**Word count server and client**

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| **package** main  **import** (  **"fmt"**  **"log"**  **"net"**  **"net/rpc"**  **"strings"**  )  **type** WordCountServer **struct** {  addr string  }  **type** WordCountRequest **struct** {  Input string  }  **type** WordCountReply **struct** {  Counts **map**[string]int  }  **func** (server \*WordCountServer) Listen() {  rpc.Register(server)  l, err := net.Listen(**"tcp"**, server.addr)  checkError(err)  **go func**() {  rpc.Accept(l)  }()  }  **func** (\*WordCountServer) Compute(  request WordCountRequest,  reply \*WordCountReply) error {  counts := make(**map**[string]int)  input := request.Input  tokens := strings.Fields(input)  **for** \_, t := **range** tokens {  counts[t] += 1  }  reply.Counts = counts  **return** nil  } |  | **func** makeRequest(  input string,  serverAddr string) (**map**[string]int, error) {  client, err := rpc.Dial(**"tcp"**, serverAddr)  checkError(err)  args := WordCountRequest{input}  reply := WordCountReply{make(**map**[string]int)}  err = client.Call(**"WordCountServer.Compute"**, args, &reply)  **if** err != nil {  **return** nil, err  }  **return** reply.Counts, nil  }  **func** checkError(err error) {  **if** err != nil {  log.Fatal(err)  }  }  **func** main() {  serverAddr := **"localhost:8888"**  server := WordCountServer{serverAddr}  server.Listen()  input1 := **"hello I am good hello bye bye bye"**  input2 := **"what a nice day for a nice cup of coffee"**  input3 := **"if this then true else if that then false"**  wc1, err1 := makeRequest(input1, serverAddr)  wc2, err2 := makeRequest(input2, serverAddr)  wc3, err3 := makeRequest(input3, serverAddr)  checkError(err1)  checkError(err2)  checkError(err3)  fmt.Printf(**"Result: %v\n"**, wc1)  fmt.Printf(**"Result: %v\n"**, wc2)  fmt.Printf(**"Result: %v\n"**, wc3)  } |