

CALCOLO FATTORIALE

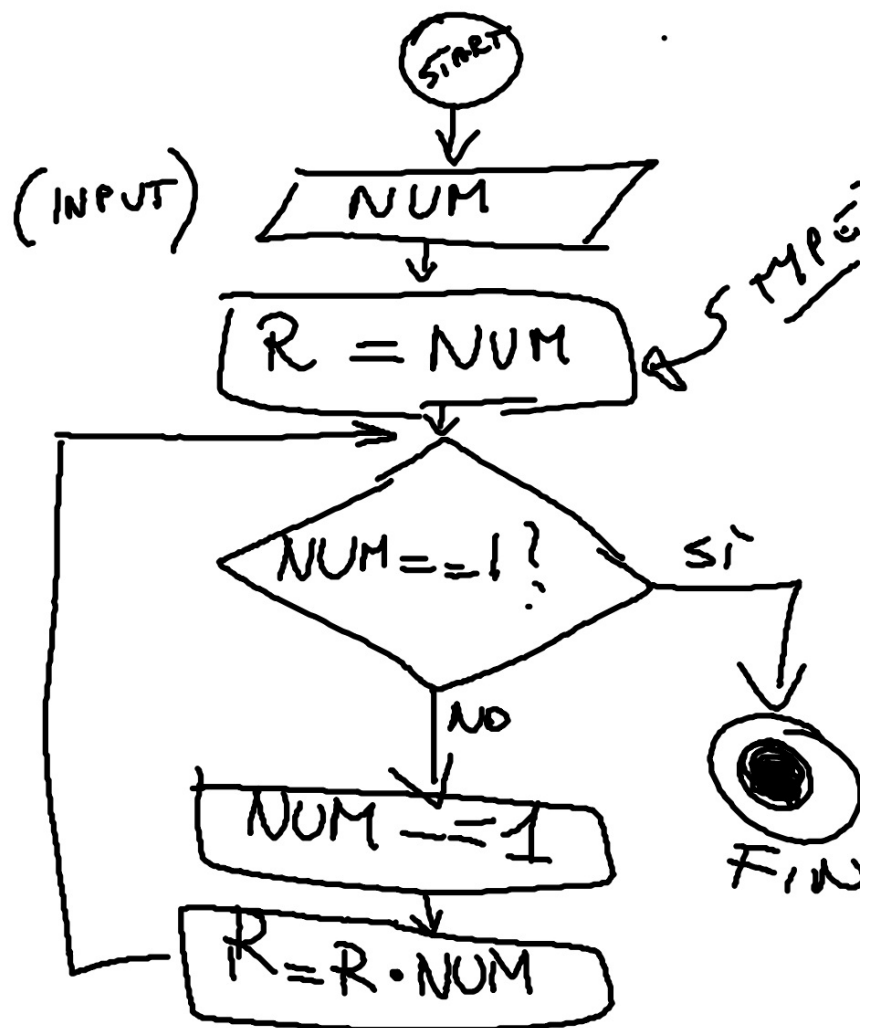
INPUT NUM = 4

R = 4 NUM = 4

R = 12 NUM = 3

R = 24 NUM = 2

R = 24 NUM = 1



DEF FATTORIALE (NUM) : IF NUM == 0
| RETURN 1

| R = NUM
| WHILE NUM > 1 :
| | NUM = NUM - 1
| | R = R * NUM
| RETURN R

TEST

| IN | 4 | 5 | 1 | 0 |
|-----|---|---|---|---|
| OUT | ✓ | ✓ | ✓ | ✗ |

(FR)

FATT_RICORSIVO (NUM):

NUM == 0:

RETURN 1

SE:

RETURN NUM * FATT_RICORSIVO (NUM-1)

3 FR2 FR1 FR0

| | N2 | N1 | N0 |
|---|-------|-------|----|
| 2 | 2.FR1 | 1.FR0 | 1 |
| 1 | 2 | 1 | |

NUM = 5
5 * 24

| TEST | | | | |
|------|---|---|---|---|
| IN | 4 | 5 | 1 | Ø |
| OUT | ✓ | ✓ | ✓ | ✓ |

ES 1

| | |
|---|-----|
| { | NUM |
| | R |

ES 2
(recursivo)

| |
|-----|
| NUM |
| NUM |
| . |
| . |
| . |

INCREMENTA (NUM1⁶, NUM2=1)
TURN NUM1 + NUM2

A = 2

B = 3

C = INCREMENTA (A)
C = 5

C = INCREMENTA (B)
C = 3

C = INCREMENTA (C)
C = 1