

Module 3: Object-Orientation in Go

Topic 2.2: Pointer Receivers

Limitations of Methods

- Receiver is passed implicitly as an argument to the method
- Method cannot modify the data inside the receiver
- Example: `OffsetX()` should increase x coordinate

```
func main() {  
    p1 := Point(3, 4)  
    p1.OffsetX(5)  
}
```

Large Receivers

- If receiver is large, lots of copying is required

```
type Image [100][100]int
func main() {
    i1 := GrabImage()
    i1.BlurImage()
}
```

- 10,000 ints copied to `BlurImage()`

Pointer Receivers

- Receiver can be a pointer to a type
- Call by reference, pointer is passed to the method

```
func (p *Point) OffsetX(v float64)
{
    p.x = p.x + v
}
```