

SOLUZIONE EQ. II GRADO

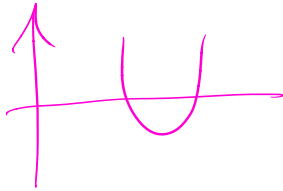
var a, b, c float64

fmt. Scan (&a)

fmt. Scan (&b)

fmt. Scan (&c)

→ if delta := b*b - 4*a*c; delta > 0 {
 }
 else if delta == 0 {
 →
 }
 else {
 →
 }
}



Δ $\begin{cases} > 0 & \text{due soluzioni} \\ & \text{distinte} \\ & X_{1,2} = \frac{-b \pm \sqrt{\Delta}}{2a} \\ = 0 & \text{due sol.} \\ & \text{coincidenti} \\ & \Delta = b^2 - 4ac \\ < 0 & \text{non ci} \\ & \text{sono sol.} \\ & \text{reali} \end{cases}$

```

if delta := b*b - 4*a*c; math.Abs(delta) < 1E-6 {
    x := -b / (2*a) delta = 0
    funt. Println("Due soluzioni  
coincidenti", x)

```

```

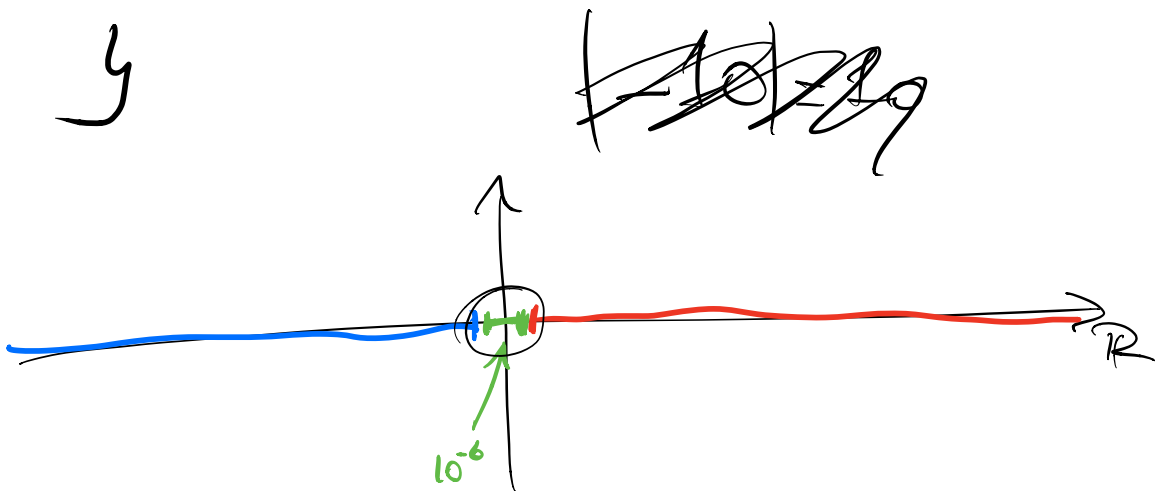
} else if delta > 0 {
    x1 := (-b + math.Sqrt(delta)) / (2*a)
    x2 := (-b - math.Sqrt(delta)) / (2*a)
    funt. Println("Due soluzioni  
distinte", x1, "e", x2)

```

```

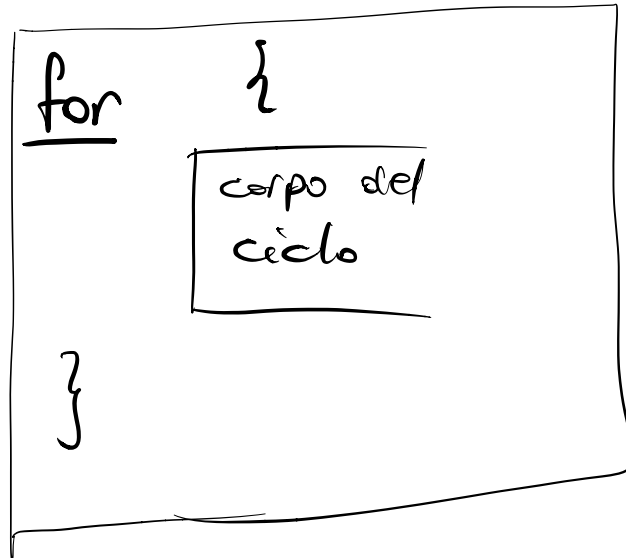
} else {
if delta < 0
    funt. Println("Non ci sono  
soluzioni reali")
}

```



ITERAZIONE

FOR D-dario

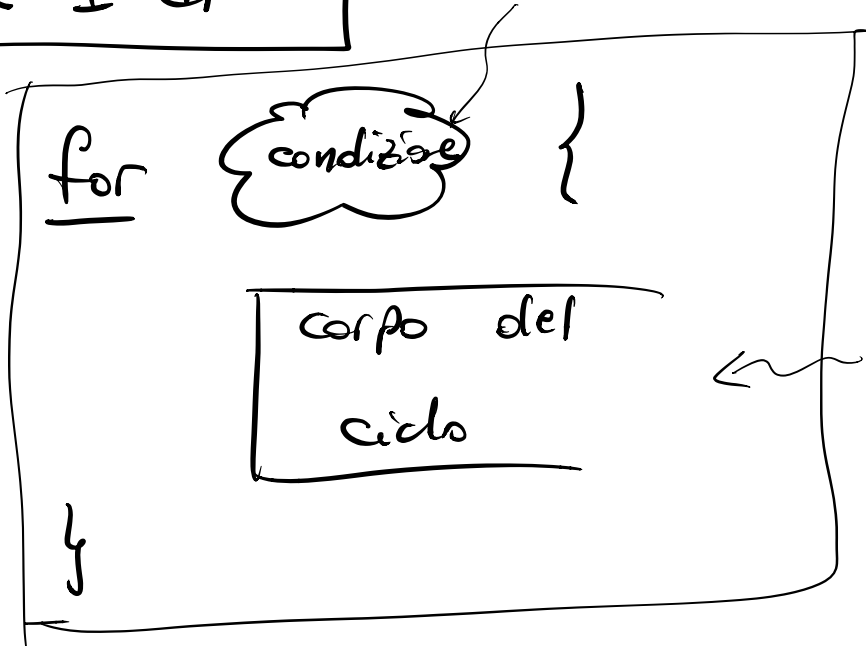


```
for {  
    fut. Println("Sei bellissimo")  
}
```

for (;;) while (true)
--

FOR 1-ario

"condizione di ciclo"



$0 \rightarrow \infty$

ESERCIZI

- Dato un numero intero, stampare quante cifre ha

```
var n, c int
fun. Scan(&n)
if n == 0 {
  else { c = 1
    for n != 0 {
      n /= 10
      c++
    }
  }
}
fun. Println(c)
```

- Dato n , calculate

$$\rightarrow 1+2+\dots+n$$

$$\begin{array}{rcl} S & = & 1 + 2 + \dots + n \\ S & = & n + (n-1) + \dots + 1 \\ \hline 2S & = & (n+1) + (n+1) + \dots + (n+1) \end{array}$$

n volte

$$2S = n(n+1)$$
$$S = \frac{n(n+1)}{2}$$

var n, s, i int

fun. Scan(n)

$i = 1$

i CONTATORI

S ACCUMULATORE

for $i \leq n$ {

$S += i$
 $i++$ ||

}
fun. Println(s)

fmt.Println (n * (n+1) / 2)

ALGORITMO DI EUCLIDE

Problema: Dati due interi positivi x e y , calcolare il loro MCD (Massimo Comune Divisore)

$$\begin{array}{r|l} 630 & 2 \\ 315 & 5 \\ 63 & 3 \\ 21 & 3 \\ 7 & 7 \\ 1 & \end{array}$$

$$\begin{array}{r|l} 168 & 2 \\ 84 & 2 \\ 42 & 2 \\ 21 & 3 \\ 7 & 7 \\ 1 & \end{array}$$

$$630 = 2 \cdot 5 \cdot 3^2 \cdot 7$$

$$168 = 2^3 \cdot 3 \cdot 7$$

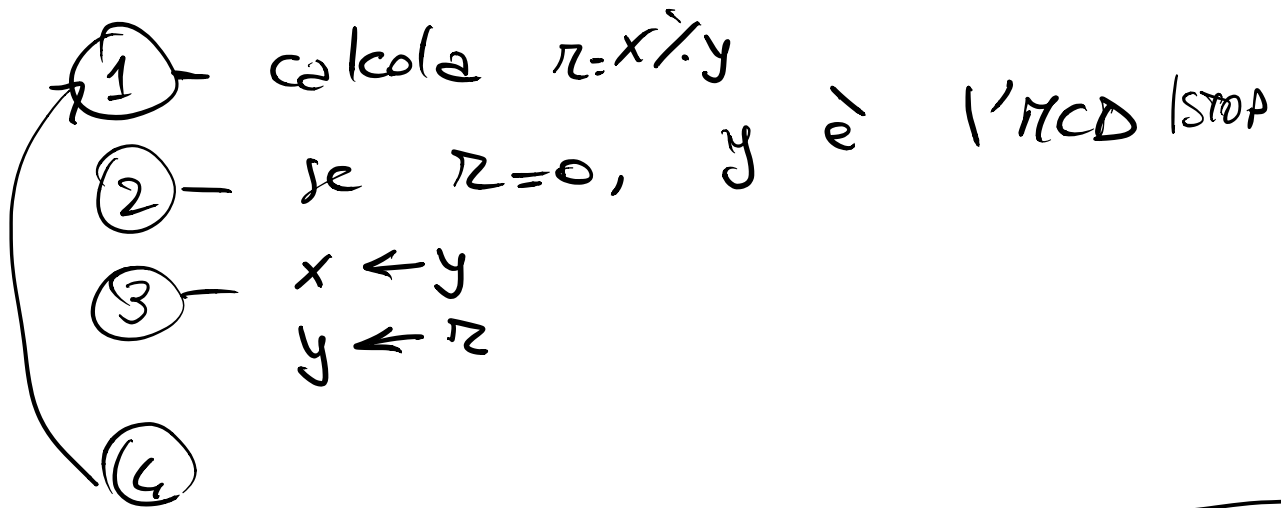
$$\text{MCD} = 42 = 2 \cdot 3 \cdot 7$$

fmt. Scan (&x)

fmt. Scan (&y)

```
n := x
if y < x {
  n = y
}
for (x % n != 0 || y % n != 0) {
  n--
}
```

$x \% n == 0 \ \&\& \ y \% n == 0$



x 630 y 168 r

funct. Scan (&x)

funct. Scan (&y)

$r := x \div y$

for . $r \neq 0$ {

$x = y$

$y = r$

$r = x \div y$

$x, y = y, r$

}

→

ESERCIZI

a - Calcola la somma
 $1^2 + 2^2 + \dots + n^2$

b - Stampa le potenze di 2
 $\leq n$

c - Stampa le prime n
potenze di 2

d - Stampa un conto alle
rovescia

7 ... 6 ... 5 ... 4 ... 3 ...