Offline storage of webpages containing corrected links

(by Uli Ender, Munich, Germany)

It is sometimes nice to be able to look at websites when you are offline.

Some browsers offer the possibility to copy single websites to a download folder, but links to other
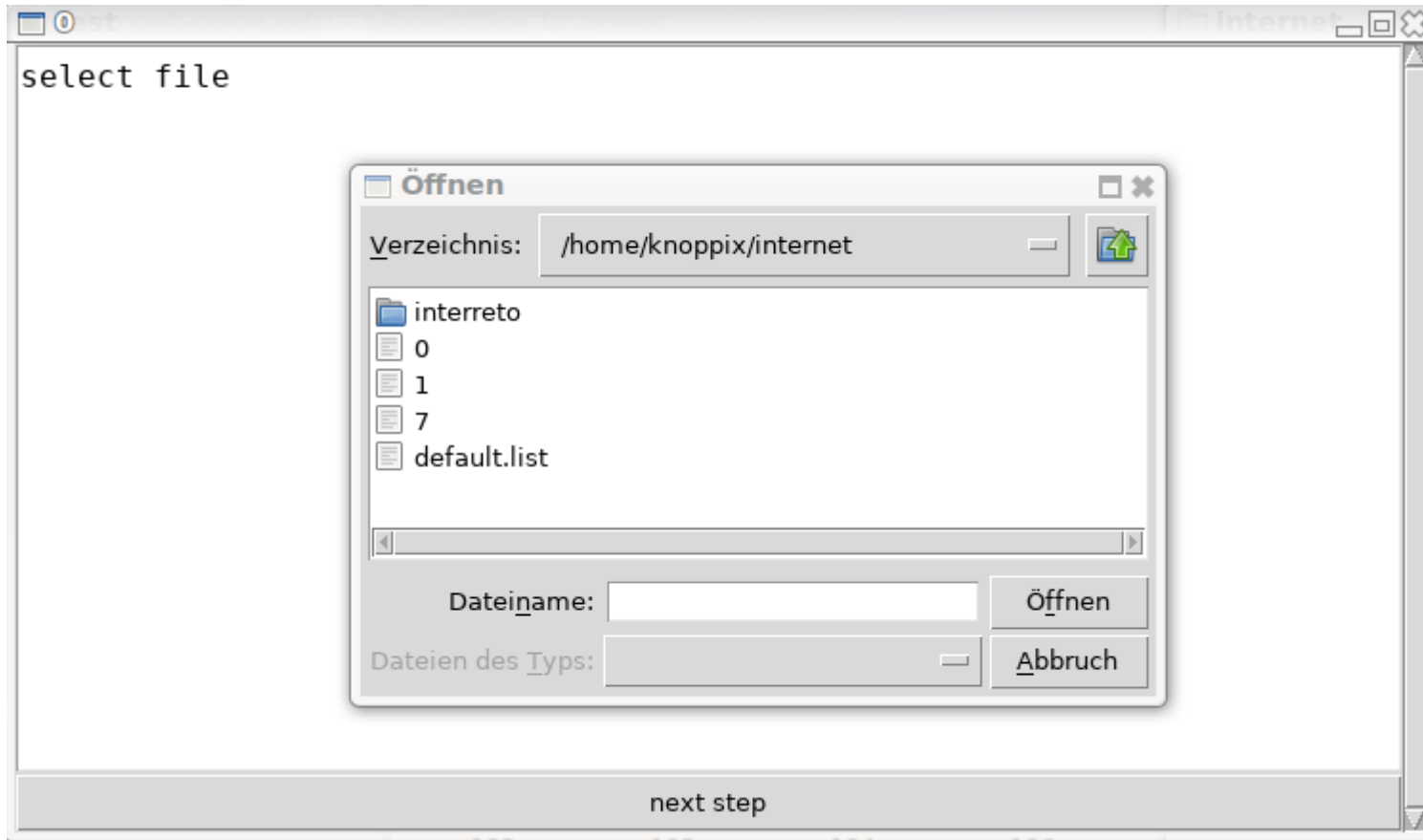
websites will still point to the internet.

When you are offline clicking onto these links will cause an error and you will not see what you wish.

To solve this problem I have written tiny Tcl-scripts (< 10k) using „http" and „tls".

The scripts permit to download webpages to a download folder (interreto == internet in Esperanto) and
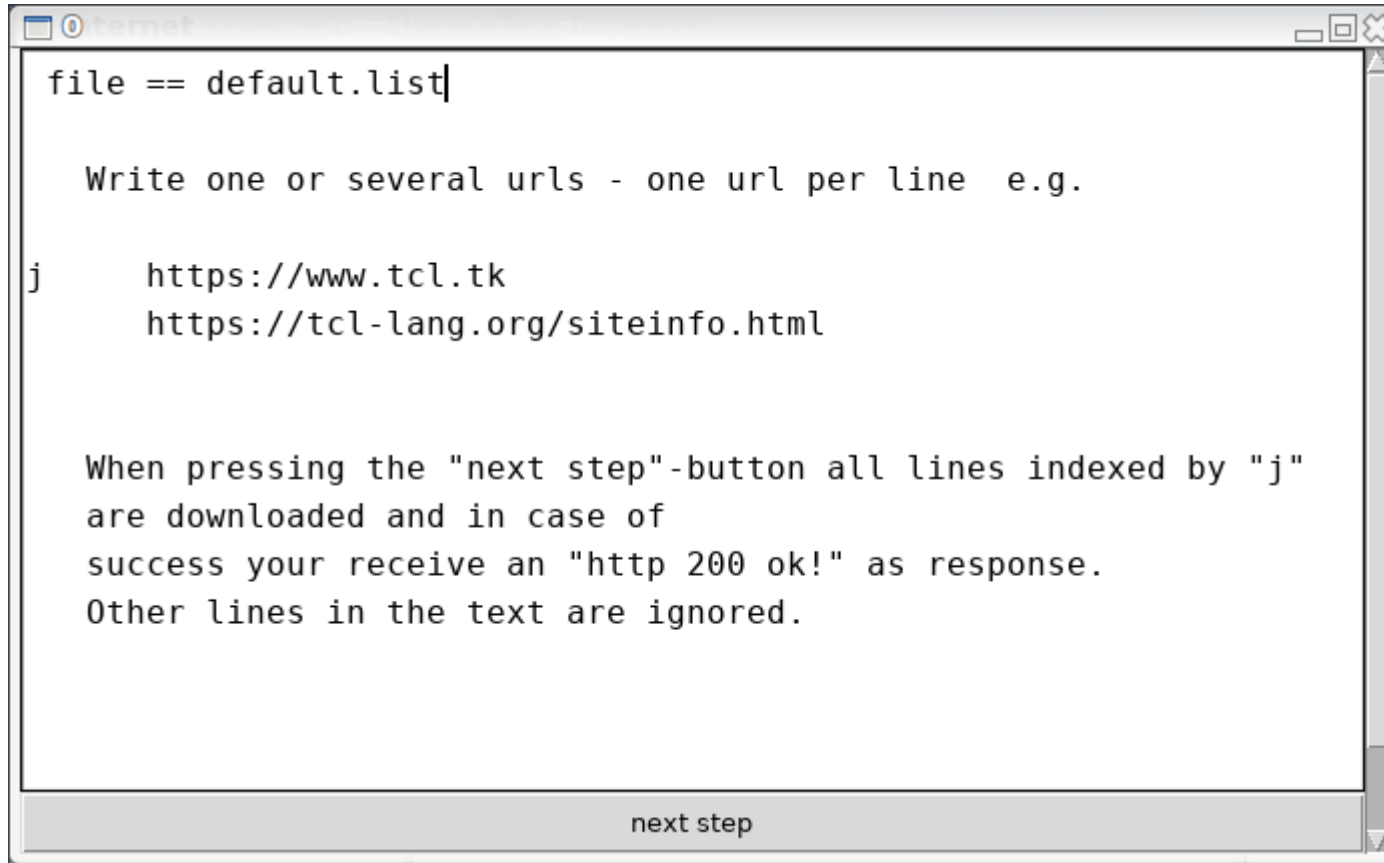convert links in the downloaded html-files to point correcty to other downloaded files.

STEPS OF CREATING AN OFFLINE INTERNET STORAGE

1) select a list-file using „tk_getOpenFile"
   e.g. doubleclicking the file default.list

STEPS OF CREATING AN OFFLINE INTERNET STORAGE

2) edit the indices in the list-file or add urls

```
file == default.list

  Write one or several urls - one url per line  e.g.

j      https://www.tcl.tk
       https://tcl-lang.org/siteinfo.html


  When pressing the "next step"-button all lines indexed by "j"
  are downloaded and in case of
  success your receive an "http 200 ok!" as response.
  Other lines in the text are ignored.
```

next step

STEPS OF CREATING AN OFFLINE INTERNET STORAGE

1) select a list-file using „tk_getOpenFile"
   e.g. doubleclicking the file **default.list**

2) mark lines in the list-file by „j" and / or add urls

3) press next-step-button
The scripts will then
a) fetch urls from a list-file (lines are index by letter „j") e.g.:
      j   https://www.tcl.tk
b) convert urls and store downloaded files e.g. „nofilename" in folder „interreto"
c) in case of html-files: ($state(type) is text/html)

   copy interreto/tcl.tk/nofilename to   interreto/tcl.tk/nofilename.orig ,
   convert all links in .../interreto/tcl.tk/nofilename to point into folder „interreto" e.g.
   https://openacs.org/conf2022/info -- > ../openacs.org/conf2022/info/nofilename

and create interreto/tcl.tk/nofilename.list with a listing of absolute links
   to the internet e.g. https://openacs.org/conf2022/info added to .../nofilename.list
4) press next-step-button

Fetching a file from internet

```
global url typ
package require http
package require tls
http::register https 443 ::tls::socket

proc fetch {} {
global url typ
set tok [http::geturl $url -binary yes]
set h [open 12 w+]
fconfigure $h -encoding binary -translation binary
upvar #0 $tok state
set antwort $state(http)                    ------- >    HTTP/1.1 200 OK
.t insert end  "$url *$antwort*\n"
if {$antwort  == "HTTP/1.1 200 OK"} {
puts $h   $state(body)                       ------- >    <!DOCTYPE … ><html> ,,,  </html>
set typ $state(type)                         ------- >    text/html
close $h                        }
if {$antwort  != "HTTP/1.1 200 OK"} {
.t insert end  "$antwort\n$state(body)\n"
}

# example:
set url https://tcl.tk
fetch
# then look to the file with eg. Firefox     exec  firefox 12
```

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Wiki Category: Distributions

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Tcl (Tool Command Language) is a very powerful but easy to learn dynamic programming language, suitable for a very wide range of uses, including web and desktop applications, networking, administration, testing and many more. Open source and business-friendly,

Typical listing of urls - here: nofilename.list

```
file == int010/www.tcl.tk/nofilename

url(

src=
n       https://www.tcl.tk/images/plume.png
n       https://www.tcl.tk/images/Developer.gif
n       https://www.tcl.tk/images/aslogo.gif
n       https://www.tcl.tk/images/Search.gif
n       https://www.tcl.tk/images/Go.gif
n       https://www.tcl.tk/images/upsell.jpg
        https://www.tcl.tk/cdn-cgi/scripts/5c5dd728/cloudflare-static/email-decode.min.js

href=
n       https://www.tcl.tk/devsite.css
        https://www.tcl.tk/
        https://www.tcl.tk/siteinfo.html
         http://www.ActiveState.com/products/tcl
        https://www.tcl.tk/
        https://www.tcl.tk/about/
        https://www.tcl.tk/software/tcltk/
        https://www.tcl.tk/community/coreteam/
        https://www.tcl.tk/community/
        https://www.tcl.tk/doc/
j       https://openacs.org/conf2022/info
        https://www.tcl.tk/software/tcltk/8.6.html
        https://www.tcl.tk/software/tcltk/8.7.html
        https://www.activestate.com/activetcl
         http://www.bawt.tcl3d.org
         http://www.magicsplat.com/tcl-installer/index.html
        https://www.irontcl.com
         http://www.tcl-lang.org/software/tklib/
         http://www.tcl-lang.org/software/tcllib/

    ...
```

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Tk is a graphical user interface toolkit that takes developing desktop applications to a higher level than conventional approaches. Tk is the standard GUI not only for Tcl, but for many other dynamic languages, and can produce rich, native applications that run unchanged across Windows, Mac OS X, Linux and more.

➤ Learn more

➤ Get Tcl/Tk (8.6) (8.7-alpha)

➤ Browse the Tcler's Wiki

➤ Read the reference pages and other documentation

ActiveState
Komodo IDE X
Tcl debugger, code intel, unit testing + more
DOWNLOAD FOR FREE

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Core Development

A wide variety of developers contribute to the open source Tcl and Tk core, which is hosted at core.tcl-lang.org. The Tcl Core Team (TCT) helps steer this development through mechanisms like Tcl

Tcl/Tk Community

The vibrant Tcl user community provides a variety of support resources to help working with Tcl/Tk. Among others, the Tcler's Wiki provides a constantly updated set of tips and tricks, while comp.lang.tcl remains the best forum for
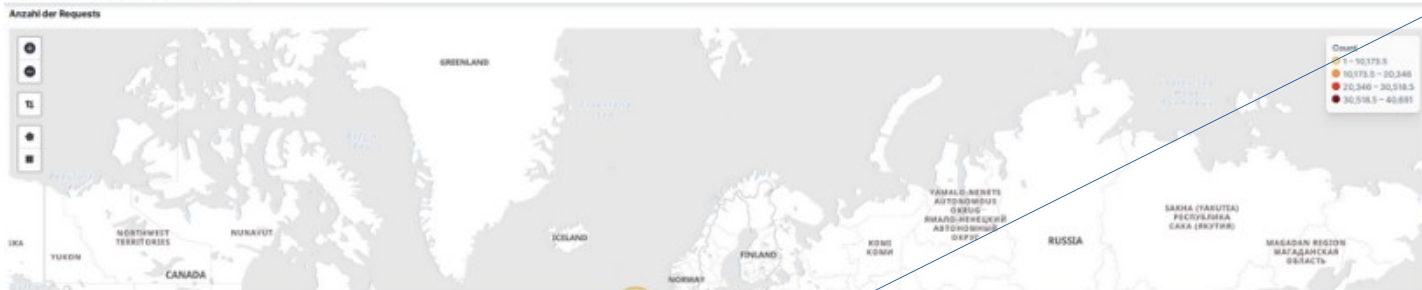
File .../interreto/openacs.org/conf2022/info/nofilename shown in webbrowser

100 remote participants

Way back to https://www.tcl.tk

This website is maintained by the OpenACS community. Any problems, email webmaster or submit a bug report.

(Powered by Tcl 🐚, Next Scripting ∿, NaviServer 4.99.24 🅽, IPv4)

I come now to the end of my talk and I want especially
thank to Reinhard Max who gave me a very good tip
during Eurotcl last year concerning the use of
                         http::geturl and tls.
This mainly caused me to prepare my talk here!

Any questions?

Contact: uli.ender@esperanto.de

Thanks for listening!

Uli Ender

List of urls in *interreto/openacs.org/conf2022/info/nofilename.list*

```
file == interreto/openacs.org/conf2022/info/nofilename

url(
n       https://openacs.org/resources/xowiki/fonts/OpenSans-Regular.ttf
n       https://openacs.org/resources/xowiki/fonts/OpenSans-Bold.ttf
n       https://openacs.org/conf2022/info/download/file/wu_header_3.jpg

 src=
n       https://openacs.org/resources/xowiki/jquery/jquery-3.6.0.min.js
n       https://openacs.org/resources/xowiki/bootstrap-treeview/1.2.0/bootstrap-treeview.min.js
n       //cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js
n       https://openacs.org/resources/acs-templating/mktree.js
  ...

 href=
n       https://openacs.org/resources/acs-subsite/site-master.css
n       https://openacs.org/resources/xowiki/xowiki-bootstrap5.css
n       https://openacs.org/resources/bootstrap-icons/bootstrap-icons-1.8.1/bootstrap-icons.css
n       //cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css
n       https://openacs.org/resources/xowiki/bootstrap-treeview/1.2.0/bootstrap-treeview.min.css
n       https://openacs.org/resources/openacs-bootstrap5-theme/css/main.css
  ...
        https://bassenahotels.com/de/Hotels/Wien-Messe-Prater
        https://www.superbude.com/en/hotel-wien/prater/
n       https://openacs.org/conf2022/info/schedule/
        https://openacs.org/photos
        https://www.km.at/
        https://openacs.org/mailto:webmaster@openacs.org
        https://openacs.org/bugtracker/openacs.org/
j       http://www.tcl.tk/
        https://next-scripting.org/
        http://sourceforge.net/projects/naviserver/
```

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---

ⓘ https://openacs.org/conf2023/info   67% ☆

Seite wurde nicht gefunden

Die Verbindung mit dem Server openacs.org schlug fehl.

Falls die Adresse korrekt ist, können Sie noch Folgendes versuchen:

- Die Seite später noch einmal aufrufen.
- Die Netzwerkverbindung überprüfen.
- Falls der Computer sich hinter einer Firewall befindet, überprüfen Sie bitte, ob Firefox der Internetzugriff erlaubt wurde.
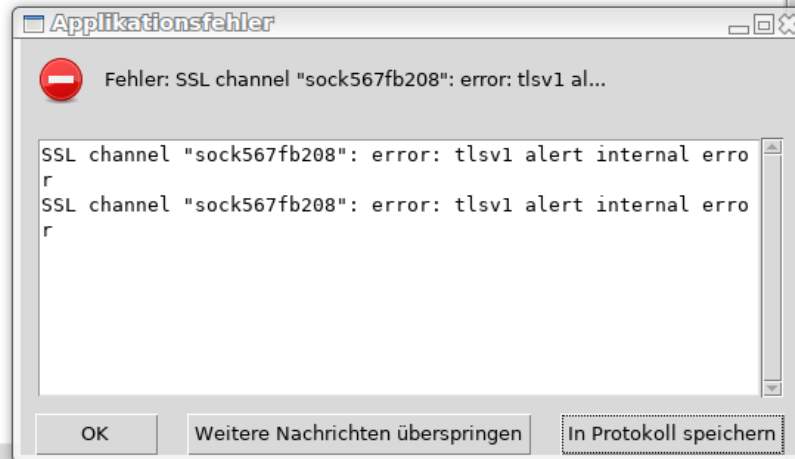
[**Nochmals versuchen**]

Protocol needed would be http: not https:

```
#
package require http
package require tls
http::register https 443 ::tls::socket

proc fetch&store {url} {
set h [open 11 w+]
set tok [http::geturl $url -binary yes]
fconfigure $h -encoding binary -translation binary
upvar #0 $tok state
set antwort $state(http)
.t insert end  "$url *$antwort*\n"
if {$antwort  == "HTTP/1.1 200 OK"} {puts $h $state(body)}
if {$antwort  != "HTTP/1.1 200 OK"} {
.t insert end  "$antwort\n$state(body)\n"
}
close $h
}

# example:
fetch&store https://uli.esperanto-muenchen.de
```

Applikationsfehler

🚫 Fehler: SSL channel "sock567fb208": error: tlsv1 al...

```
SSL channel "sock567fb208": error: tlsv1 alert internal error
SSL channel "sock567fb208": error: tlsv1 alert internal error
```

| OK | Weitere Nachrichten überspringen | In Protokoll speichern |

| F | < | 10 | > | S |

```
#
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fconfigure $h -encoding binary -translatio
upvar #0 $tok state
set antwort $state(http)
.t insert end  "$url *$antwort*\n"
if {$antwort  == "HTTP/1.1 200 OK"} {puts
if {$antwort  != "HTTP/1.1 200 OK"} {
.t insert end  "$antwort\n$state(body)\n"
}
close $h
}

# example:
fetch&store    https://www.ActiveState.com/products/tcl
```

Applikationsfehler

Fehler: SSL channel "sock56a53708": error: sslv3 al...

SSL channel "sock56a53708": error: sslv3 alert handshake failure
SSL channel "sock56a53708": error: sslv3 alert handshake failure

OK   Weitere Nachrichten überspringen   In Protokoll speichern

Error: 301 Moved Permanently

```
//uli.esperanto-muenchen.de *HTTP/1.1 200 OK*

# example:
fetch&store http://uli.esperanto-muenchen.de

http://uli.esperanto-muenchen.de *HTTP/1.1 200 OK*


# example:
fetch&store        http://www.ActiveState.com/products/tcl




http://www.ActiveState.com/products/tcl *HTTP/1.1 301 Moved Permanently*
HTTP/1.1 301 Moved Permanently
<html>
<head><title>301 Moved Permanently</title></head>
<body>
<center><h1>301 Moved Permanently</h1></center>
<hr><center>CloudFront</center>
</body>
</html>
```

Convert url-name and store in folder „interreto"

some examples:

      url   (you use in the browser)   and   type (returned by $state(type)

--- >   converted filename (used in the folder /home/knoppix/internet/interreto)

===

http://www.tcl.tk   text/html

--- >   /tcl.tk/nofilename   /tcl.tk/nofilename.orig /tcl.tk/nofilename.list

http://www.tcl.tk/images/plume.png   image/png

--- >   .../interreto/tcl.tk/images/plume.png

http://www.tcl.tk/siteinfo.html   text/html

--- >   .../interreto/tcl.tk/siteinfo.html /tcl.tk/siteinfo.html.orig tcl.tksiteinfo.html.list

https://openacs.org/conf2023/info   text/html

--- >   .../interreto/openacs.org/conf2023/info/nofilename .../nofilename.origin …/nofilename.list

https://avatars3.githubusercontent.com/u/319421?v=3&s=200   image/png

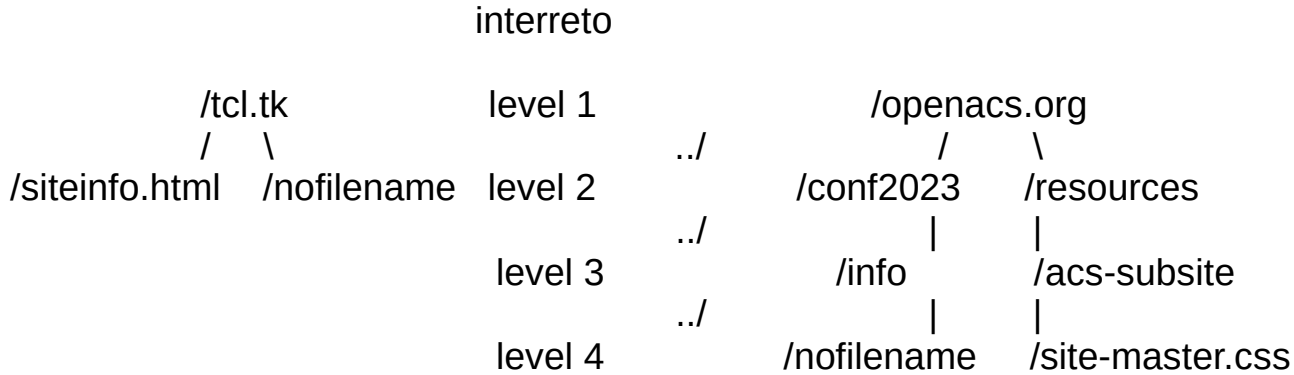--- >   .../interreto/avatars3.githubusercontent.com/u/319421_v=3&s=200/nofilename

https://www.esperanto.de/de/enhavo/informi/wie-k%C3%BCnstlich-oder-nat%C3%BCrlich-ist-esperanto text.html
- > interreto/esperanto.de/de/enhavo/informi/wie-künstlich-oder-natürlich-ist-esperanto/nofilename ....orig ....list

hierarchy of files in folder interreto

2 examples:
The url from where the html-file had been taken is supposed to be https://openacs.org/conf2023/info

```
                              interreto

              /tcl.tk              level 1                    /openacs.org
              /    \                          ../                  /      \
/siteinfo.html   /nofilename   level 2                /conf2023    /resources
                                          ../                 |        |
                              level 3                /info        /acs-subsite
                                          ../                 |        |
                              level 4             /nofilename   /site-master.css


                              (../  ==  1 level upwards)
```

Original link: http://www.tcl.tk
Replaced by: ../../../tcl.tk/nofilename   (note: www is omitted)
Line added in nofilename.list :   http://www.tcl.tk

Original link: /resources/acs-subsite/site-master.css
Replaced by: ../../resources/acs-subsite/site-master.css
Line added in nofilename.list :   j https://openacs.org/resources/acs-subsite/site-master.css
(note: files with pictures , css and js are recommended to be downloaded to show the webpage correctly)