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CONFERENCE

Web scraping em GO!

Quais as vantagens em utilizar essa linguagem para coleta de dados na Web

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About me

THE DEVELOPER'S CONFERENCE

Licenciatura em Música

UFRJ

Análise e Desenvolvimento de Sistemas

UEZO

Ciência de Dados (Big Data)

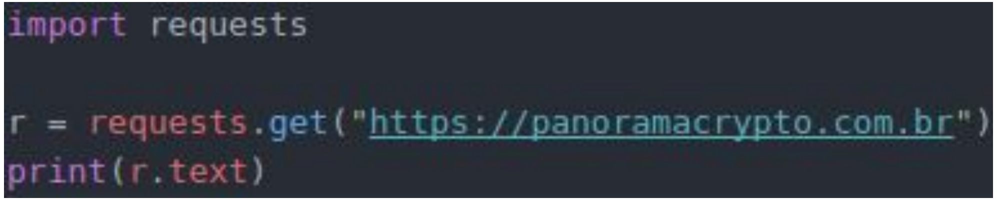
IGTI

Cientista de Dados

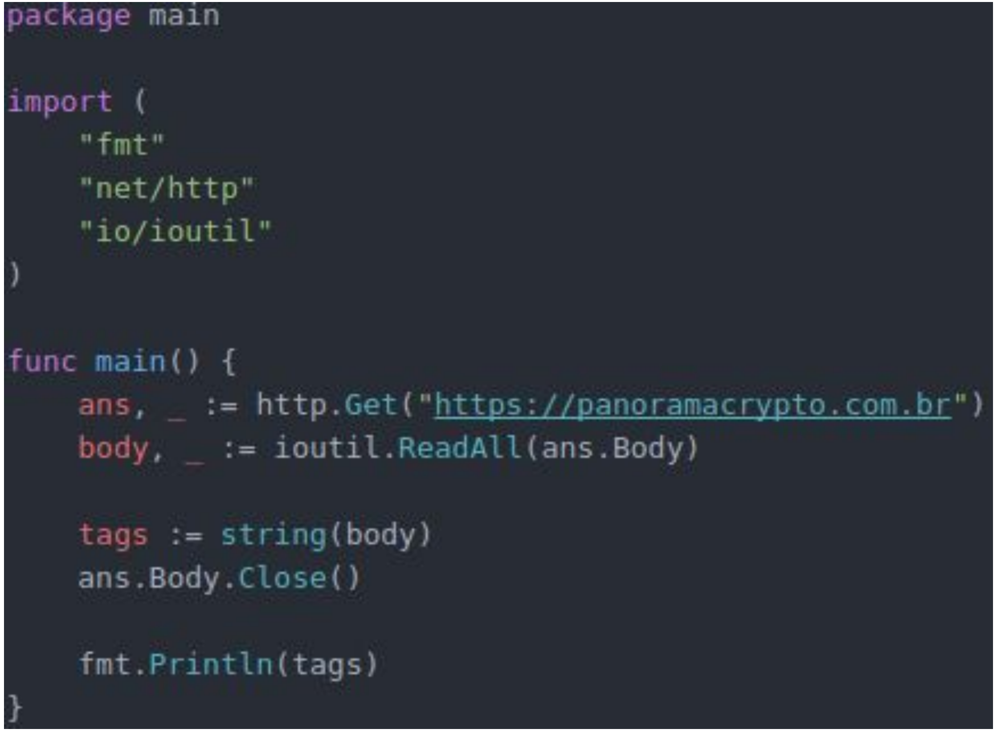
Wise&Trust

Redator

PanoramaCrypto



```python
import requests

r = requests.get("https://panoramacrypto.com.br")
print(r.text)
```

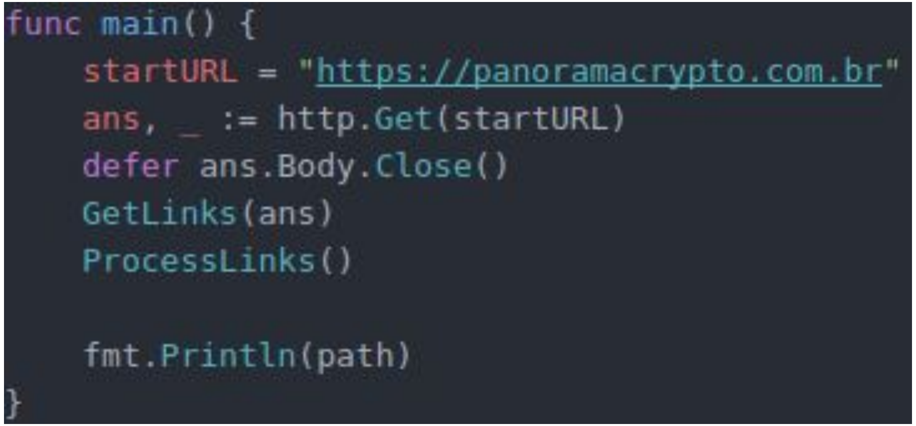


```go
package main

import (
    "fmt"
    "net/http"
    "io/ioutil"
)

func main() {
    ans, _ := http.Get("https://panoramacrypto.com.br")
    body, _ := ioutil.ReadAll(ans.Body)

    tags := string(body)
    ans.Body.Close()

    fmt.Println(tags)
}
```

Construindo um Spider

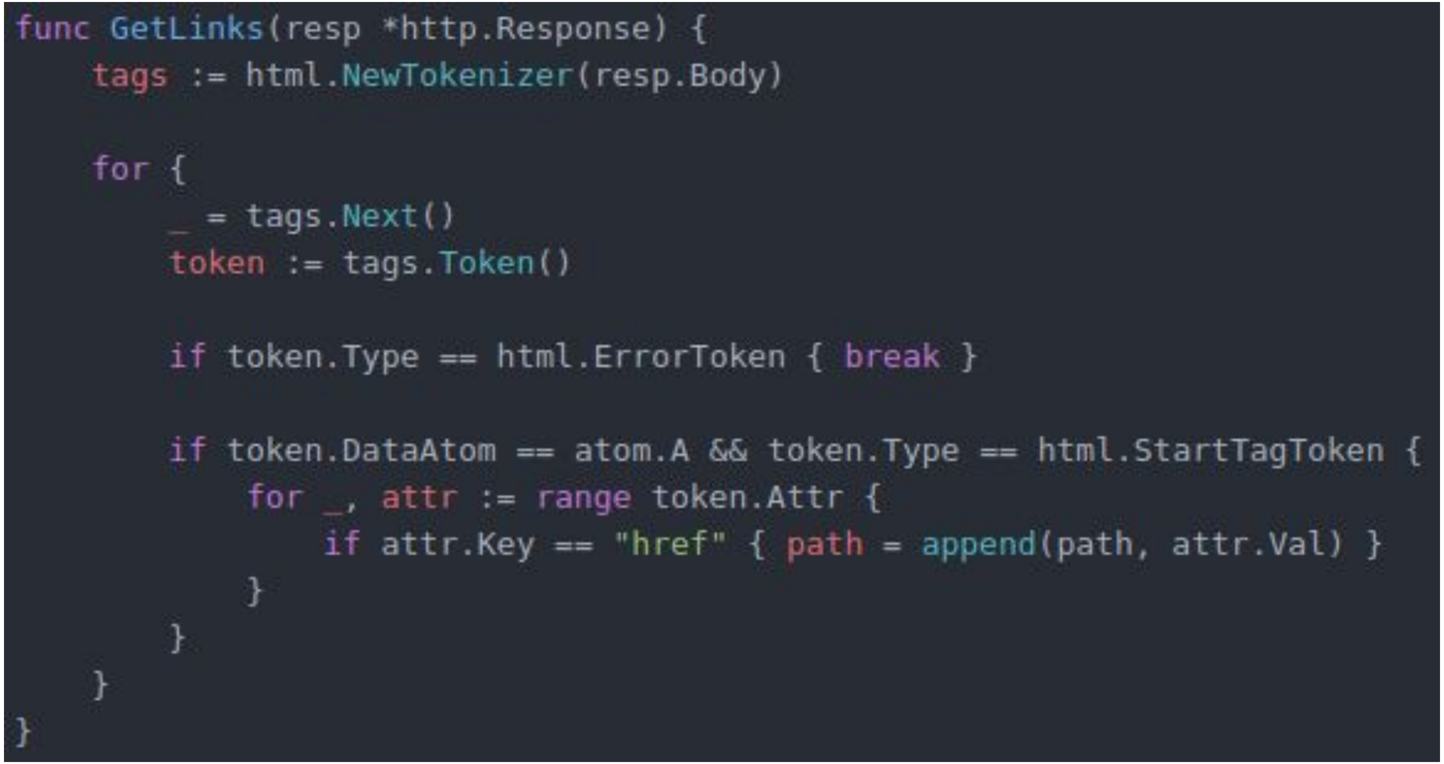
“net/http”

“golang.com/x/net/html”



```
func main() {
    startURL = "https://panoramacrypto.com.br"
    ans, _ := http.Get(startURL)
    defer ans.Body.Close()
    GetLinks(ans)
    ProcessLinks()

    fmt.Println(path)
}
```

Encontrando links

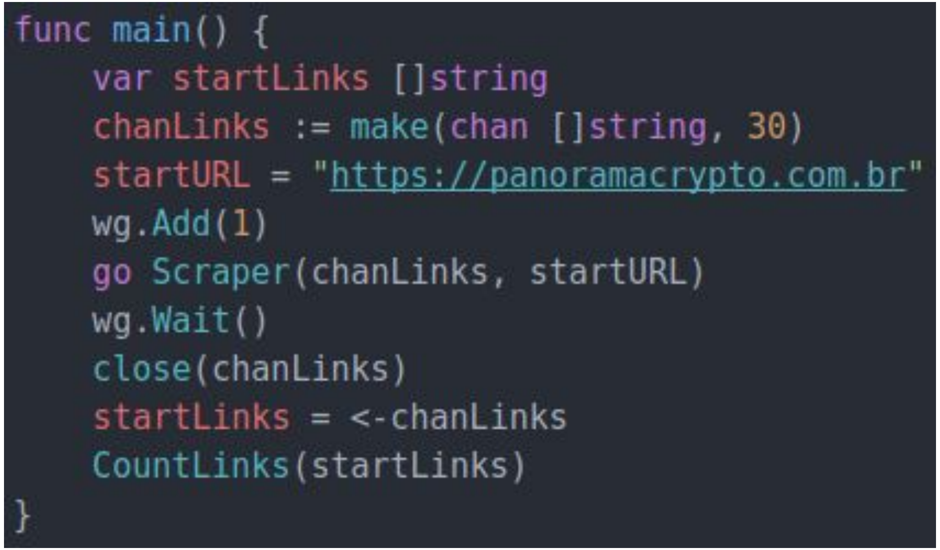


```go
func GetLinks(resp *http.Response) {
    tags := html.NewTokenizer(resp.Body)

    for {
        _ = tags.Next()
        token := tags.Token()

        if token.Type == html.ErrorToken { break }

        if token.DataAtom == atom.A && token.Type == html.StartTagToken {
            for _, attr := range token.Attr {
                if attr.Key == "href" { path = append(path, attr.Val) }
            }
        }
    }
}
```

Podemos ir além!!!

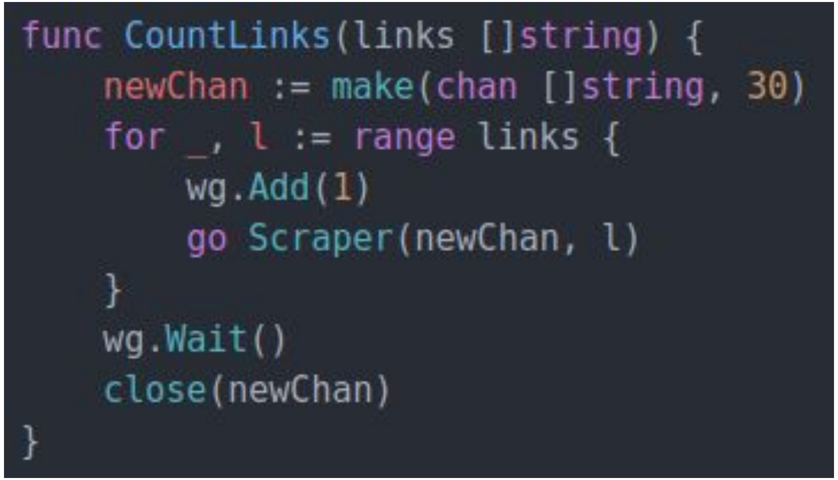
Channel

Chamadas assíncronas

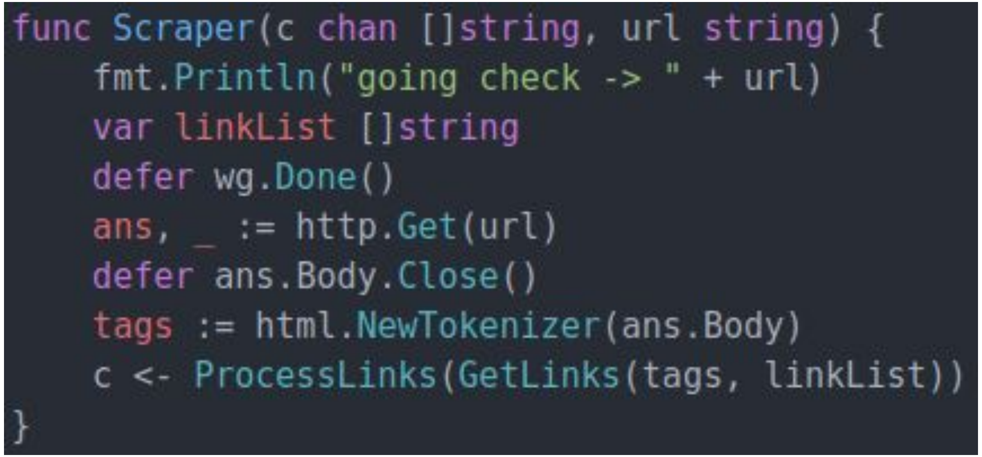


```
func main() {
    var startLinks []string
    chanLinks := make(chan []string, 30)
    startURL = "https://panoramacrypto.com.br"
    wg.Add(1)
    go Scraper(chanLinks, startURL)
    wg.Wait()
    close(chanLinks)
    startLinks = <-chanLinks
    CountLinks(startLinks)
}
```

Chamada Assíncrona



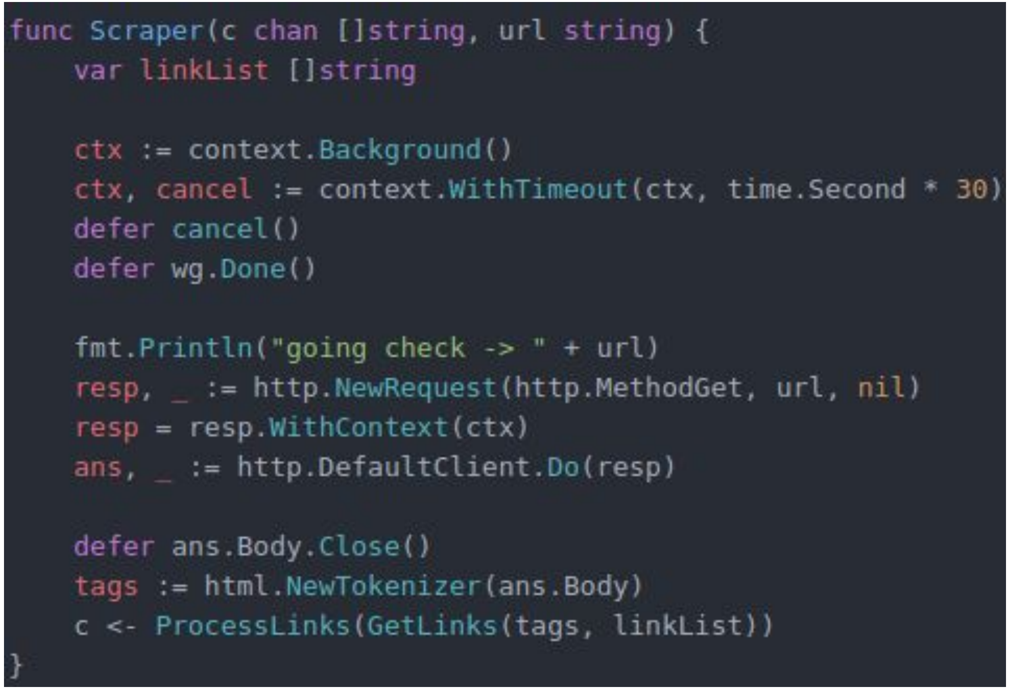
```go
func CountLinks(links []string) {
	newChan := make(chan []string, 30)
	for _, l := range links {
		wg.Add(1)
		go Scraper(newChan, l)
	}
	wg.Wait()
	close(newChan)
}
```



```go
func Scraper(c chan []string, url string) {
	fmt.Println("going check -> " + url)
	var linkList []string
	defer wg.Done()
	ans, _ := http.Get(url)
	defer ans.Body.Close()
	tags := html.NewTokenizer(ans.Body)
	c <- ProcessLinks(GetLinks(tags, linkList))
}
```

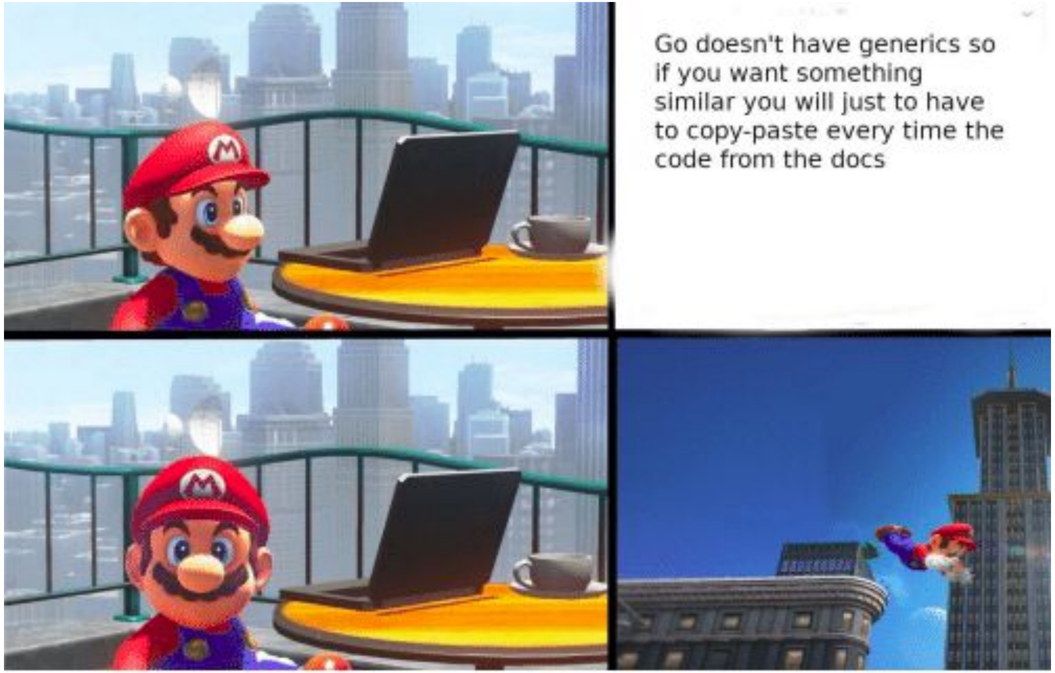
Usando Context

O Context permite cancelar uma operação desfazendo os passos anteriores



```
func Scraper(c chan []string, url string) {
    var linkList []string

    ctx := context.Background()
    ctx, cancel := context.WithTimeout(ctx, time.Second * 30)
    defer cancel()
    defer wg.Done()

    fmt.Println("going check -> " + url)
    resp, _ := http.NewRequest(http.MethodGet, url, nil)
    resp = resp.WithContext(ctx)
    ans, _ := http.DefaultClient.Do(resp)

    defer ans.Body.Close()
    tags := html.NewTokenizer(ans.Body)
    c <- ProcessLinks(GetLinks(tags, linkList))
}
```

Nem tudo são flores...



Go doesn't have generics so if you want something similar you will just to have to copy-paste every time the code from the docs

All good nothing wrong

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Perguntas?

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