

TIP1 INTERI

LETTERA int/uint

$$\left[\begin{array}{l} x = \underline{4} \\ y = \underline{(3+x)/12} \end{array} \right]$$

13 } esempi di letterali
312 } int decimali
-13 }

012 } in base 8
~~09~~

0x12 } in base 16
0x1A8 }

0b10010 } in base 2
0b0111 }

var x, y, z int

x = 0b101 //5

y = 0x12 //18

z = (x+y)/010 //8

func. Println(z)

↓

2

TIPI FLOATING-POINT

REAL ——— float 32, float 64
COMPLEX ——— complex 64, complex 128

REAL

LETTERALI FLOATING-POINT

3.14

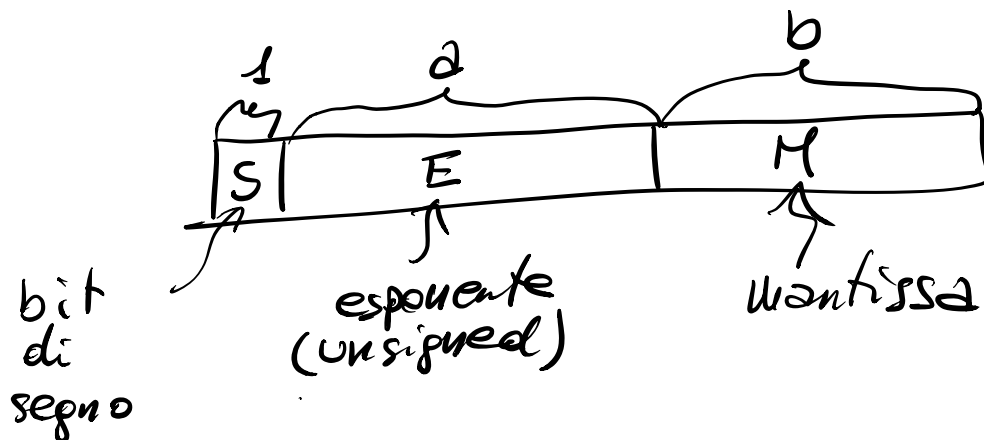
- . 1

1.12 E - 3

3.4 E 12

COME VIENE MEMORIZZATO

(IEEE 754)



Se $E \neq 00000$

$$(-1)^S \cdot \underline{2^{E-\text{bias}}} \cdot \boxed{1.M}$$

$$12.375 = 1100.011 = \rightarrow$$

$$\begin{array}{cccc} 1 & 1 & 0 & 0 \\ \uparrow & \uparrow & \uparrow & \uparrow \\ 2^3 & 2^2 & 2^1 & 2^0 \end{array}$$

$$\begin{array}{ccc} 0 & 1 & 1 \\ \uparrow & \uparrow & \uparrow \\ 2^{-1} & 2^{-2} & 2^{-3} \end{array}$$

$$0.375 = 2^{-2} + 2^{-3}$$

$$\downarrow \quad \frac{1}{4} + \frac{1}{8} =$$

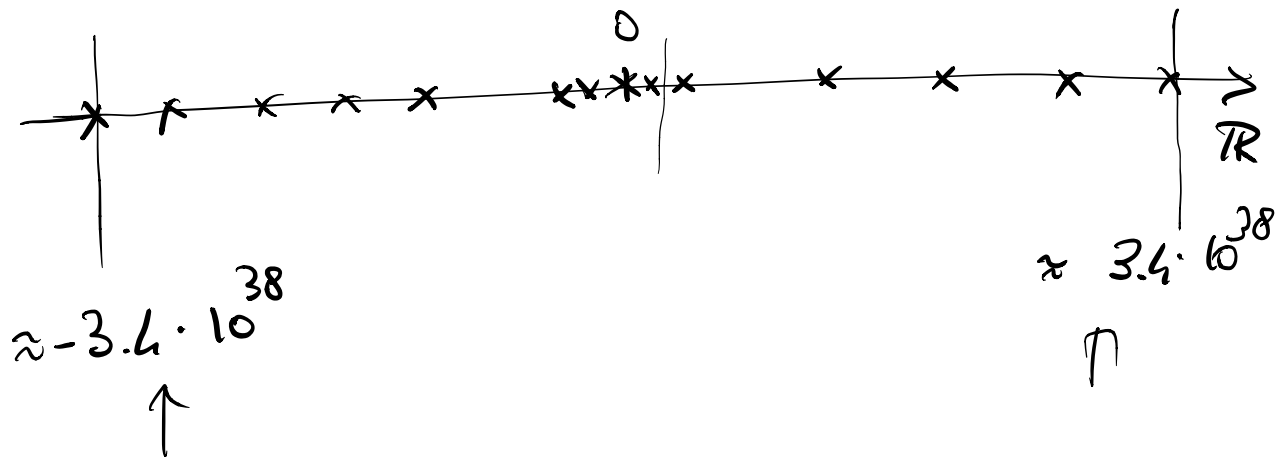
$$= \frac{2+1}{8} = \frac{3}{8}$$

$$\begin{array}{r|l} 12 & 2 \text{ r. } 0 \\ 6 & 2 \text{ r. } 0 \\ 3 & 2 \text{ r. } 1 \\ 1 & 2 \text{ r. } 1 \\ 0 & \end{array}$$

$$\rightarrow = 1. \underline{100011} \cdot \underline{2^3} \quad \begin{array}{l} E-\text{bias}=3 \\ E-127=3 \\ E=130 \end{array}$$

0	0001000010	1000110000
E		

TIPO	bit	byte	
float32	32	4	$a=8$ $b=23$ $\text{bias} = 127$
float64	64	8	$a=11$ $b=52$ $\text{bias} = 1023$



float32

COMPLEX1

$3.5 + 4i$

$(3.5, 4)$

Q11 z, x, y complex

$$x = 3.5 + 4i$$

$$y = 3i$$

$$z = x * y$$

$$3i (3.5 + 4i) =$$

$$= 10.5i - 12$$

CARATTERI

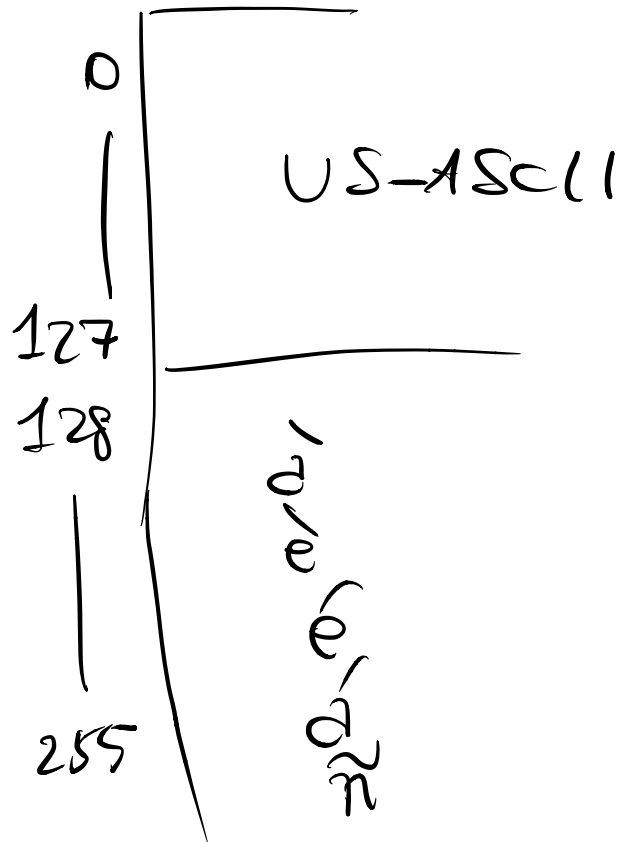
- STANDARD US-ASCII

	7-bit	CARATTERI
0	0000000	
	'	NEW LINE
	<	CARRIARE RETURN
	<	
	<	
127	1111111	

pippo.go

```
package main •
import "fmt"
...
```

- 150 - 8859 - 1 (Latin, Western)
8-bit



- Unicode
codepoints

carattere



$$17 \cdot 2^{16} = 11111112$$

32 bit

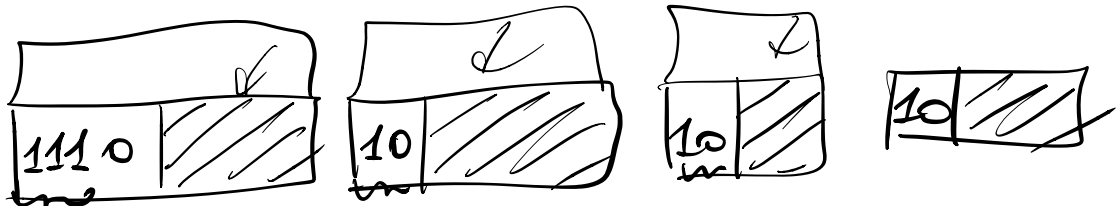
UTF-32

Nel mezzo del camino di
nostra vita ...



- UTF-16 Java ~~GoLang~~

- UTF-8 GoLang
1 carattere = 1 ÷ 4 byte



n° di byte
complessivi:

(tranne nel caso
che si usi un solo
byte)

