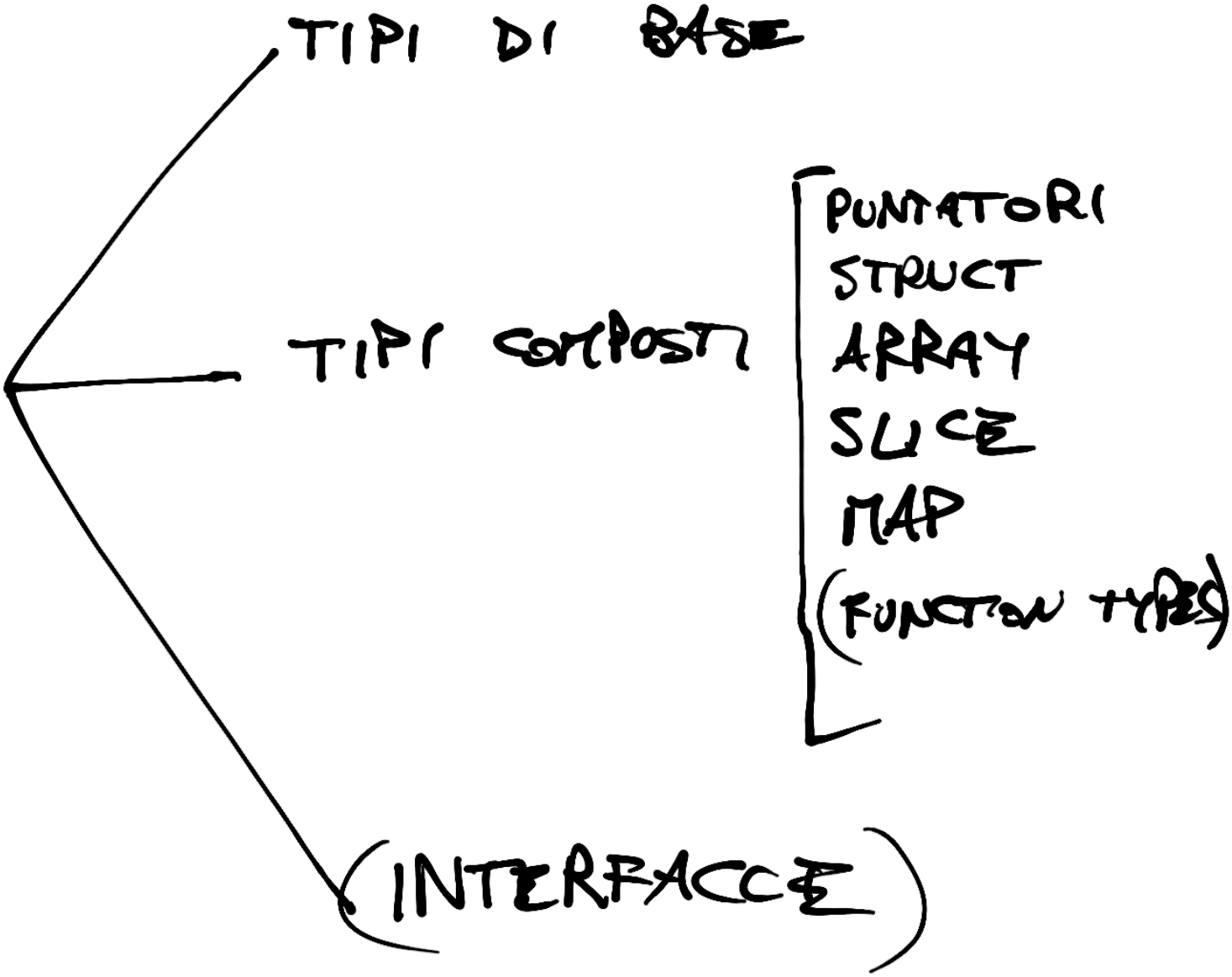
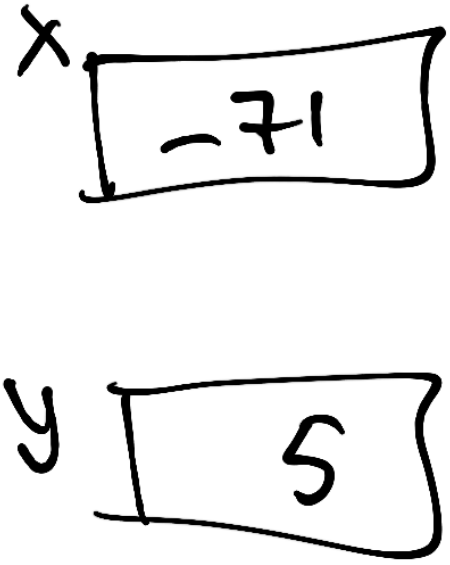
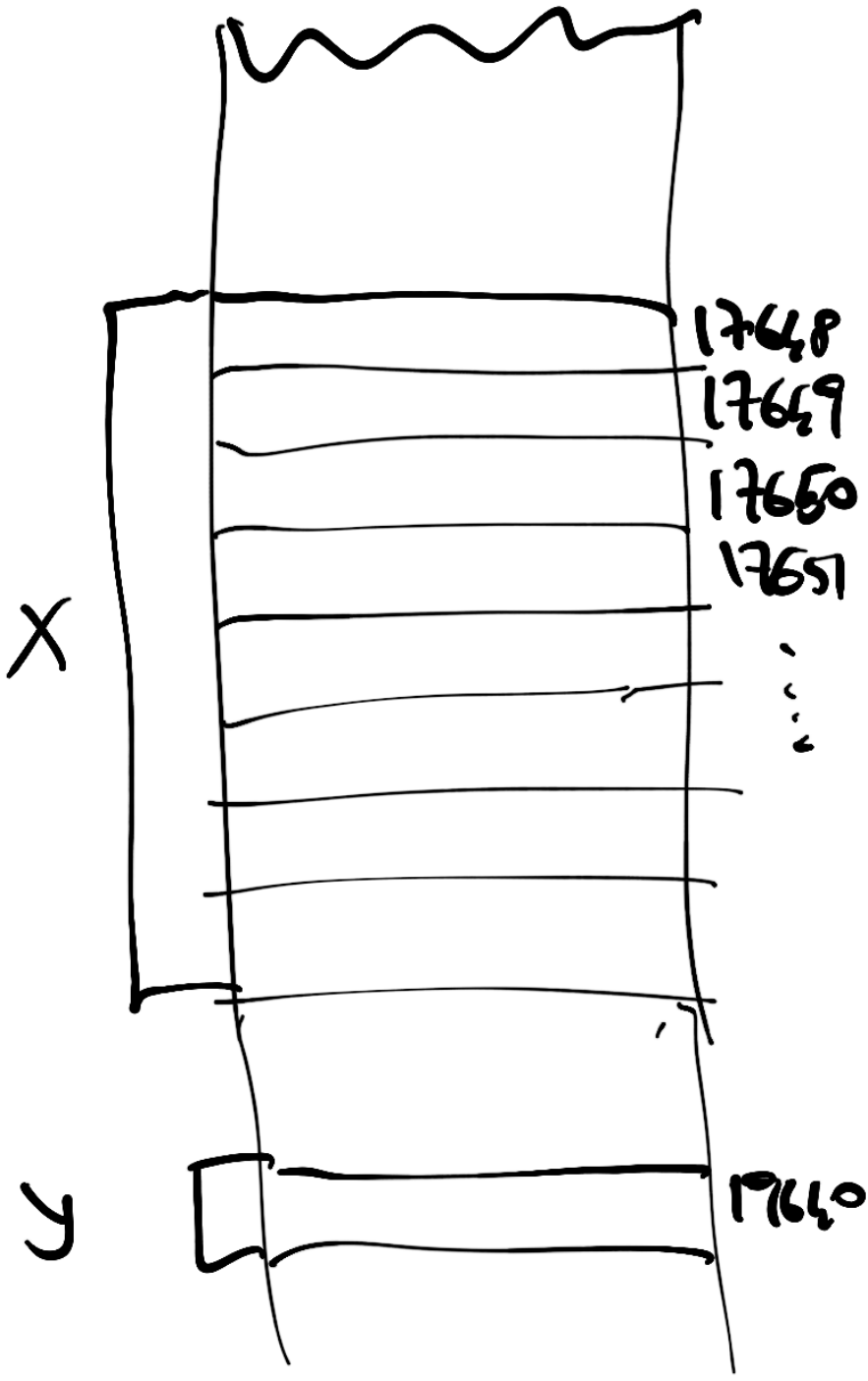
TIPI IN GO


TIPI DI BASE
TIPI COMPOSTI
PUNTATORI
STRUCT
ARRAY
SLICE
MAP
(FUNCTION TYPES)
(INTERFACCE)

var x int64

var y uint8





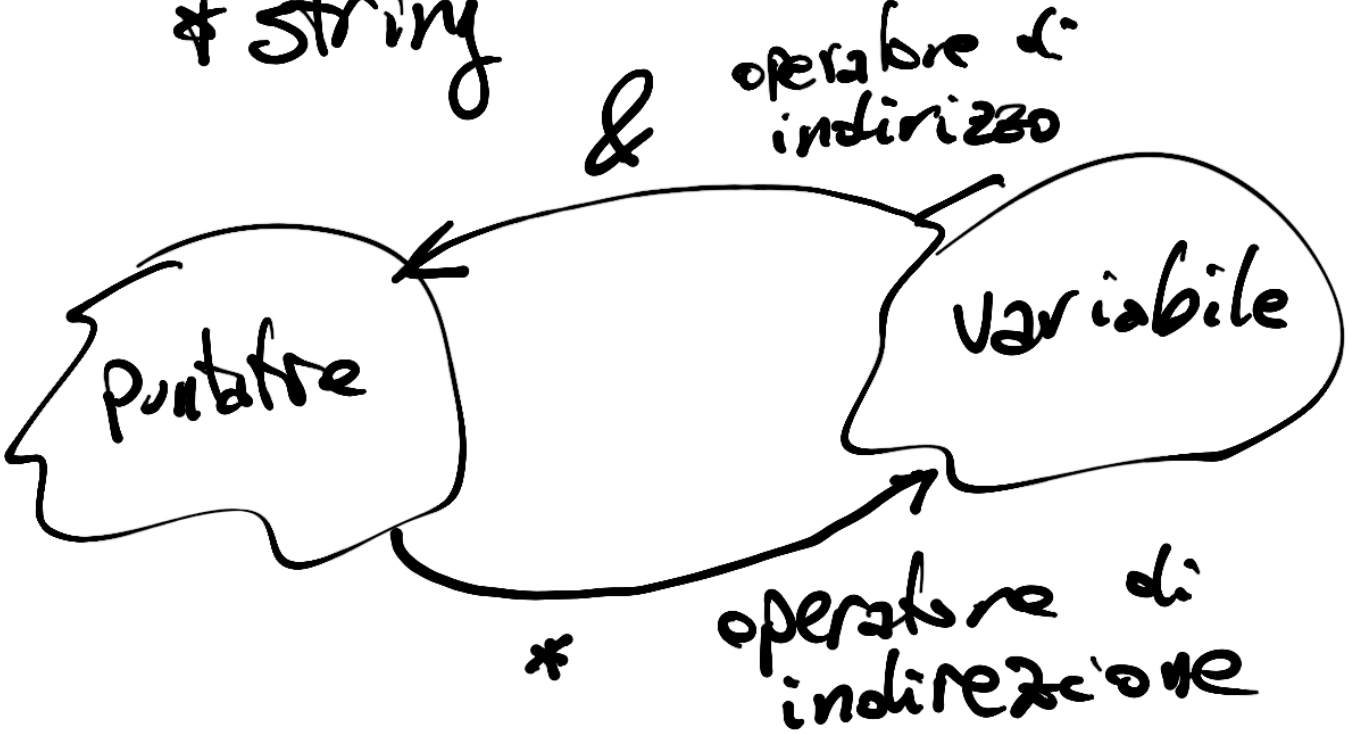
PUNTATORE ≡ LOCAZIONE DI MEM.
(indirizzo)

---

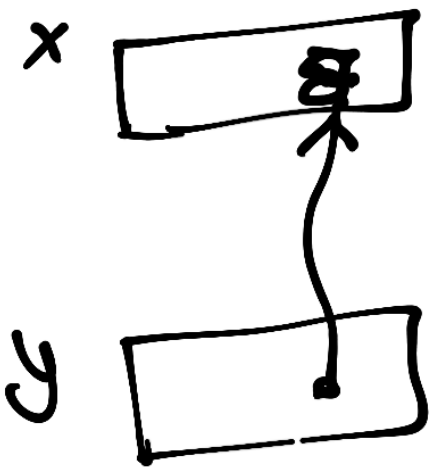
*T

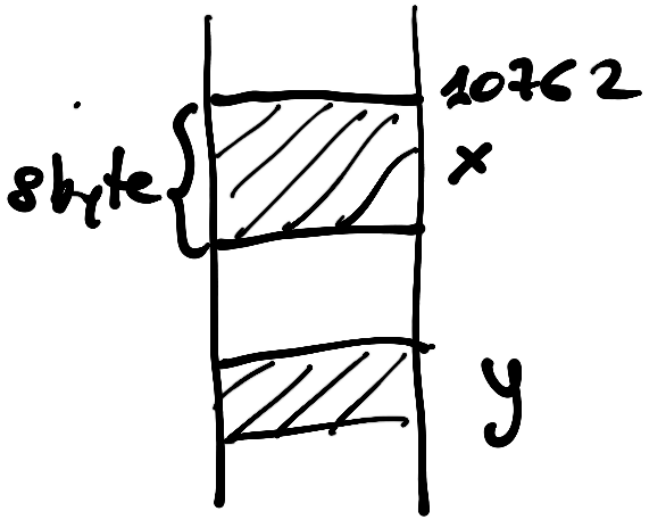
"puntatore a T"

* int16
* uint8
* string

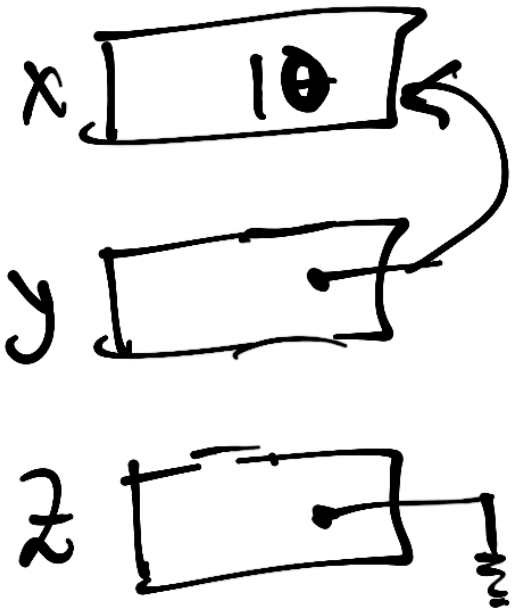


```
var  x  int64
var  y  *int64

x = 7
y = &x
(*y)++
fmt.Println(*y)
fmt.Println(y)
```





```
var x int64
var y *int64
var z **int64

x = 7
y = &x
*y = *y + 3
```



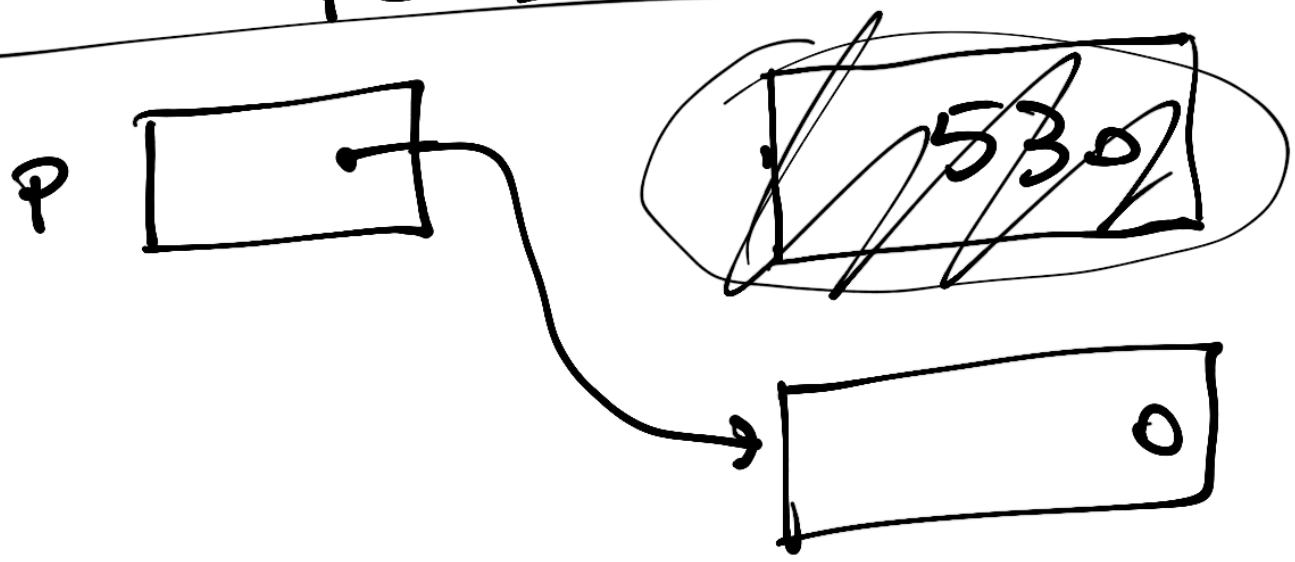
```
var x string = "ciao"
var p *string
p = &x
fmt.Println(p)
fmt.Println(*p)
fmt.Println((*p)[0])
fmt.Println(len(*p))
fmt.Println(**p)
```

new

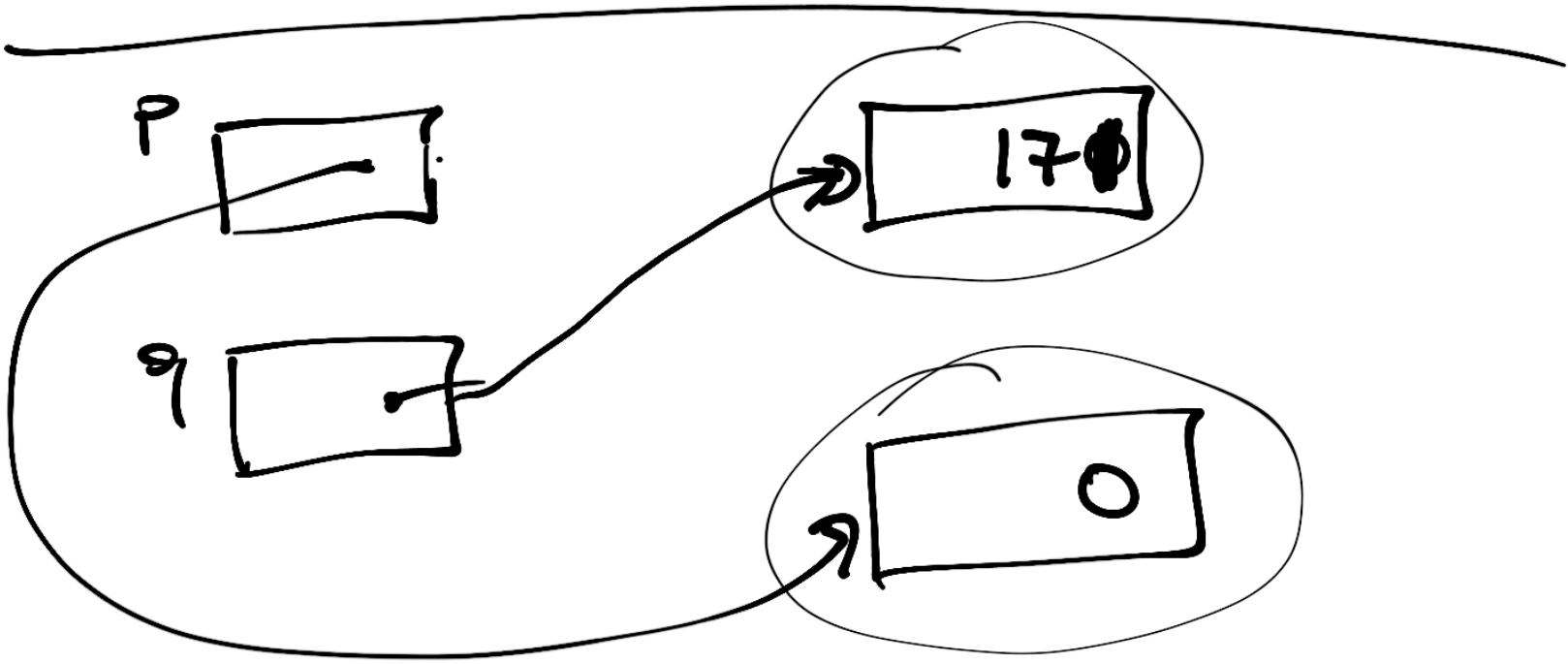
new (T) ← tipo

- CREA UNO SPAZIO DI MEMORIA ABBASTANZA GRANDE PER T
- RESTITUISCE L'INDIRIZZO

```
var p *int64
p = new (int64)
*p = 530
p = new (int64)
```



```
var p, q *int
p = new (int)
*p = 170
q = p
p = new (int)
(*q)++
fmt.Println (*p, *q)
```

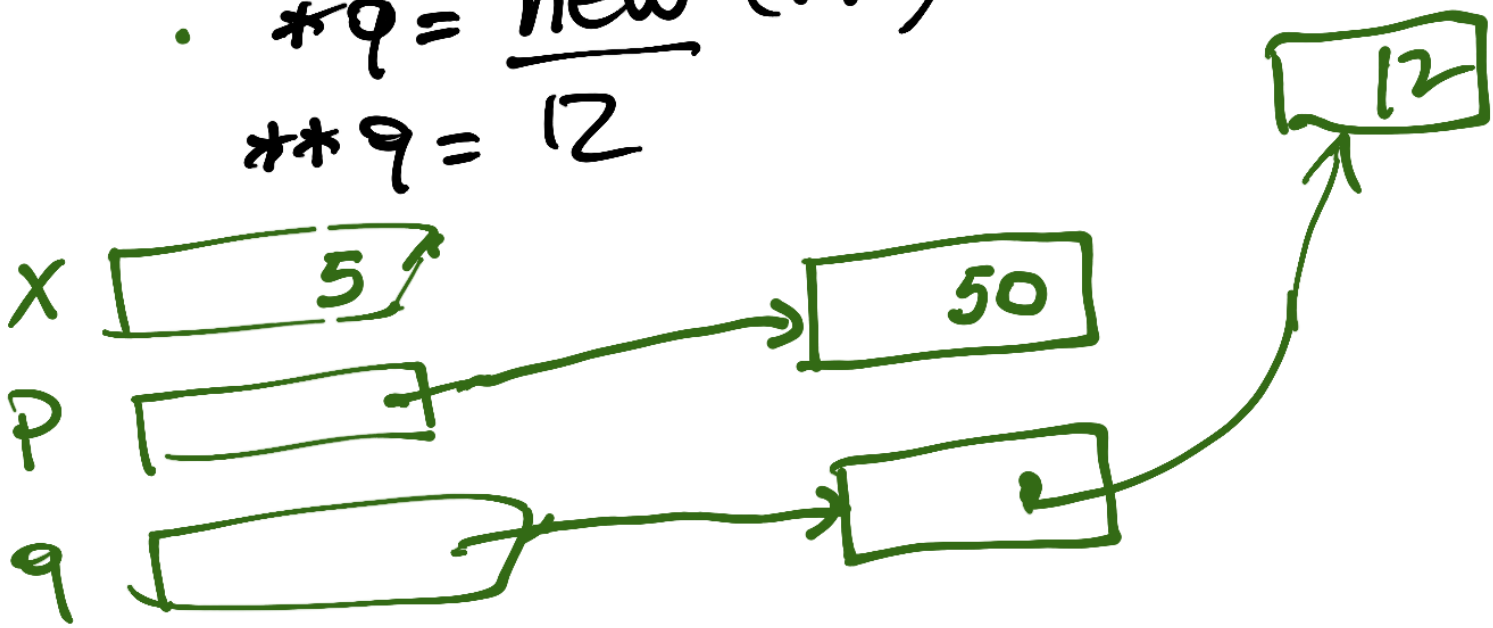


var x int

var p *int

var q **int

- x = 7
- p = &x
- q = &p
- p = new (int)
- *p = 50
- q = new (*int)
- *q = &x
- **q = 5
- *q = new (int)
- **q = 12



```
func  inc2(x int) {
      x += 2
}
```

~~pippo = pippo + 2~~

```
inc2(pippo)
```

```
func  inc2(x int) int {
      return x+2
}
```

~~pippo = pippo + 2~~

```
pippo = inc2(pippo)
```

```
func  inc2(x *int) {
      (*x) += 2
}
```

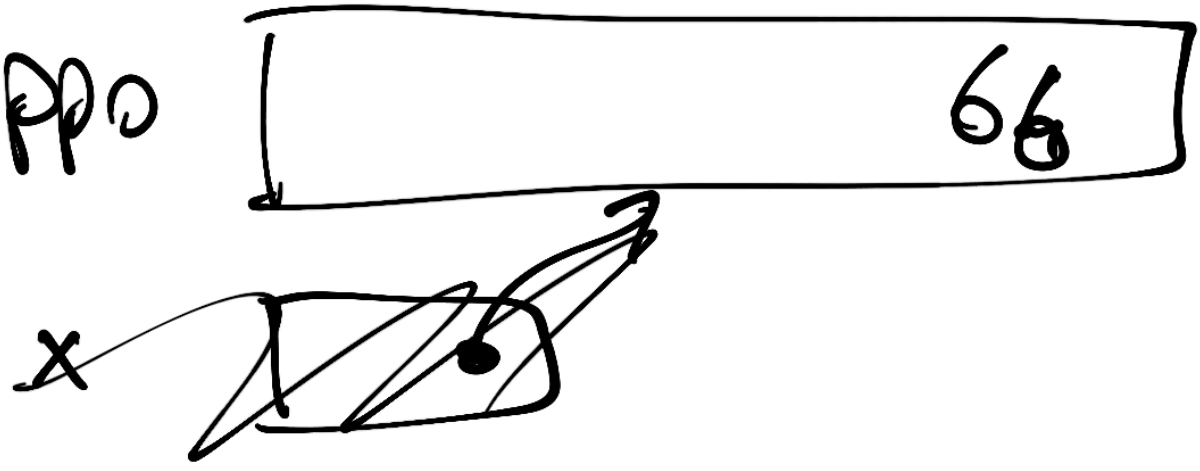
~~pippo = pippo + 2~~

```
inc2(&pippo)
```

intHuge 1000000 bit

```
func inc2(x *intHuge) {
    (*x) += 2
}

...

var pippo intHuge
pippo = inc2(&pippo)
```

main



```
func round (x *float64, n int) {
    for i:=0; i<n; i++{
        (*x) *= 10
    }
    dec := *x - float64(int(*x))
    if dec > 0.5 {
        *x = *x - dec + 1.0
    }else{
        *x = *x - dec
    }
    for i:=0; i<n; i++{
        (*x) /= 10
    }
}
```