链滴

golang 之 slice

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原文链接：https://ld246.com/article/1538399274035
来源网站：链滴

```go
package arraryList

import "fmt"

type ArraryList struct {
    Slice []interface{}
}

func test() {
    //s := make([]interface{}, 10)
    s := make([]interface{}, 0, 10)
    for i := 0; i < cap(s); i++ {
        s = append(s, i)
    }
    fmt.Println("the origin s and cap:", s, cap(s))
    /**
        slice s的增删查改
     */
    arraryList := &ArraryList{}
    s = arraryList.Add(s, 100, 6)
    arraryList.AddLast(&s, 101)
    fmt.Println("add s and cap:", s, cap(s))

    s = arraryList.Edit(s, 100, 5)
    fmt.Println("edit s and cap:", s, cap(s))

    s = arraryList.Remove(s, 5)
    fmt.Println("delete s and cap:", s, cap(s))

    value := arraryList.Get(s, 5)
    fmt.Printf("get s[%d]'s value:%v\n", 5, value)

    s1 := s

    //使用字面量赋值
    s = []interface{}{10, 11, 12, 13, 14, 15, 16}

    //赋值之后不影响之前的s
    fmt.Println("after reset s, s1 and cap:", s1, cap(s1))

    s2 := s1[1:]
    s3 := s[1:]
    fmt.Println(" cap(s2) and cap(s3)", cap(s2), cap(s3))
}

func (this *ArraryList) Add(s []interface{}, elem interface{}, index int) ([]interface{}) {
    ss := make([]interface{}, cap(s)+1)
    copy(ss, s[:index])
    ss[index] = elem
    copy(ss[index+1:], s[index:])
    return ss
}
```

```go
func (this *ArraryList) AddLast(s *[]interface{}, elem interface{}) {
    *s = append(*s, elem)
}

func (this *ArraryList) Edit(s []interface{}, elem interface{}, index int) ([]interface{}) {
    s[index] = elem
    return s
}

func (this *ArraryList) Remove(s []interface{}, index int) ([]interface{}) {
    ss := append(s[:index], s[index+1:]...)
    return ss
}

func (this *ArraryList) Get(s []interface{}, index int) (interface{}) {
    return s[index]
}

func (this *ArraryList) GetFirst(s []interface{}) (interface{}) {
    return this.Get(s, 0)
}

func (this *ArraryList) GetLast(s []interface{}) (interface{}) {
    return this.Get(s, len(s)-1)
}
```

1. slice的区间向右扩展cap eg：s2,s3
2. cap增长在1024以内2倍,大于则为1.25倍增长
3. 修改字面变量不会改变原来slice的值 eg:s1
4. append 修改需要传入指针 否则appen无效 eg: AddLast()
5. cap值很大的情况不适合用slice
6. slice是数组的view