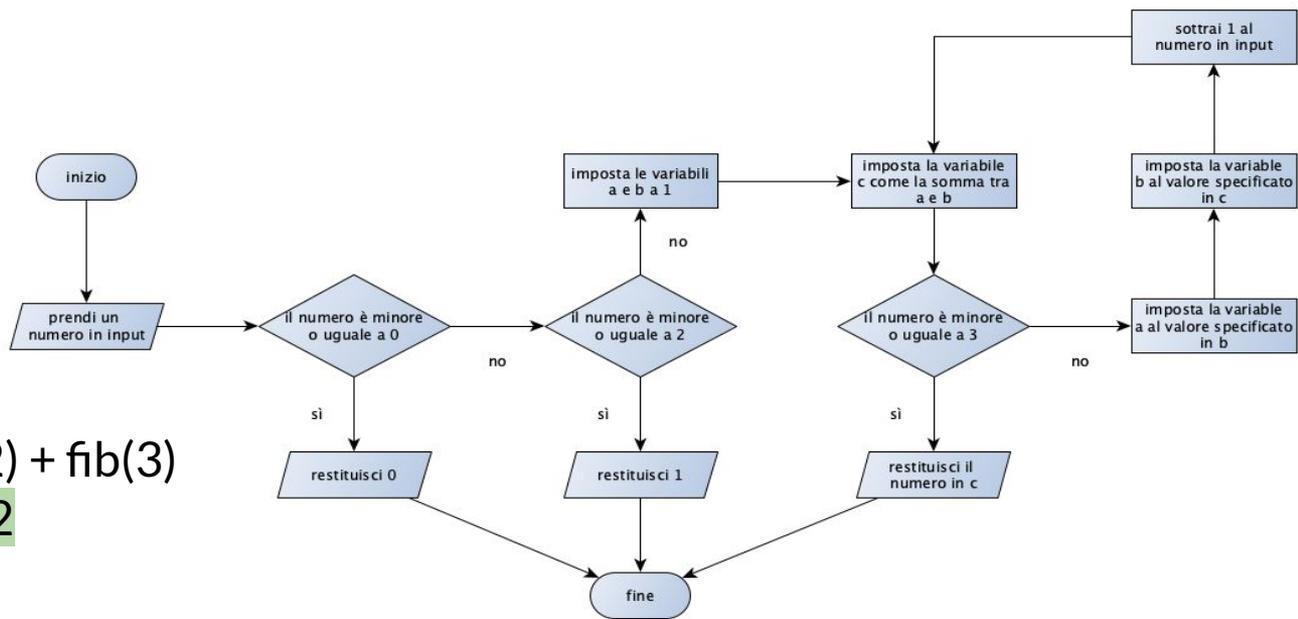


# Diagramma di flusso di fib(n)



<b><i>n</i></b> =	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>...</b>
fib(n) =	0	1	1	2	3	5	8	13	21	34	55	89	14	23	37	...

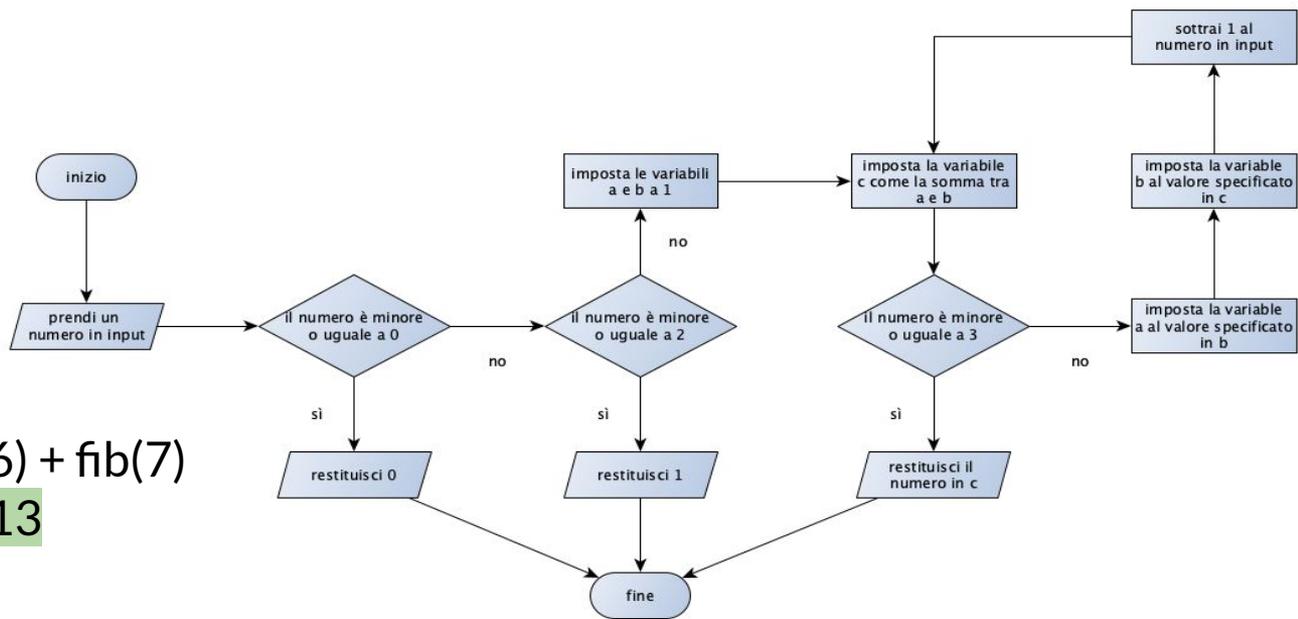
# Diagramma di flusso di fib(n)



$$\begin{aligned}
 \text{fib}(4) &= \text{fib}(2) + \text{fib}(3) \\
 &= 1 + 2 \\
 &= 3
 \end{aligned}$$

<i>n</i> =	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	...
fib(n) =	0	1	1	2	3	5	8	13	21	34	55	89	144	233	377	...

# Diagramma di flusso di fib(n)

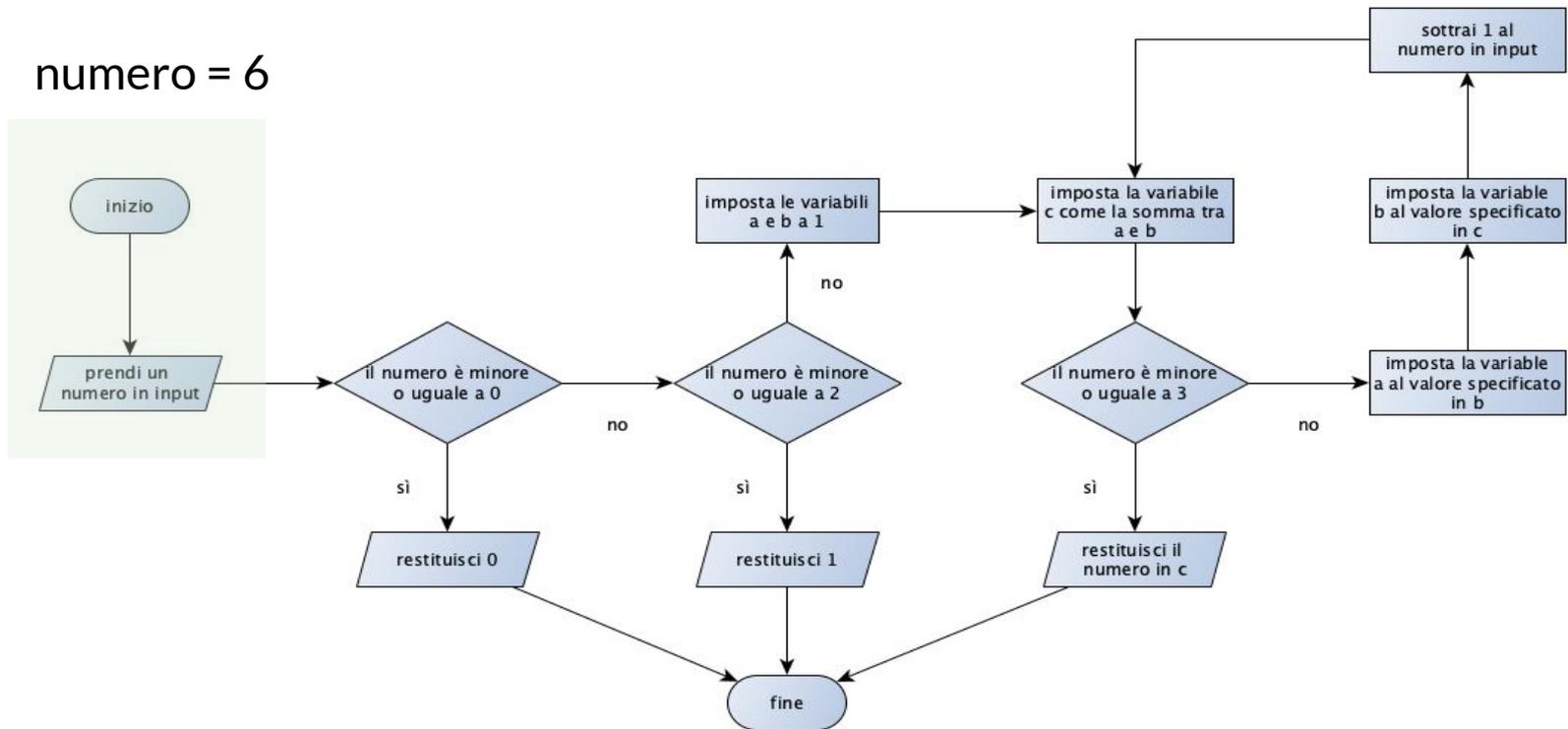


$$\begin{aligned}
 \text{fib}(8) &= \text{fib}(6) + \text{fib}(7) \\
 &= 8 + 13 \\
 &= 21
 \end{aligned}$$

<i>n</i> =	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	...
fib( <i>n</i> ) =	0	1	1	2	3	5	8	13	21	34	55	89	14	23	37	...

# Diagramma di flusso fib(n) per n = 6

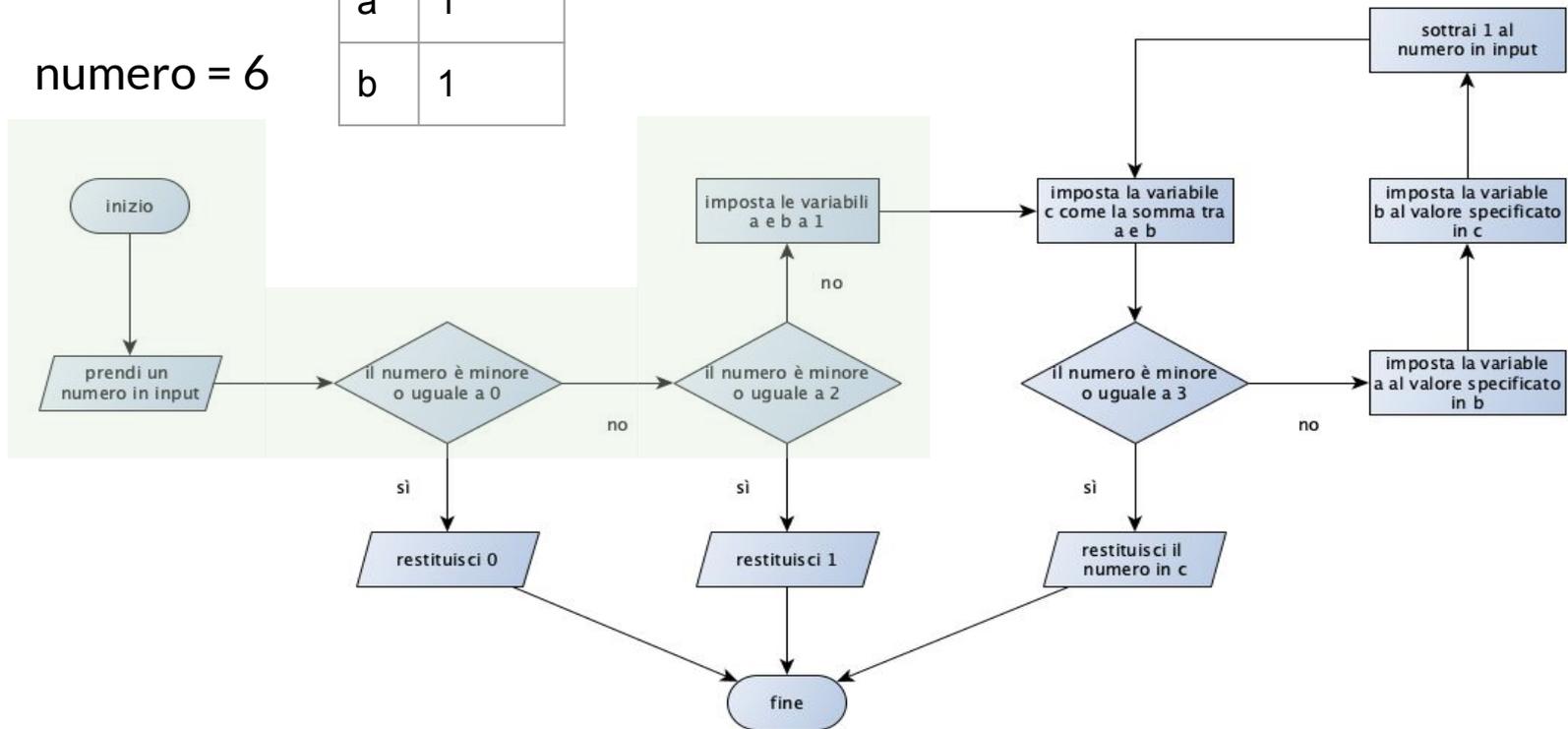
numero = 6



# Diagramma di flusso fib(n) per n = 6

numero = 6

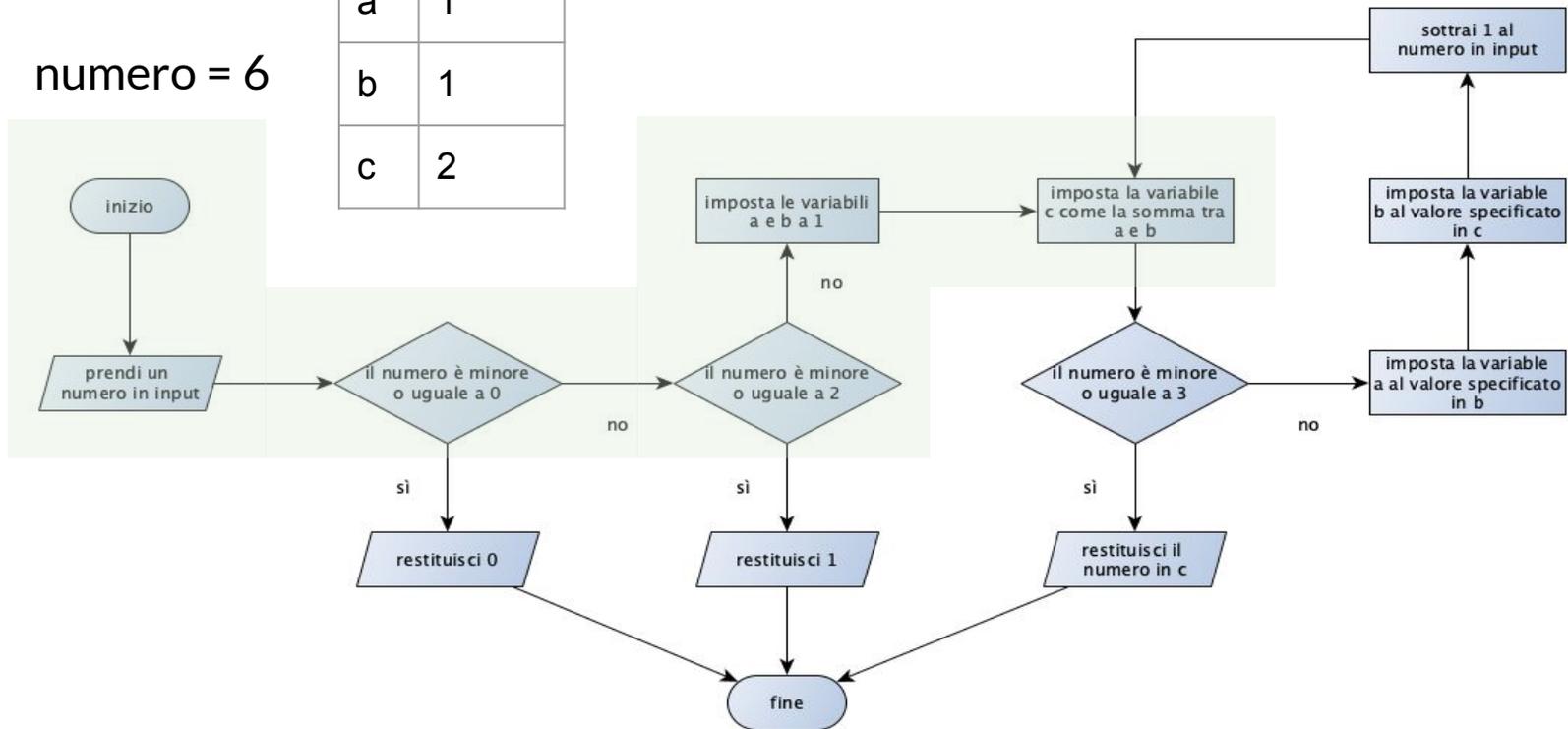
a	1
b	1



# Diagramma di flusso fib(n) per n = 6

numero = 6

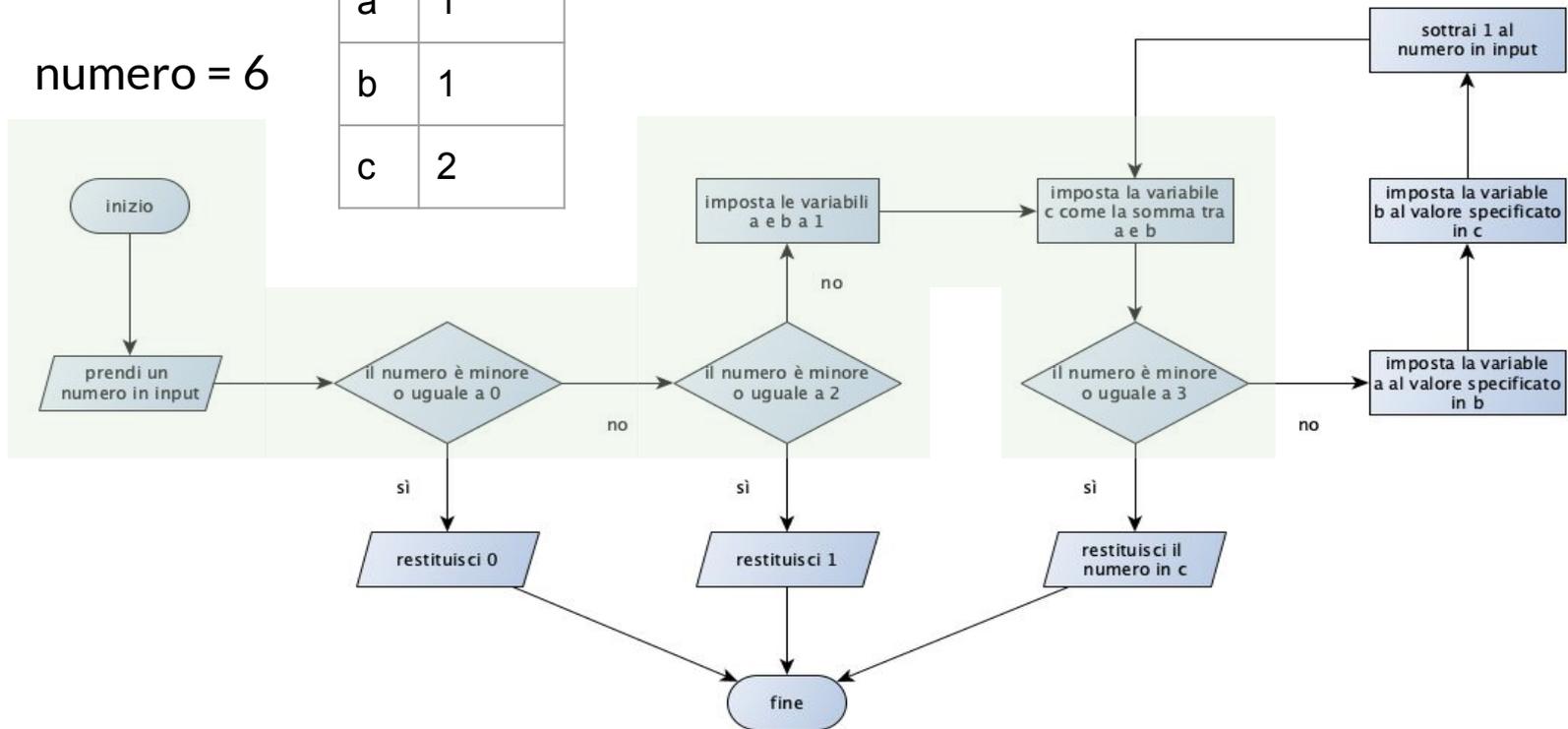
a	1
b	1
c	2



# Diagramma di flusso fib(n) per n = 6

numero = 6

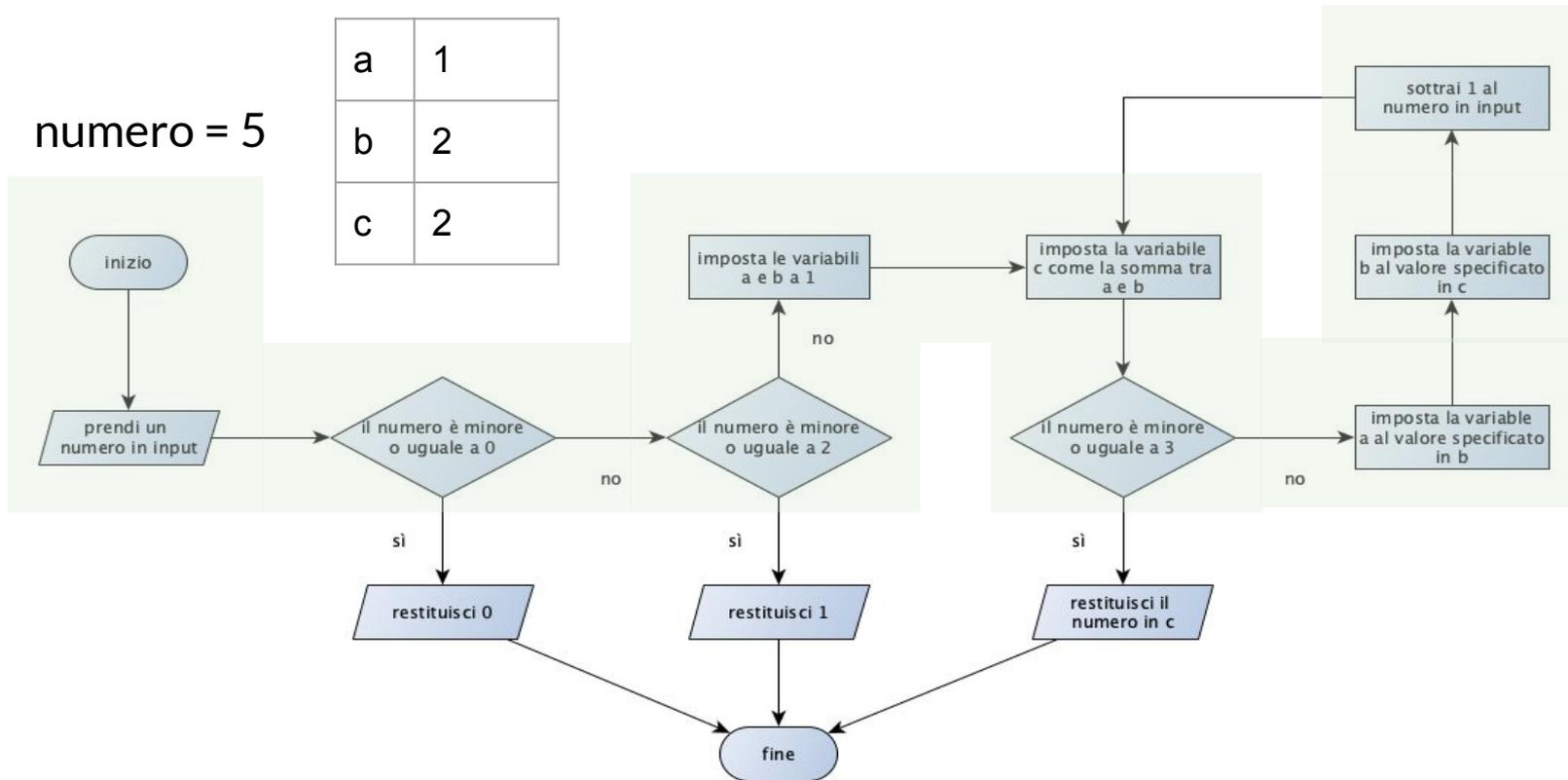
a	1
b	1
c	2



# Diagramma di flusso fib(n) per n = 6

numero = 5

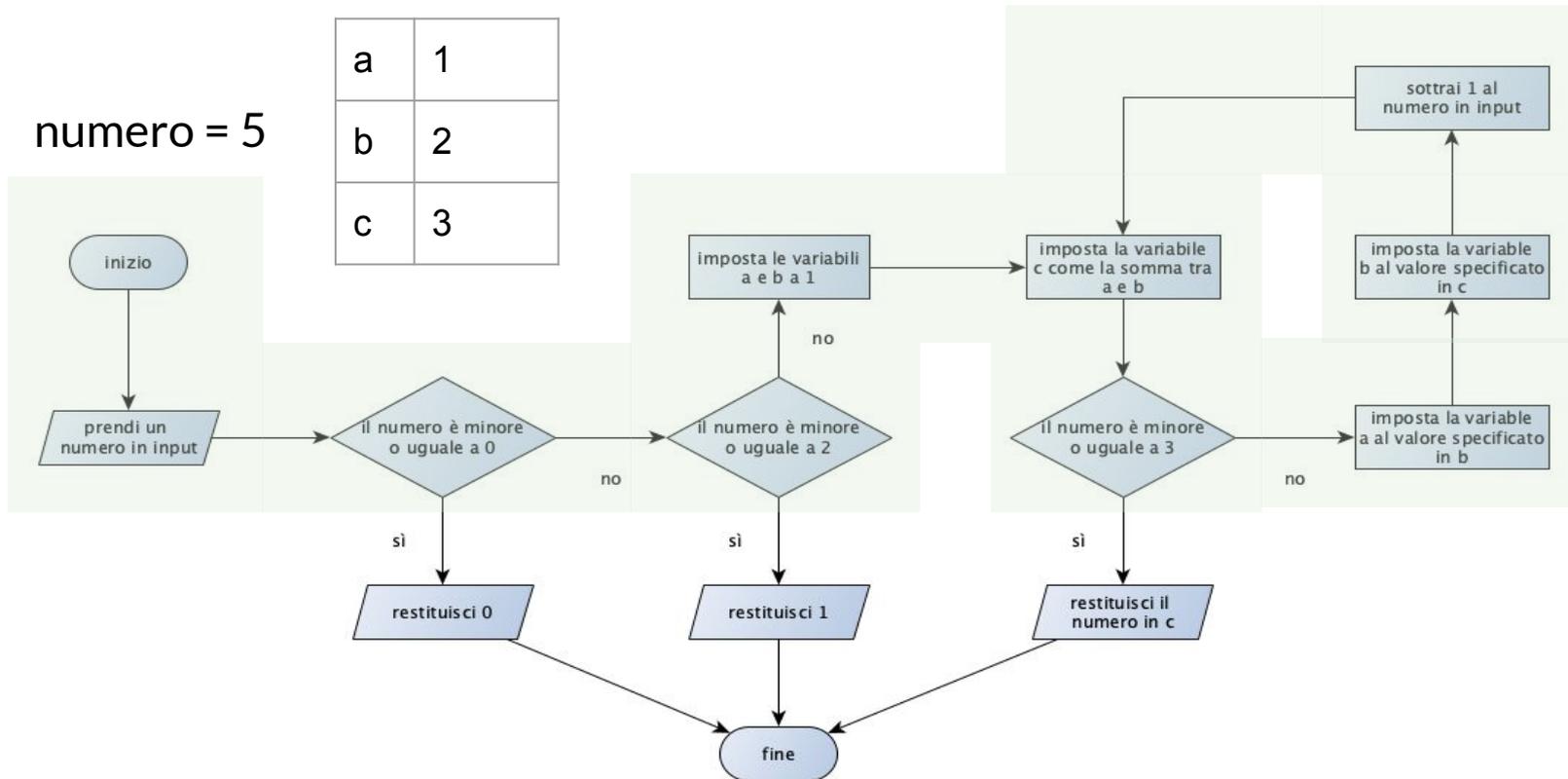
a	1
b	2
c	2



# Diagramma di flusso fib(n) per n = 6

numero = 5

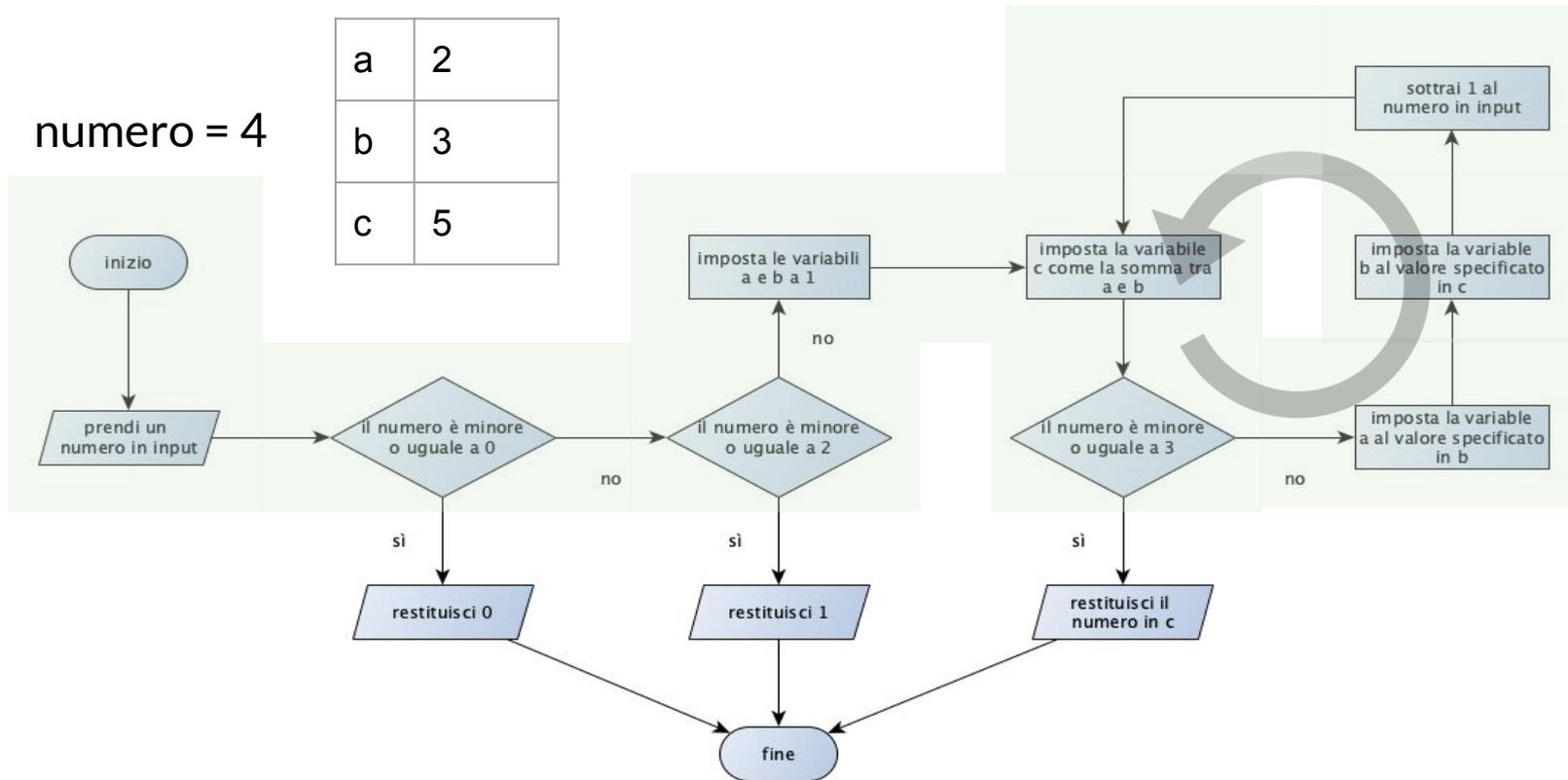
a	1
b	2
c	3



# Diagramma di flusso fib(n) per n = 6

numero = 4

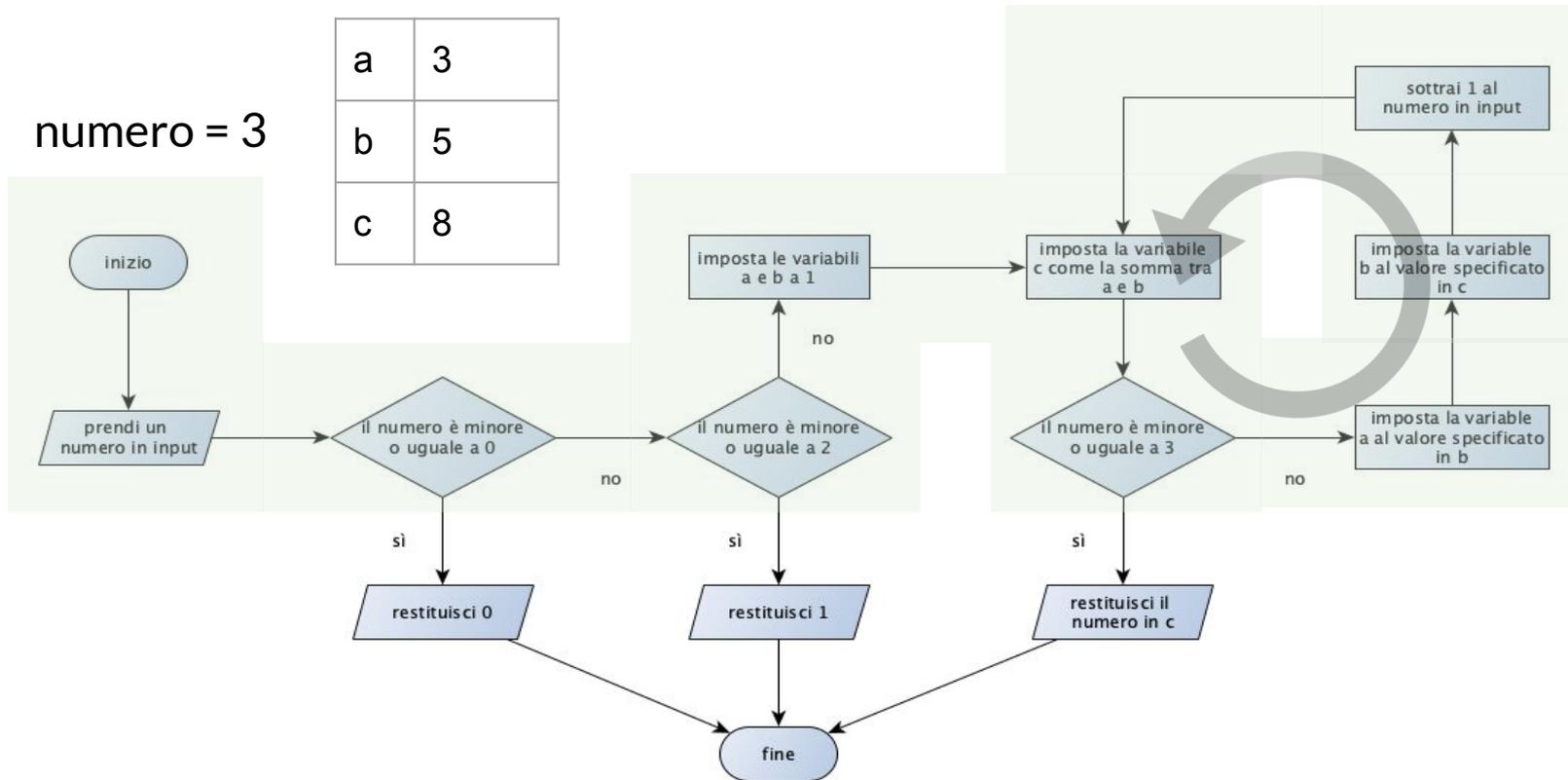
a	2
b	3
c	5



# Diagramma di flusso fib(n) per n = 6

numero = 3

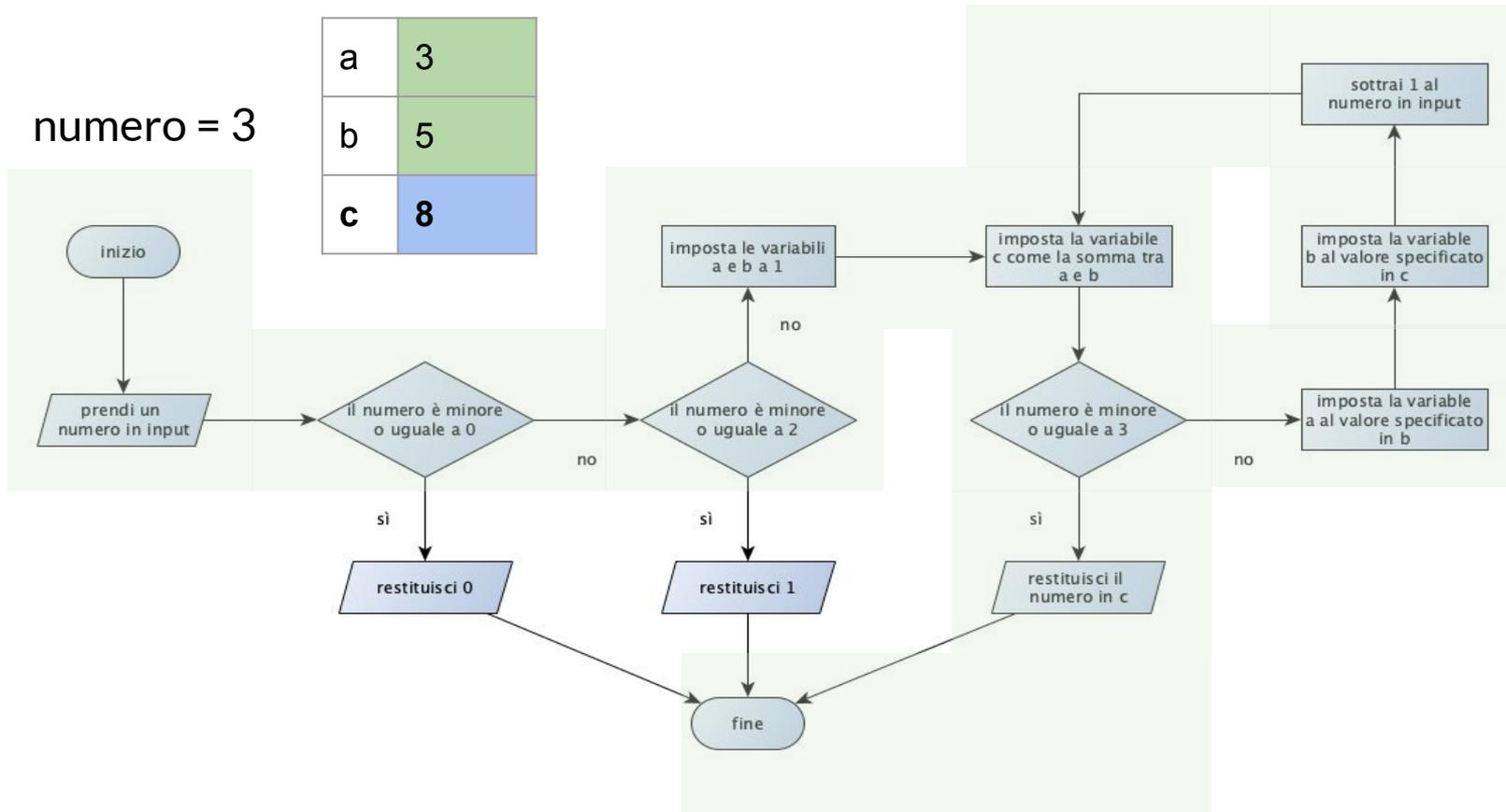
a	3
b	5
c	8



# Diagramma di flusso fib(n) per n = 6

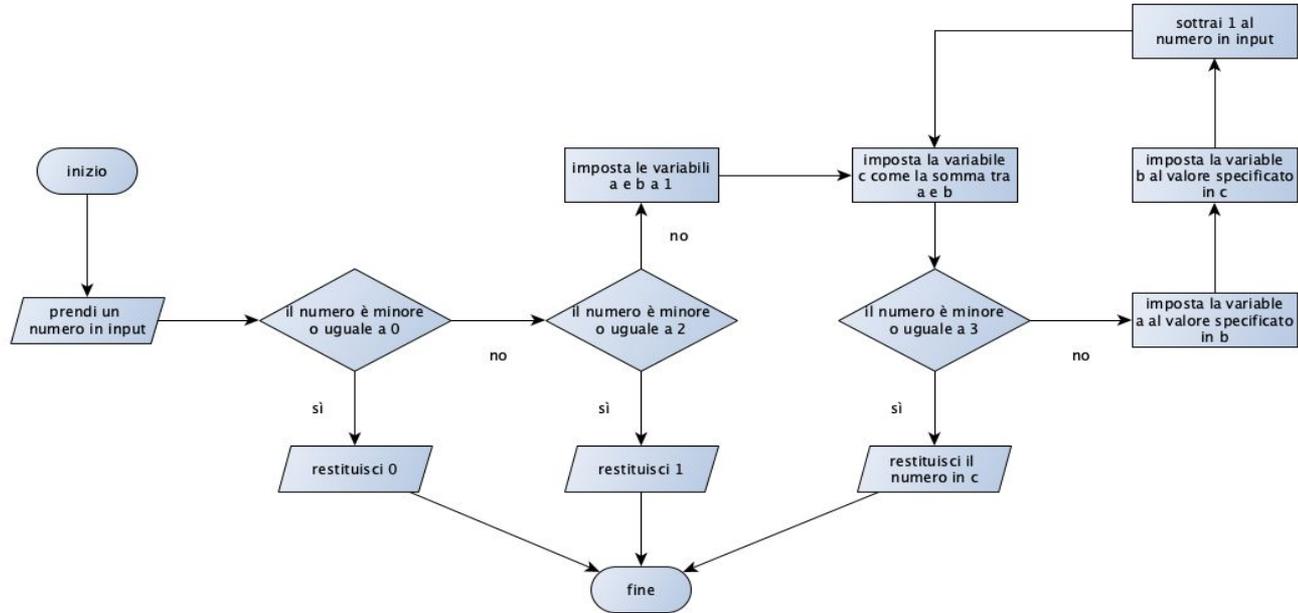
numero = 3

a	3
b	5
c	8

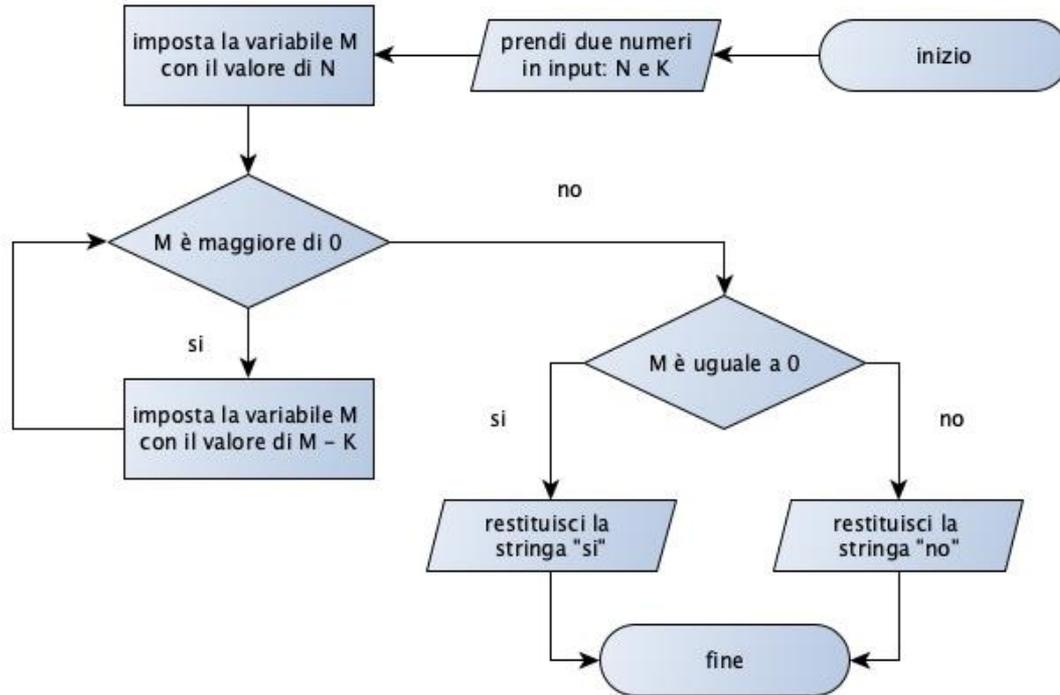


# Diagramma di flusso di fib(n) – Python

```
def fib(n):  
    if n <= 0:  
        return 0  
    elif n <= 2:  
        return 1  
    else:  
        a = 1  
        b = 1  
        while True:  
            c = a + b  
            if n <= 3:  
                return c  
            a = b  
            b = c  
            n = n - 1
```

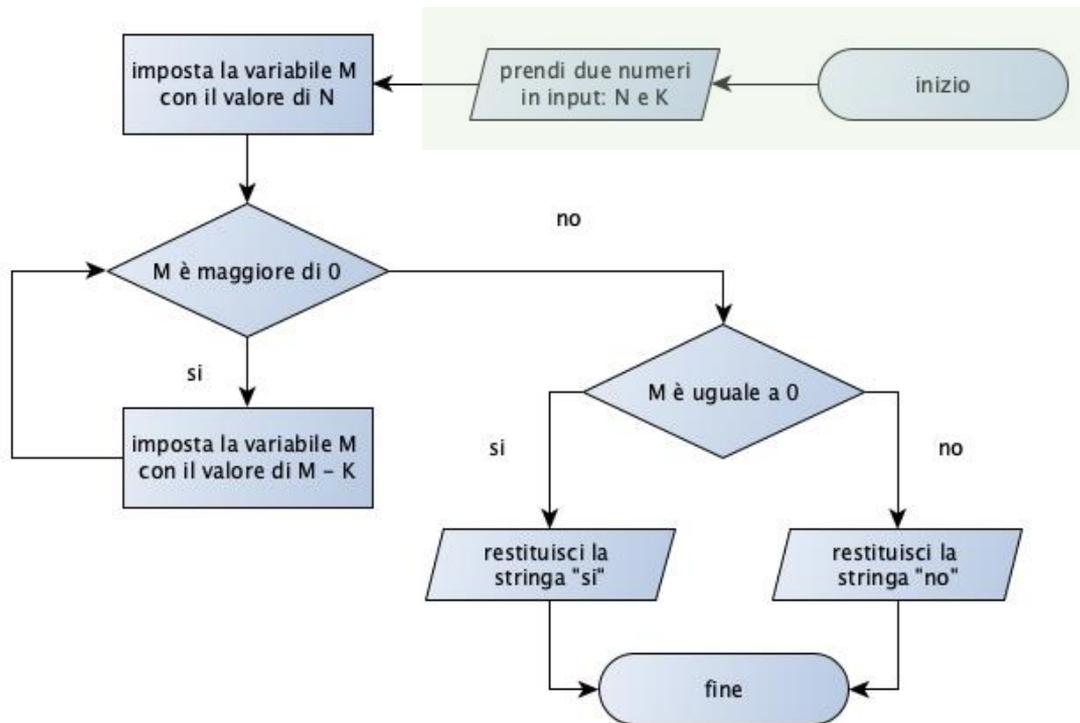


# Diagramma di flusso – esercizio



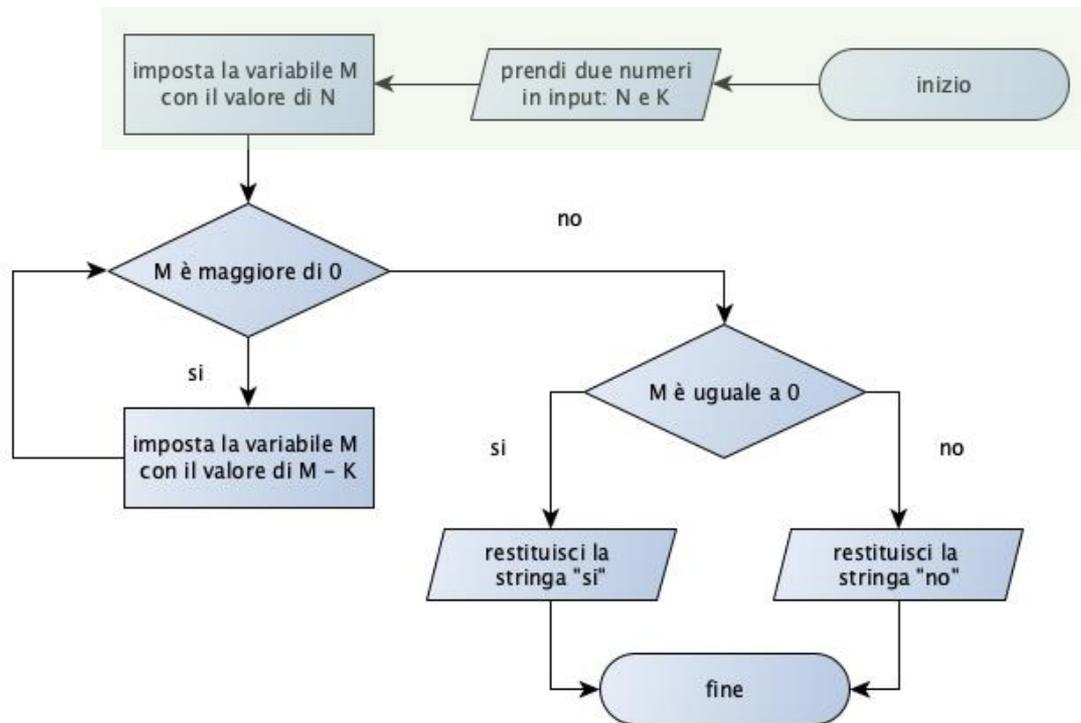
# Diagramma di flusso – esercizio

N	15
K	4



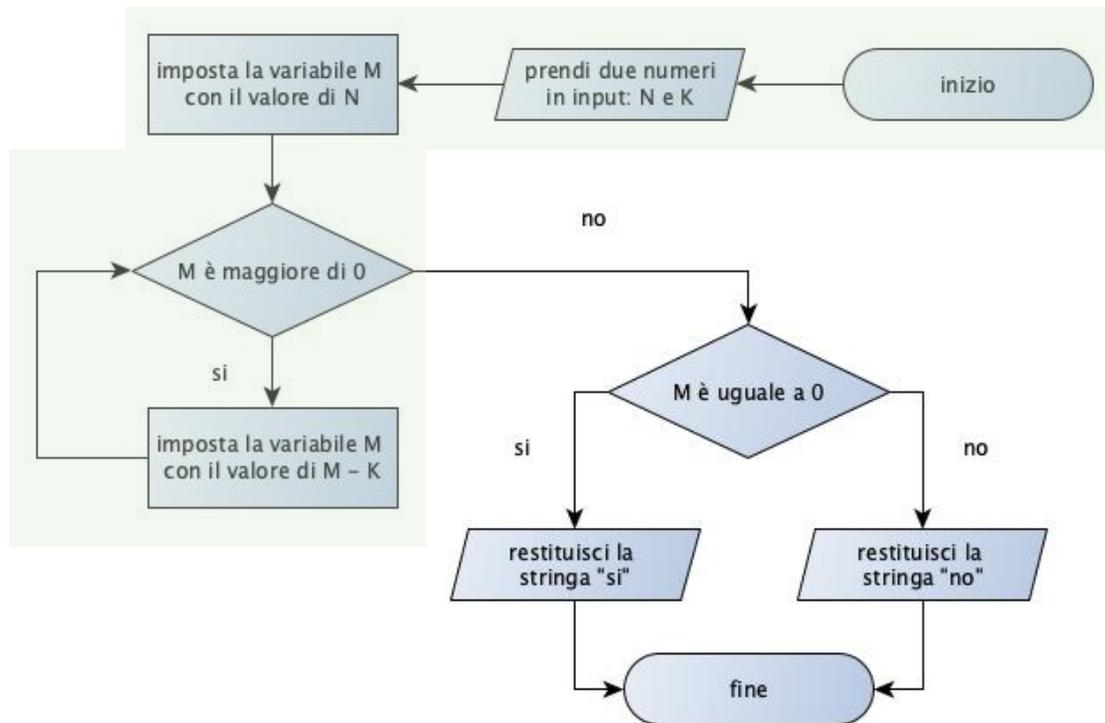
# Diagramma di flusso – esercizio

N	15
K	4
M	15



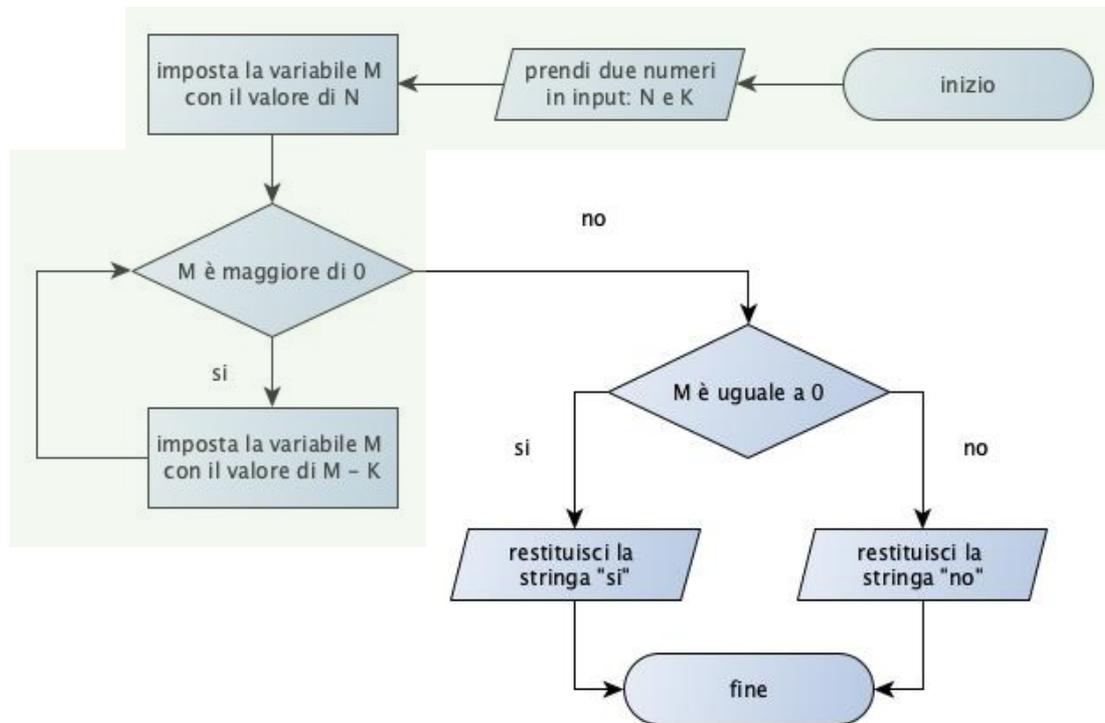
# Diagramma di flusso – esercizio

N	15
K	4
M	11



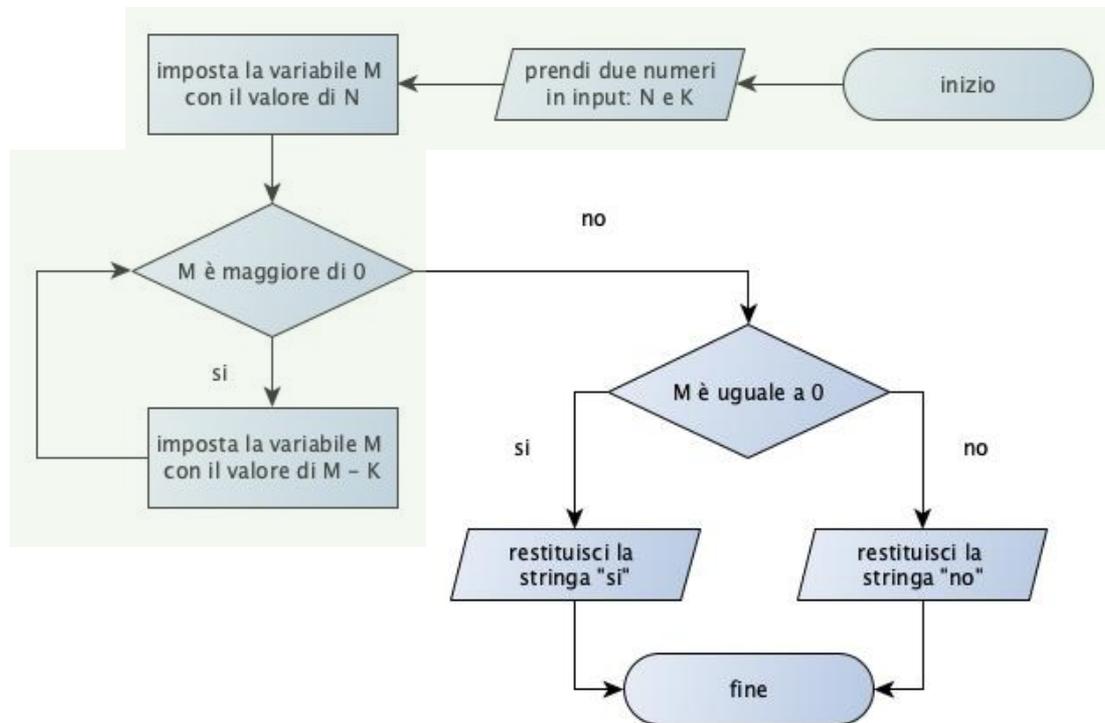
# Diagramma di flusso – esercizio

N	15
K	4
M	7



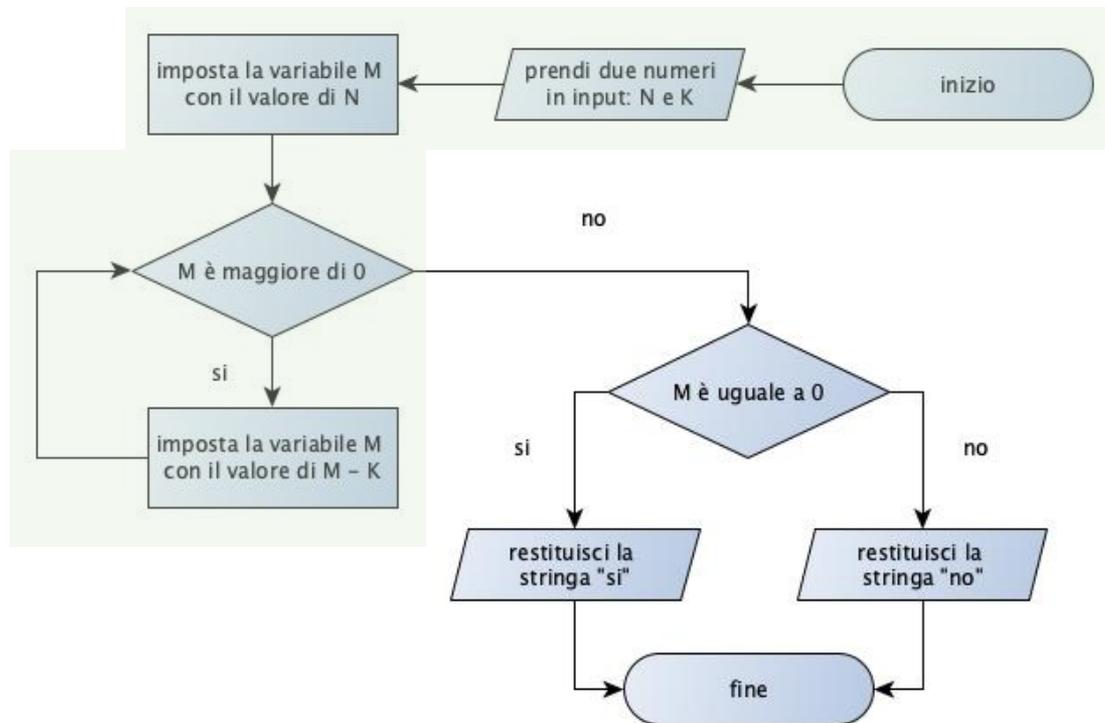
# Diagramma di flusso – esercizio

N	15
K	4
M	3



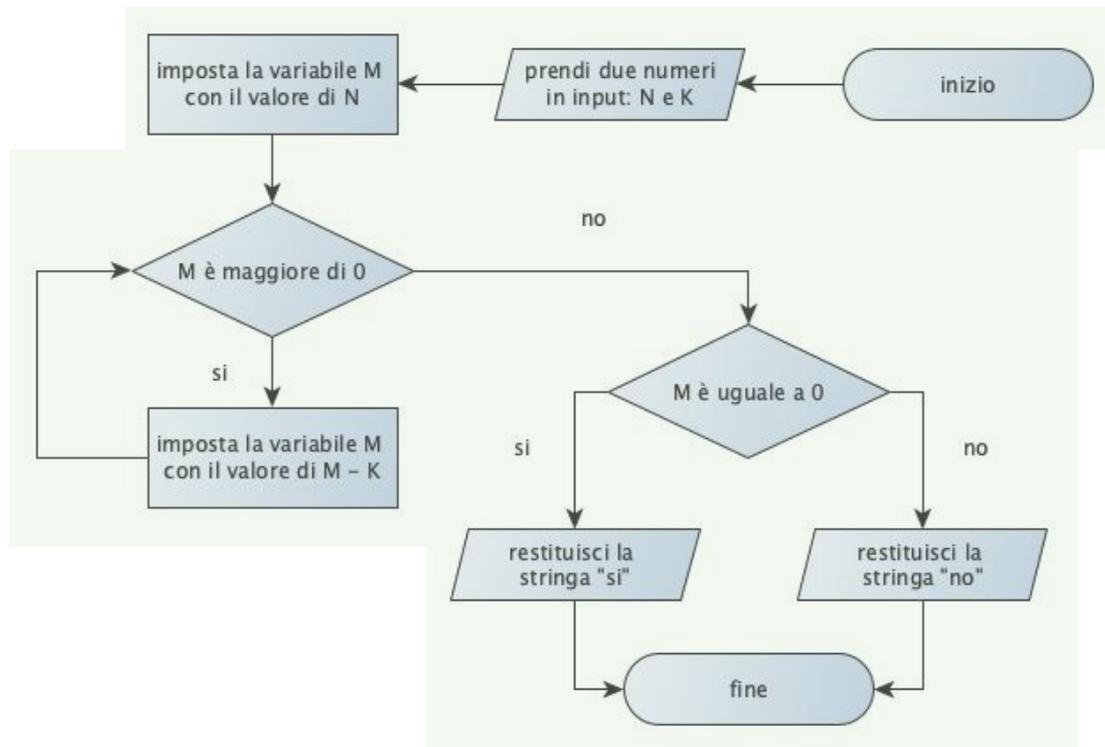
# Diagramma di flusso – esercizio

N	15
K	4
M	-1



# Diagramma di flusso – esercizio

N	15
K	4
M	-1



no

# Sistema numerico binario

BYTE							
$2^7$	$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
<b>128</b>	<b>64</b>	<b>32</b>	<b>16</b>	<b>8</b>	<b>4</b>	<b>2</b>	<b>1</b>

208							
1	1	0	1	0	0	0	0
$1 \times 2^7$	$1 \times 2^6$	$0 \times 2^5$	$1 \times 2^4$	$0 \times 2^3$	$0 \times 2^2$	$0 \times 2^1$	$0 \times 2^0$
128	64	32	16	8	4	2	1
$128 + 64 + 16 = 208$							

# Sistema numerico binario

154							
1	0	0	1	1	0	1	0
$1 \times 2^7$	$0 \times 2^6$	$0 \times 2^5$	$1 \times 2^4$	$1 \times 2^3$	$0 \times 2^2$	$1 \times 2^1$	$0 \times 2^0$
128	64	32	16	8	4	2	1
$128 + 16 + 8 + 2 = 154$							

# Sistema numerico binario

<b>80</b>							
?	?	?	?	?	?	?	?
$? \times 2^7$	$? \times 2^6$	$? \times 2^5$	$? \times 2^4$	$? \times 2^3$	$? \times 2^2$	$? \times 2^1$	$? \times 2^0$
128	64	32	16	8	4	2	1

# Sistema numerico binario

80							
0	1	0	1	0	0	0	0
$0 \times 2^7$	$1 \times 2^6$	$0 \times 2^5$	$1 \times 2^4$	$0 \times 2^3$	$0 \times 2^2$	$0 \times 2^1$	$0 \times 2^0$
128	64	32	16	8	4	2	1
64 + 16 = 80							

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