

# Go Structs

WASA: Web and Software Architecture

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# Structs

```
package main
import "fmt"
type Vertex struct {
    x int
    y int
}
func main() {
    v := Vertex{1, 2}
    fmt.Println(v)           // {1 2}
    v.x = 4
    fmt.Println(v)           // {4 2}
    m := v.x*v.x + v.y*v.y
    fmt.Println(m)           // 20
}
```

# Pointers to Structs

```
// ...  
p := &v  
p.x = 5  
fmt.Println(v) // {5 2}  
// ...
```

## Struct literals

```
var (  
    v1 = Vertex{1, 2} // has type Vertex  
    v2 = Vertex{x: 1} // y:0 is implicit  
    v3 = Vertex{}     // x:0 and y:0  
    p  = &Vertex{1, 2} // has type *Vertex  
)
```