

Programmazione I

Lezione 15

Operatori in GO

Binari						
*	/	%		^	&	&^
+	-		<<	>>		
==	!=	<	<=	>	>=	
&&						
Unari						
++	--					
+	-	!	^	*	&	<-

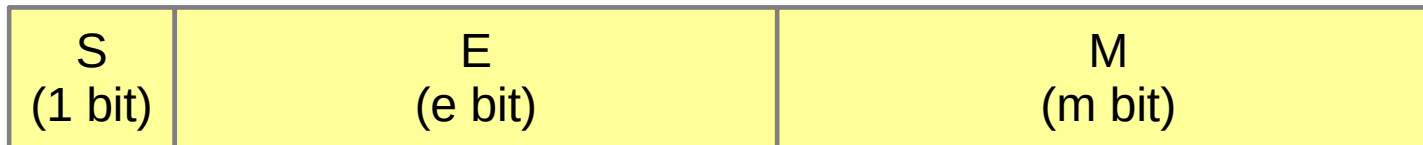
Playing with bits

- GO “format verbs” <https://golang.org/pkg/fmt/>
- Tipi int (play_with_bits_int.go)
 - Esperimento: trova max. int, trova min. int
 - Costanti “Max” e “Min”
 - Esperimento: stampa valore in decimale e il corrispondente in binario
- Package math

Playing with bits

- Tipi float

- Standard IEEE 754



- S → Segno, E → Esponente, M → Mantissa (significand)

$$(-1)^S * 2^{E-\text{bias}} * M$$

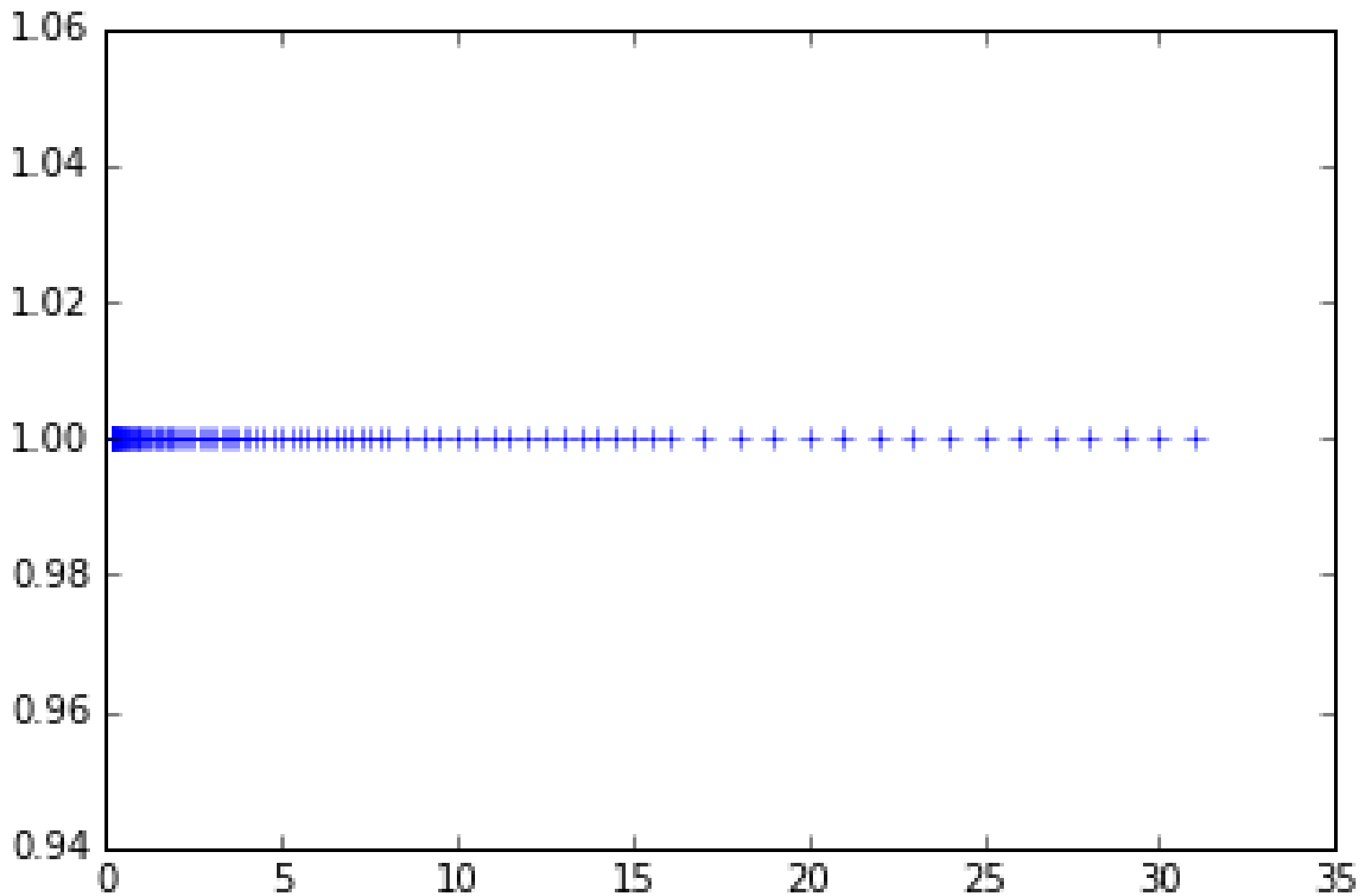
- 32 bit (4 byte) → e = 8, m = 23, bias = $2^7-1 = 127$ →

$$\pm 10^{-45} \dots \pm 3.4 \cdot 10^{38}$$

- 64 bit (8 byte) → e = 11, m = 52, bias = $2^{10}-1 = 1023$ →

$$\pm 5 \cdot 10^{-324} \dots \pm 1.7 \cdot 10^{308}$$

- Esperimento: memorizza 0.1 e stampalo con elevata precisione!
- `play_with_bits_part2.go`



- Densità float (mantissa 4 bit, esponente in $[-3, 4]$)
(preso da relate.cs.illinois.edu/course/cs450-s18)