1、基本介绍

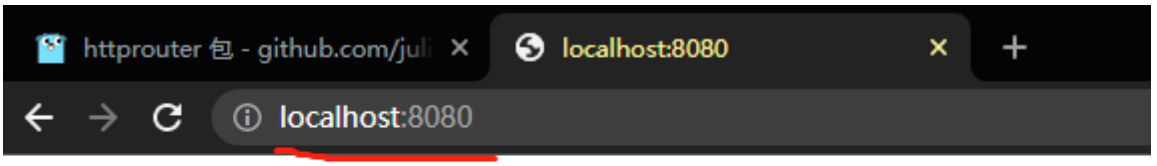
HttpRouter 是用于Go的轻量级高性能 HTTP 请求路由器（也称为多路复用器或简称mux）。

与Go包的默认多路复用器net/http相比，此路由器支持路由模式中的变量并匹配请求方法。它也可以更好地扩展。

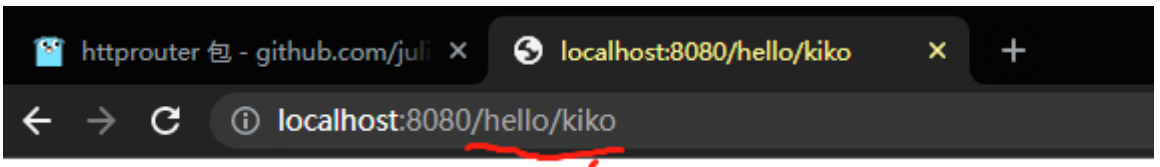
该路由器针对高性能和小内存占用进行了优化。即使有很长的路径和大量的路线，它也能很好地扩展。压缩动态 trie（基数树）结构用于有效匹配。

2、基本使用

```
package hrouter

import (
    "fmt"
    "log"
    "net/http"

    "github.com/julienschmidt/httprouter"
)

func Index(w http.ResponseWriter, r *http.Request, _ httprouter.Params) {
    fmt.Fprint(w, "<h1>Welcome!</h1>\n")
}

func Hello(w http.ResponseWriter, r *http.Request, ps httprouter.Params) {
    fmt.Fprintf(w, "<h1>hello, %s!</h1>\n", ps.ByName("name"))
}

func TestRouter1() {
    router := httprouter.New()          // 得到一个路由
    router.GET("/", Index)              // 发送Get请求，调用Index函数
    router.GET("/hello/:name", Hello) // 路由传参

    log.Fatal(http.ListenAndServe(":8080", router)) // 开启监听和服务
}
```



Welcome!



hello, kiko!

3、Http Method对应的方法

httprouter 为所有的HTTP Method 提供了快捷的使用方式，只需要调用对应的方法即可。

```
func (r *Router) GET(path string, handle Handle) {
    r.Handle("GET", path, handle)
}

func (r *Router) HEAD(path string, handle Handle) {
    r.Handle("HEAD", path, handle)
}

func (r *Router) OPTIONS(path string, handle Handle) {
    r.Handle("OPTIONS", path, handle)
}

func (r *Router) POST(path string, handle Handle) {
    r.Handle("POST", path, handle)
}

func (r *Router) PUT(path string, handle Handle) {
    r.Handle("PUT", path, handle)
}
func (r *Router) PATCH(path string, handle Handle) {
    r.Handle("PATCH", path, handle)
}

func (r *Router) DELETE(path string, handle Handle) {
    r.Handle("DELETE", path, handle)
}
```


Types

type Handle

```
type Handle func(http.ResponseWriter, *http.Request, Params)
```

Handle is a function that can be registered to a route to handle HTTP requests. Like http.HandlerFunc, but has a third parameter for the values of wildcards (variables).

type Param added in v1.1.0

```
type Param struct {
    Key   string
    Value string
}
```

Param is a single URL parameter, consisting of a key and a value.

type Params added in v1.1.0

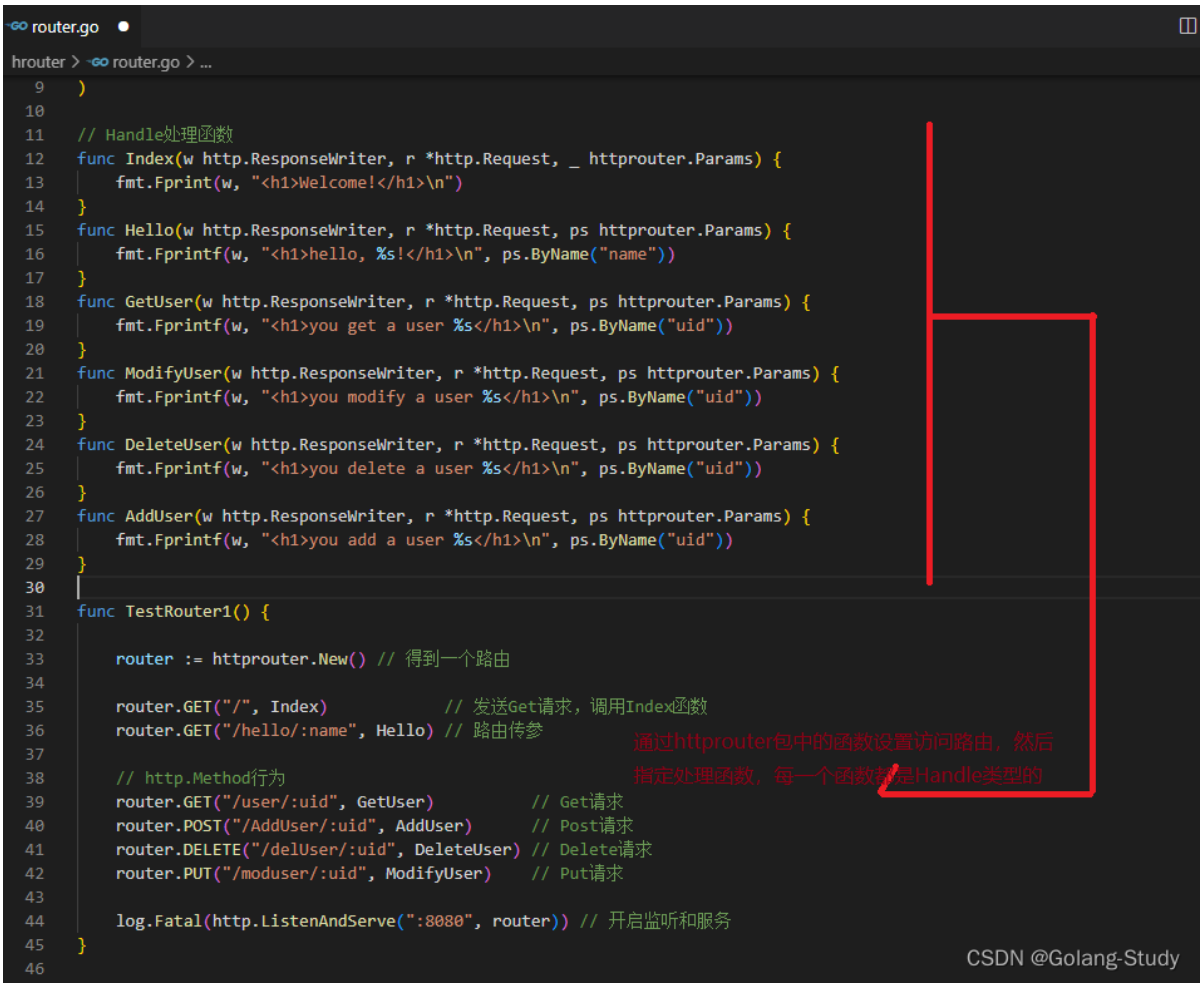
```
type Params []Param
```

Params is a Param-slice, as returned by the router. The slice is ordered, the first URL parameter is also the first slice value. It is therefore safe to read values by the index.

func (Params) ByName added in v1.1.0

```
func (ps Params) ByName(name string) string
```

ByName returns the value of the first Param which key matches the given name. If no matching Param is found, an empty string is returned.



4、综合使用template\http\httprouter

```
package hrouter

import (
    "fmt"
    "html/template"
    "log"
    "net/http"

    "github.com/julienschmidt/httprouter"
)

func TestTemplateRouter() {

    // 准备路由
    router := httprouter.New()

    // GET请求1
    router.GET("/", func(w http.ResponseWriter, r *http.Request, p
httprouter.Params) {
        // 解析指定文件生成模板对象
        tmpl, err :=
template.ParseFiles("F:/tools/golang/goweb/hrouter/index.html")
        if err != nil {
            log.Fatal("Error parsing template: ", err)
        }
        // 利用给定数据渲染模板，并将结果写入w
```

```
        tmpl.Execute(w, []string{"Java", "Golang", "Python", "C++", "", ""})
    })

    // GET请求2
    router.GET("/user/:name", func(w http.ResponseWriter, r *http.Request, p
httprouter.Params) {
        // 解析指定文件生成模板对象
        tmpl, err :=
template.ParseFiles("F:/tools/golang/goweb/hrouter/user.html")
        if err != nil {
            log.Fatal("Error parsing template: ", err)
        }
        // 利用给定数据渲染模板，并将结果写入w
        tmpl.Execute(w, []string{"Java", "Golang", "Python", "C++", "", ""})

        fmt.Fprintf(w, "Select a User %s", p.ByName("name"))
    })

    // 服务器监听本地8080端口
    err := http.ListenAndServe(":8080", router)
    if err != nil {
        log.Fatal(err)
    }
}
```