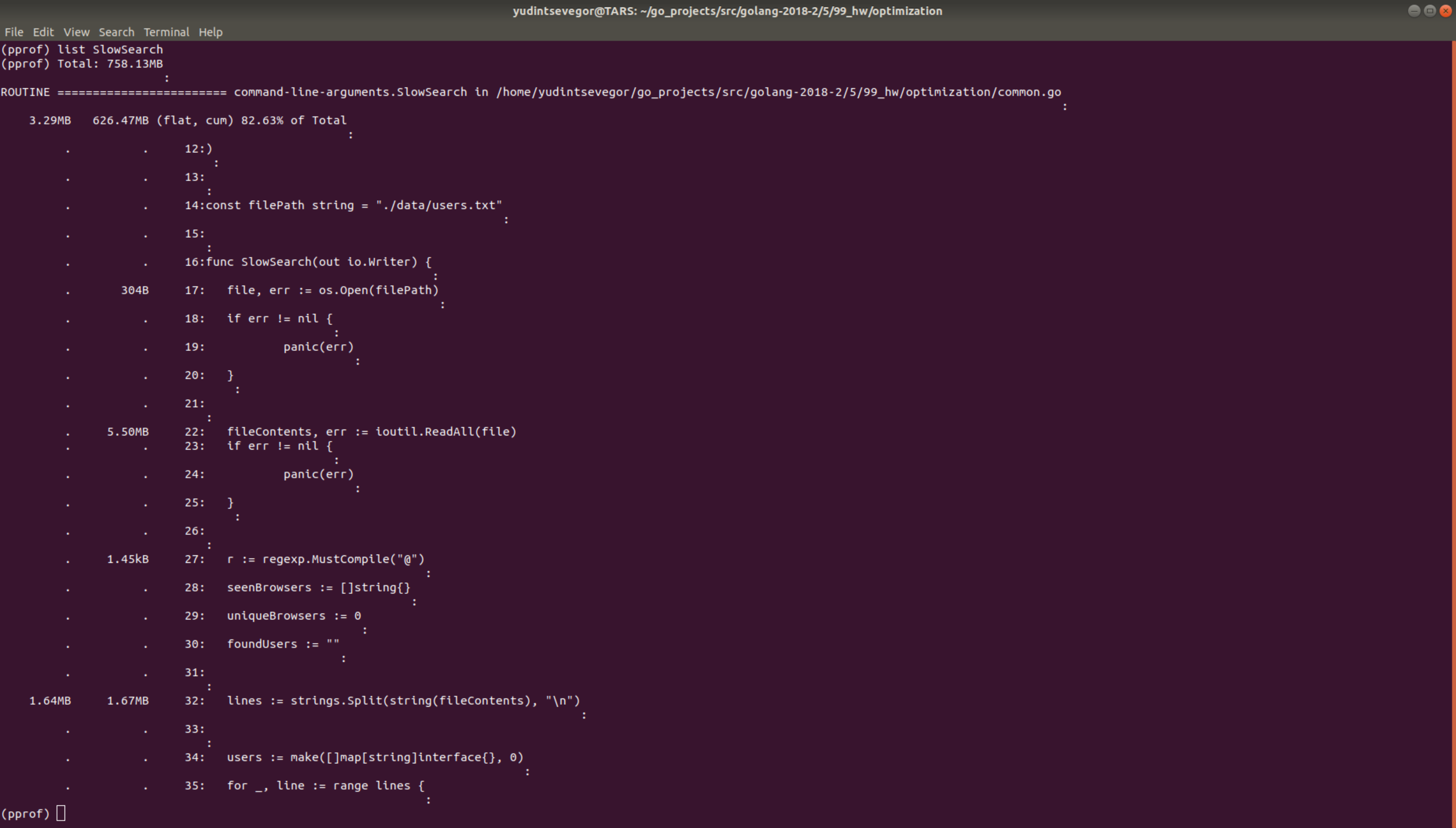
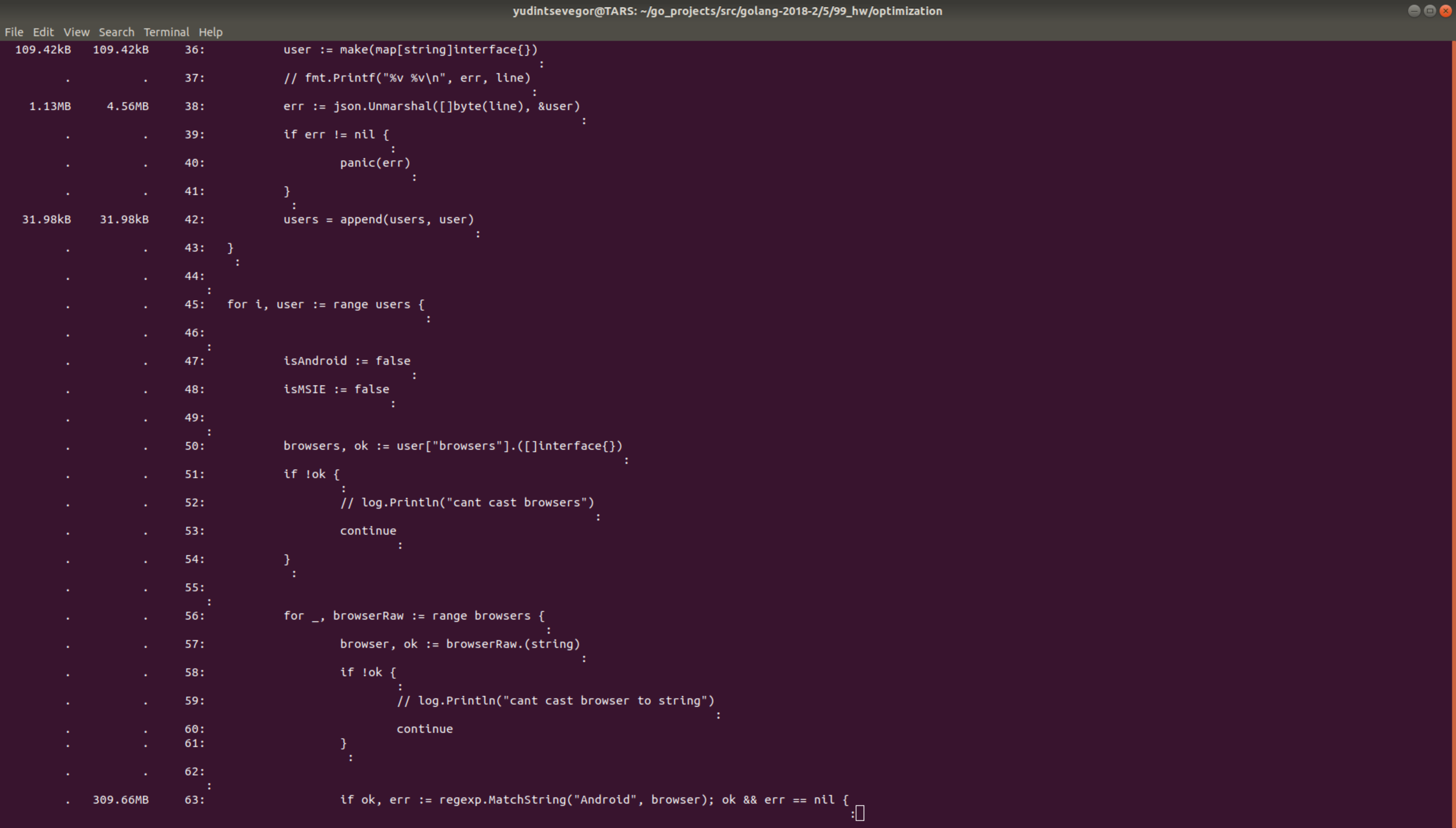
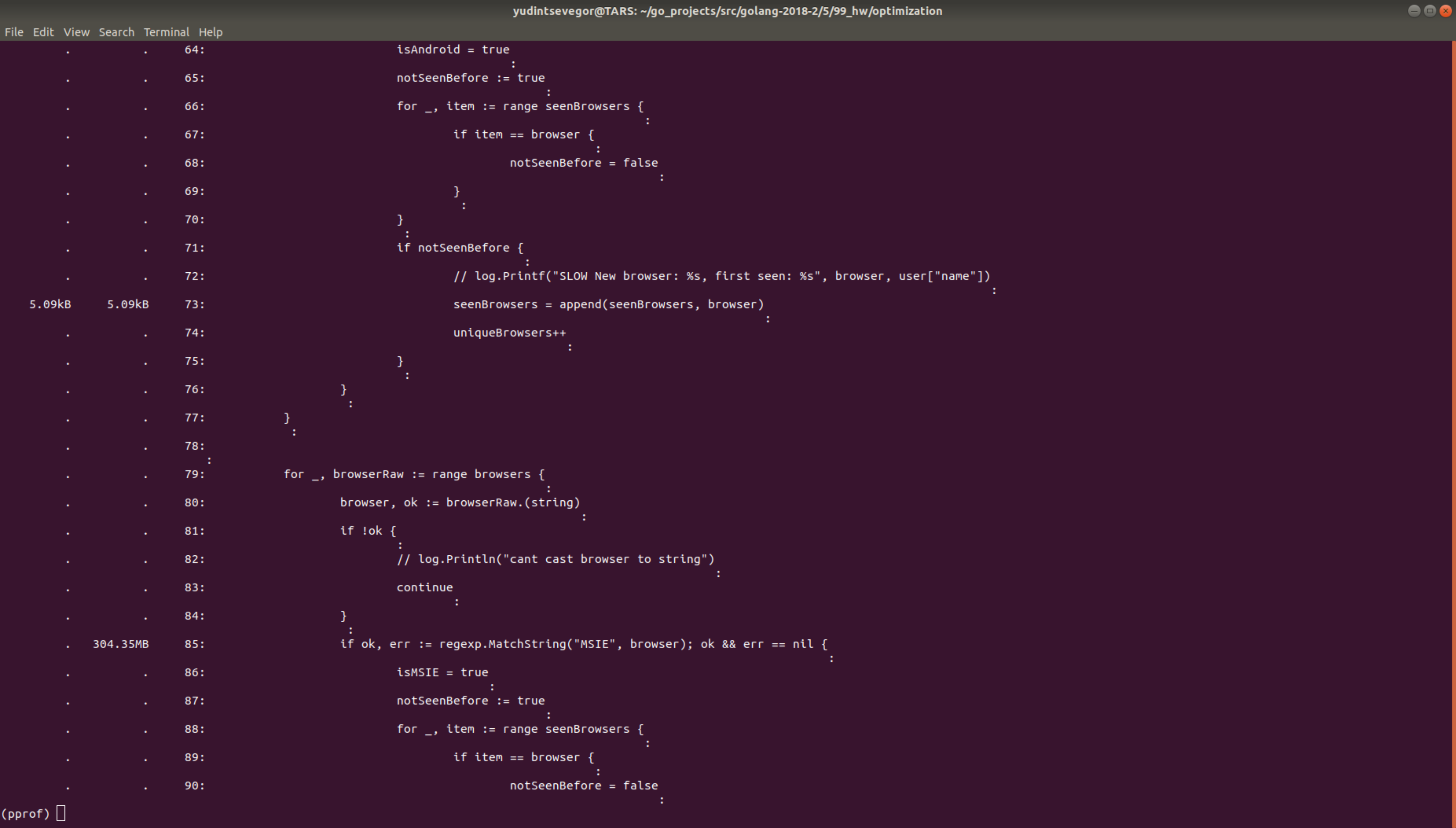

yudintsevegor@TARS: ~/go_projects/src/golang-2018-2/5/99_hw/optimization
File Edit View Search Terminal Help

```
(pprof) list SlowSearch
(pprof) Total: 758.13MB
                       :
ROUTINE ======================== command-line-arguments.SlowSearch in /home/yudintsevegor/go_projects/src/golang-2018-2/5/99_hw/optimization/common.go
                                                                                                                                                      :
    3.29MB   626.47MB (flat, cum) 82.63% of Total
                                                 :
         .          .     12:)
                              :
         .          .     13:
                             :
         .          .     14:const filePath string = "./data/users.txt"
                                                                       :
         .          .     15:
                             :
         .          .     16:func SlowSearch(out io.Writer) {
                                                             :
         .       304B     17:   file, err := os.Open(filePath)
                                                              :
         .          .     18:   if err != nil {
                                               :
         .          .     19:           panic(err)
                                                  :
         .          .     20:   }
                                 :
         .          .     21:
                             :
         .     5.50MB     22:   fileContents, err := ioutil.ReadAll(file)
         .          .     23:   if err != nil {
                                               :
         .          .     24:           panic(err)
                                                  :
         .          .     25:   }
                                 :
         .          .     26:
                             :
         .     1.45kB     27:   r := regexp.MustCompile("@")
                                                            :
         .          .     28:   seenBrowsers := []string{}
                                                          :
         .          .     29:   uniqueBrowsers := 0
                                                   :
         .          .     30:   foundUsers := ""
                                                :
         .          .     31:
                             :
    1.64MB     1.67MB     32:   lines := strings.Split(string(fileContents), "\n")
                                                                                  :
         .          .     33:
                             :
         .          .     34:   users := make([]map[string]interface{}, 0)
                                                                          :
         .          .     35:   for _, line := range lines {
                                                            :
(pprof) 
```

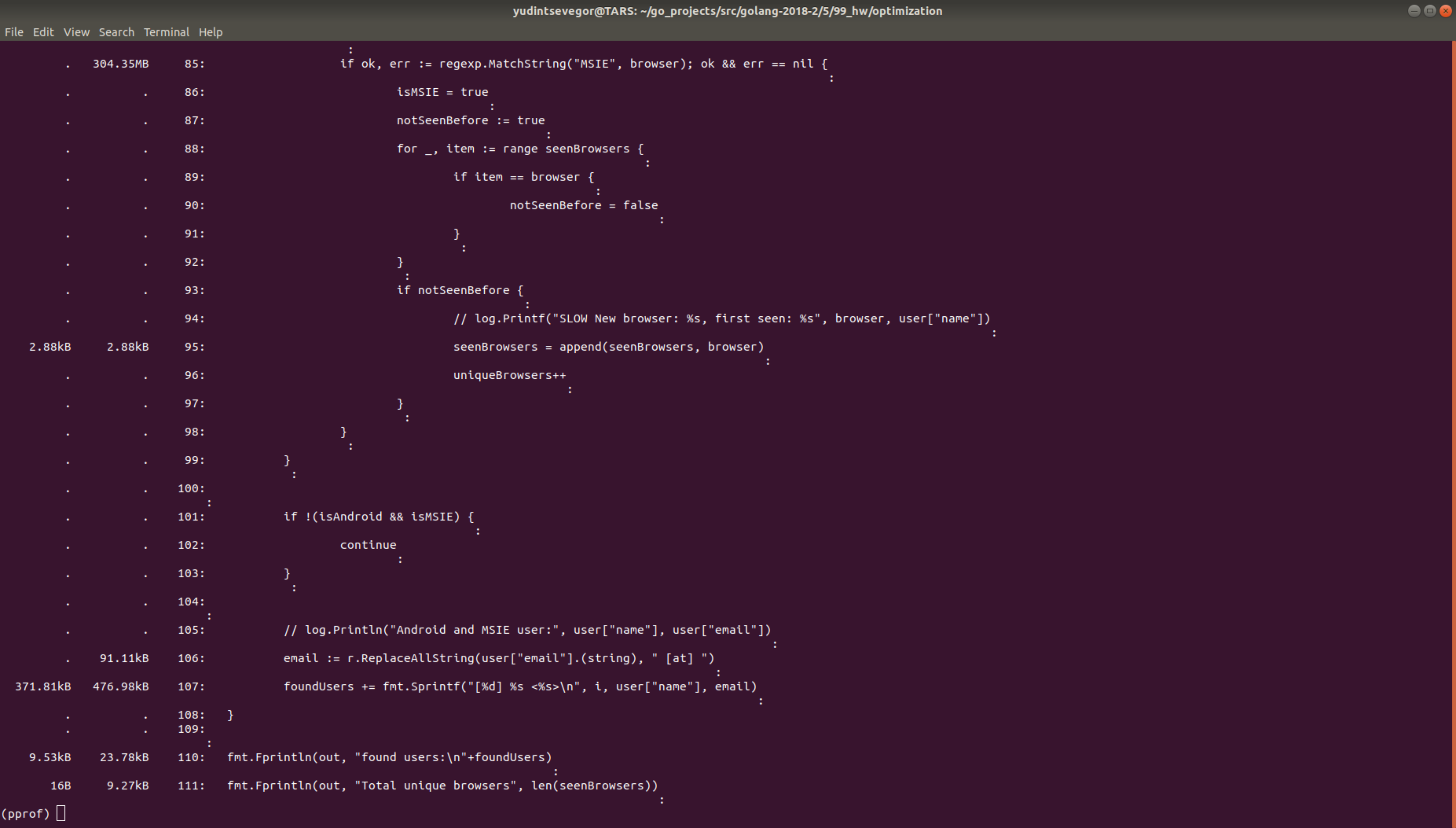

yudintsevegor@TARS: ~/go_projects/src/golang-2018-2/5/99_hw/optimization
File
Edit
View
Search
Terminal
Help

```
 109.42kB   109.42kB     36:           user := make(map[string]interface{})
                                                                        :
        .          .     37:           // fmt.Printf("%v %v\n", err, line)
                                                                       :
   1.13MB     4.56MB     38:           err := json.Unmarshal([]byte(line), &user)
                                                                              :
        .          .     39:           if err != nil {
                                                           :
        .          .     40:                   panic(err)
                                                              :
        .          .     41:           }
                                              :
  31.98kB    31.98kB     42:           users = append(users, user)
                                                                :
        .          .     43:   }
                                :
        .          .     44:
                            :
        .          .     45:   for i, user := range users {
                                                            :
        .          .     46:
                            :
        .          .     47:           isAndroid := false
                                                              :
        .          .     48:           isMSIE := false
                                                           :
        .          .     49:
                            :
        .          .     50:           browsers, ok := user["browsers"].([]interface{})
                                                                                    :
        .          .     51:           if !ok {
                                                  :
        .          .     52:                   // log.Println("cant cast browsers")
                                                                                :
        .          .     53:                   continue
                                                         :
        .          .     54:           }
                                              :
        .          .     55:
                            :
        .          .     56:           for _, browserRaw := range browsers {
                                                                         :
        .          .     57:                   browser, ok := browserRaw.(string)
                                                                              :
        .          .     58:                   if !ok {
                                                         :
        .          .     59:                           // log.Println("cant cast browser to string")
                                                                                                  :
        .          .     60:                           continue
        .          .     61:                   }
                                                      :
        .          .     62:
                            :
        .   309.66MB     63:                   if ok, err := regexp.MatchString("Android", browser); ok && err == nil {
                                                                                                                     :
```



yudintsevegor@TARS: ~/go_projects/src/golang-2018-2/5/99_hw/optimization

```
         .          .     64:                           isAndroid = true
                                                                        :
         .          .     65:                           notSeenBefore := true
                                                                             :
         .          .     66:                           for _, item := range seenBrowsers {
                                                                                           :
         .          .     67:                                   if item == browser {
                                                                                    :
         .          .     68:                                           notSeenBefore = false
                                                                                             :
         .          .     69:                                   }
                                                                 :
         .          .     70:                           }
                                                         :
         .          .     71:                           if notSeenBefore {
                                                                          :
         .          .     72:                                   // log.Printf("SLOW New browser: %s, first seen: %s", browser, user["name"])
                                                                                                                                             :
    5.09kB     5.09kB     73:                                   seenBrowsers = append(seenBrowsers, browser)
                                                                                                            :
         .          .     74:                                   uniqueBrowsers++
                                                                                :
         .          .     75:                           }
                                                         :
         .          .     76:                   }
                                                 :
         .          .     77:           }
                                         :
         .          .     78:
                             :
         .          .     79:           for _, browserRaw := range browsers {
                                                                             :
         .          .     80:                   browser, ok := browserRaw.(string)
                                                                                  :
         .          .     81:                   if !ok {
                                                        :
         .          .     82:                           // log.Println("cant cast browser to string")
                                                                                                     :
         .          .     83:                           continue
                                                                :
         .          .     84:                   }
                                                 :
         .   304.35MB     85:                   if ok, err := regexp.MatchString("MSIE", browser); ok && err == nil {
                                                                                                                     :
         .          .     86:                           isMSIE = true
                                                                     :
         .          .     87:                           notSeenBefore := true
                                                                             :
         .          .     88:                           for _, item := range seenBrowsers {
                                                                                           :
         .          .     89:                                   if item == browser {
                                                                                    :
         .          .     90:                                           notSeenBefore = false
                                                                                             :
(pprof) 
```



```
                                                 :
         .   304.35MB    85:                    if ok, err := regexp.MatchString("MSIE", browser); ok && err == nil {
                                                                                                                     :
         .          .    86:                            isMSIE = true
                                                                     :
         .          .    87:                            notSeenBefore := true
                                                                             :
         .          .    88:                            for _, item := range seenBrowsers {
                                                                                           :
         .          .    89:                                    if item == browser {
                                                                                    :
         .          .    90:                                            notSeenBefore = false
                                                                                             :
         .          .    91:                                    }
                                                                 :
         .          .    92:                            }
                                                         :
         .          .    93:                            if notSeenBefore {
                                                                          :
         .          .    94:                                    // log.Printf("SLOW New browser: %s, first seen: %s", browser, user["name"])
                                                                                                                                             :
    2.88kB     2.88kB    95:                                    seenBrowsers = append(seenBrowsers, browser)
                                                                                                            :
         .          .    96:                                    uniqueBrowsers++
                                                                                :
         .          .    97:                            }
                                                         :
         .          .    98:                    }
                                                 :
         .          .    99:            }
                                         :
         .          .   100:
                            :
         .          .   101:            if !(isAndroid && isMSIE) {
                                                                   :
         .          .   102:                    continue
                                                        :
         .          .   103:            }
                                         :
         .          .   104:
                            :
         .          .   105:            // log.Println("Android and MSIE user:", user["name"], user["email"])
                                                                                                             :
         .   91.11kB   106:            email := r.ReplaceAllString(user["email"].(string), " [at] ")
                                                                                                     :
  371.81kB   476.98kB   107:            foundUsers += fmt.Sprintf("[%d] %s <%s>\n", i, user["name"], email)
                                                                                                           :
         .          .   108:    }
         .          .   109:
                            :
    9.53kB    23.78kB   110:    fmt.Fprintln(out, "found users:\n"+foundUsers)
                                                                              :
       16B     9.27kB   111:    fmt.Fprintln(out, "Total unique browsers", len(seenBrowsers))
                                                                                             :
(pprof) 
```