Go Slice Tricks Cheat Sheet

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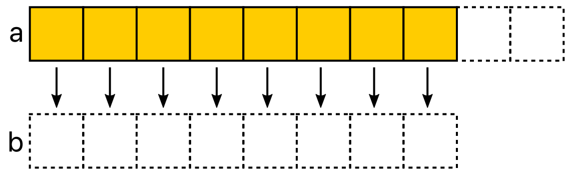
https://github.com/golang/go/wiki/SliceTricks

Copy

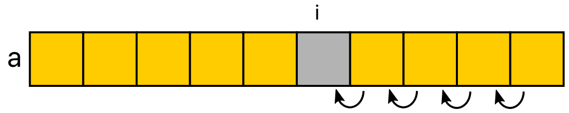


```
b = make([]T, len(a))
copy(b, a)
```

```
b = append([]T(nil), a...)
```

```
b = append(a[:0:0], a...)
```

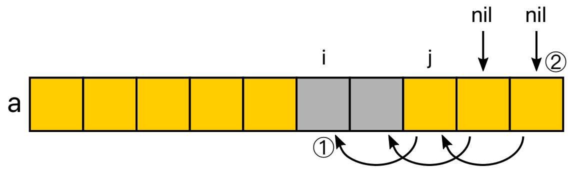
Delete



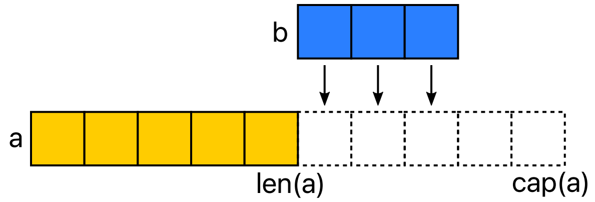
```
a = append(a[:i], a[i+1:]...)
```

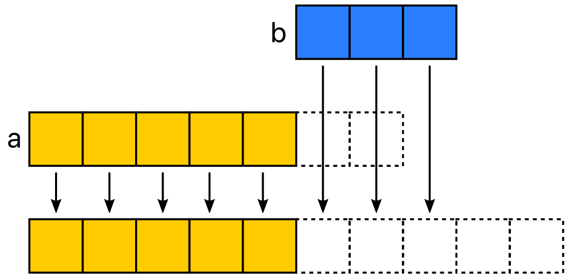
```
a = a[:i+copy(a[i:], a[i+1:])]
```

Cut (GC)



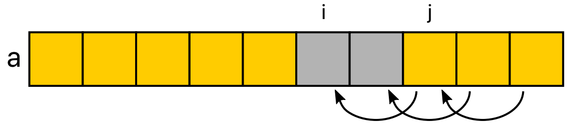
AppendVector





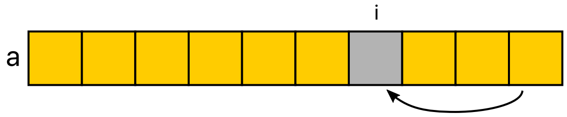
```
a = append(a, b...)
```

Cut



```
a = append(a[:i], a[j:]...)
```

Delete without preserving order

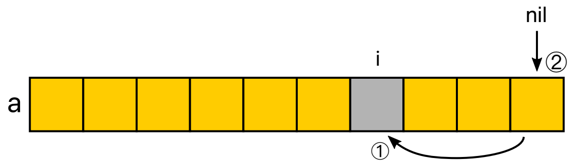


```
a[i] = a[len(a)-1]
a = a[:len(a)-1]
```

Delete (GC)

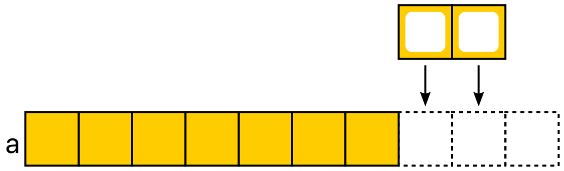
```
copy(a[i:], a[j:])
for k, n := len(a)-j+i, len(a); k < n; k++ {
 a[k] = nil // or the zero value of T
}
a = a[:len(a)-j+i]
```

Delete without preserving order (GC)



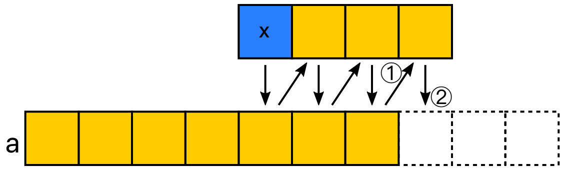
```
a[i] = a[len(a)-1]
a[len(a)-1] = nil
a = a[:len(a)-1]
```

Extend



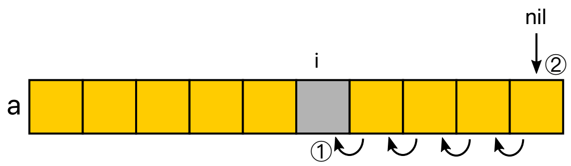
```
a = append(a, make([]T, j)...)
```

Insert



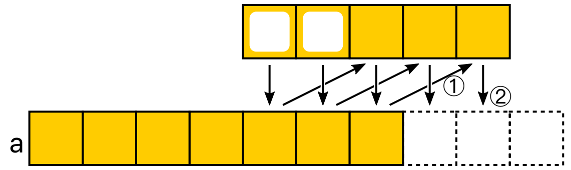
```
a = append(a[:i], append([]T{x}, a[i:]...)...)
```

Push



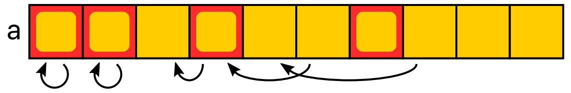
```
if i < len(a)-1 {
  copy(a[i:], a[i+1:])
}
a[len(a)-1] = nil // or the zero value of T
a = a[:len(a)-1]
```

Expand



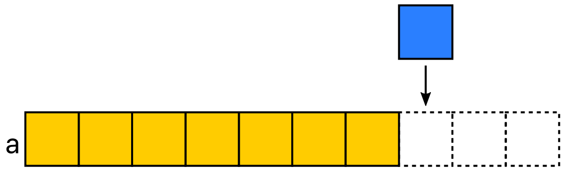
```
a = append(a[:i], append(make([]T, j), a[i:]...)...)
```

Filter (in place)



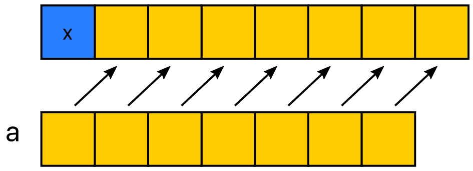
```
n := 0
for _, x := range a {
 if keep(x) {
  a[n] = x
  n++
 }
}
a = a[:n]
```

InsertVector

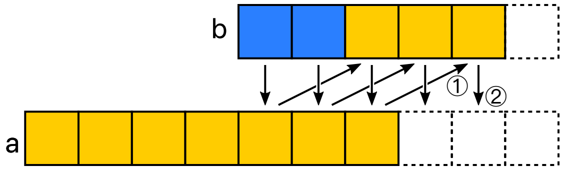


```
a = append(a, x)
```

Push Front/Unshift

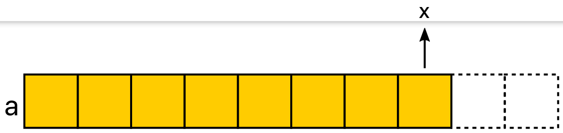


```
a = append([]T{x}, a...)
```



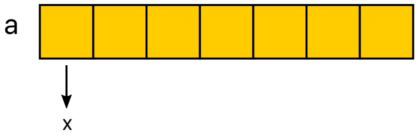
```
a = append(a[:i], append(b, a[i:]...)...)
```

Pop



```
x, a = a[len(a)-1], a[:len(a)-1]
```

Pop Front/Shift



```
x, a = a[0], a[1:]
```