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*tag*store



advanced storing & retrieval of informations

the old days of computing



Booting system from CD-ROM
512 KB boot image found

Welcome to PDP-11 7th Edition UNIX

- 1) At the @ prompt type: boot<enter>
- 2) At the : prompt type: rl(0,0)rl2unix<enter>
- 3) At the # prompt type <ctrl-d> and login as root with password root

@boot

New Boot, known devices are hp ht rk rl rp tm vt

△△: rl(0,0)rl2unix

△△MEM = 177856

△△# Restricted rights: Use, duplication, or disclosure
is subject to restrictions stated in your contract with
Western Electric Company, Inc.

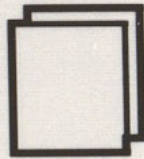
Thu Sep 22 19:43:18 EDT 1988

login: _

desktop metaphor

Decision 3

Simplified vs Detailed



Simplified version without detailed lines to indicate text.



Additional elements of lines added to define the object features.

Decision 4

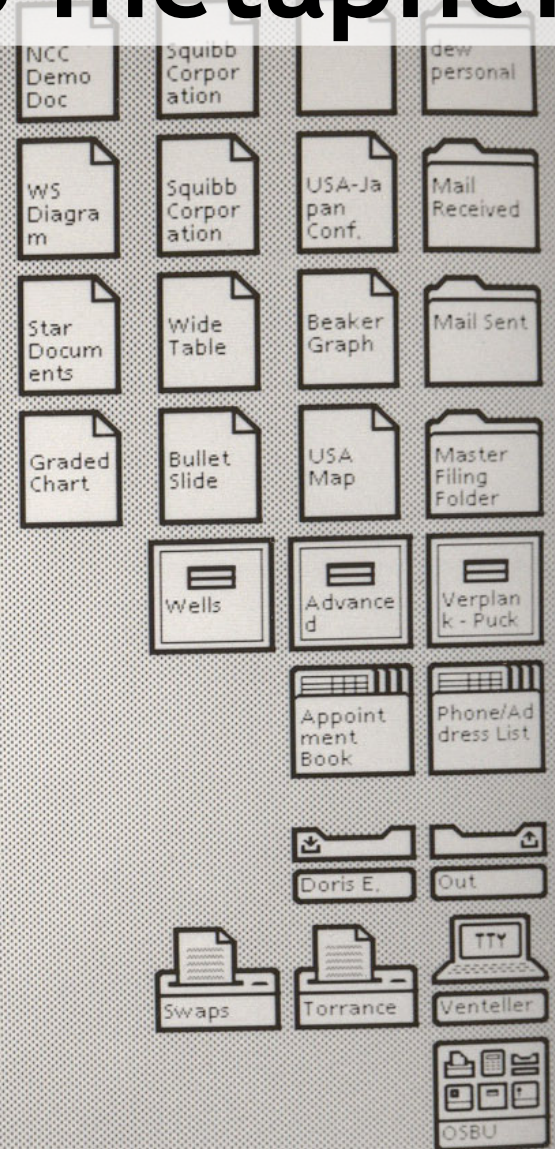
Two Dimensional vs Three Dimensional



Single plane depiction showing height and width only.



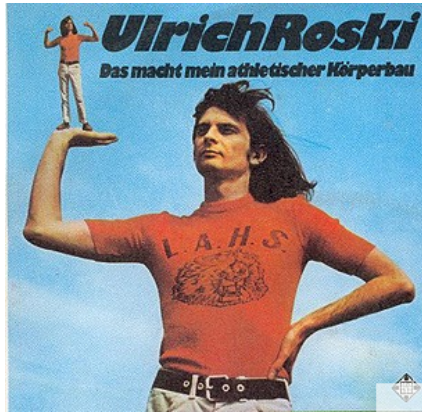
Single plane depiction showing height, width and implied depth.



Alan Kay at Xerox PARC (1970)

desktop metaphor

1970



desktop metaphor



1970

New Admiral Color
only \$249^{95*}

Exclusive 3-year color picture tube warranty. 50% more power for a brighter color picture

Admiral introduces an all-new 12" (diag.) color portable that features the exclusive Admiral precision-crafted K-10 chassis, which combines solid state components with proven vacuum tube technology. You get a clearer, brighter color picture, less heat build-up, unparalleled reliability and lighter weight.

And only Admiral gives you the exclusive 3-year color picture tube warranty on every color set. That's one year longer than any other.

Admiral builds in more big set performance in all its color portables, each with a power transformer, plus a solid state 3-stage I.F. amplifier that insures studio sharp pictures even in weak signal areas. Get the newest and most dependable portable TV ever. Admiral, unquestionably your best buy in color TV at only \$249.95.



Admiral 14" (diag.) color portable. Choice of white, brown/white or Walnut-grain finishes.



Admiral Color 16. America's only 16" (diag.) color portable. In Walnut with...



 **AutoPixx.de**



desktop metaphor

1970

desktop metaphor *necessary*



2010

desktop metaphor *limiting*

desktop metaphor:



one thing at **one** place

without limitations:



each thing at **its** places



Real world shop

Digital cameras ↔ Home electronics

Digital cameras @ virtual shop



... and *additionally*:

other customer also bought
hot brands
cool prices
most wanted
your wishlist
gifts

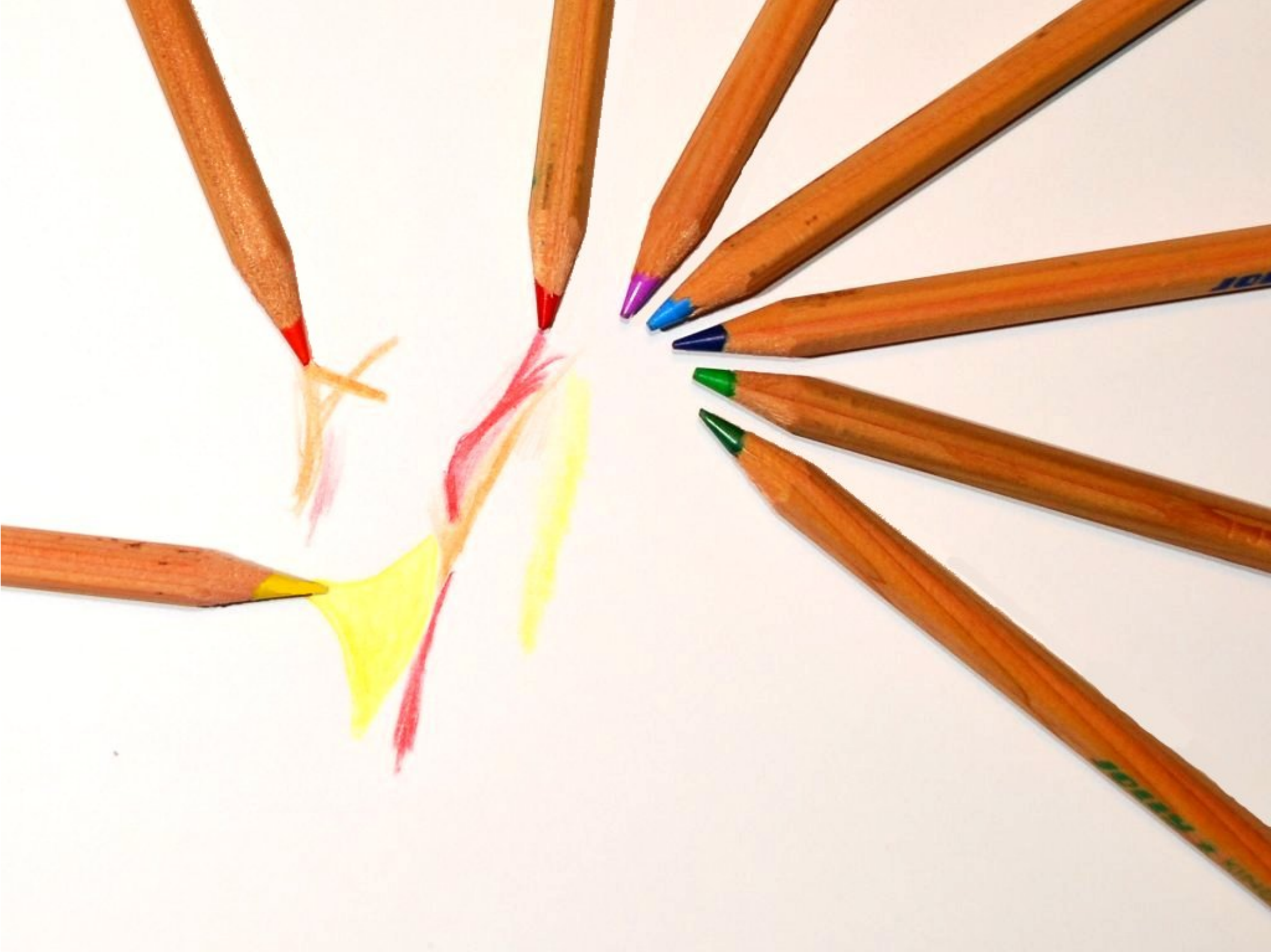
...

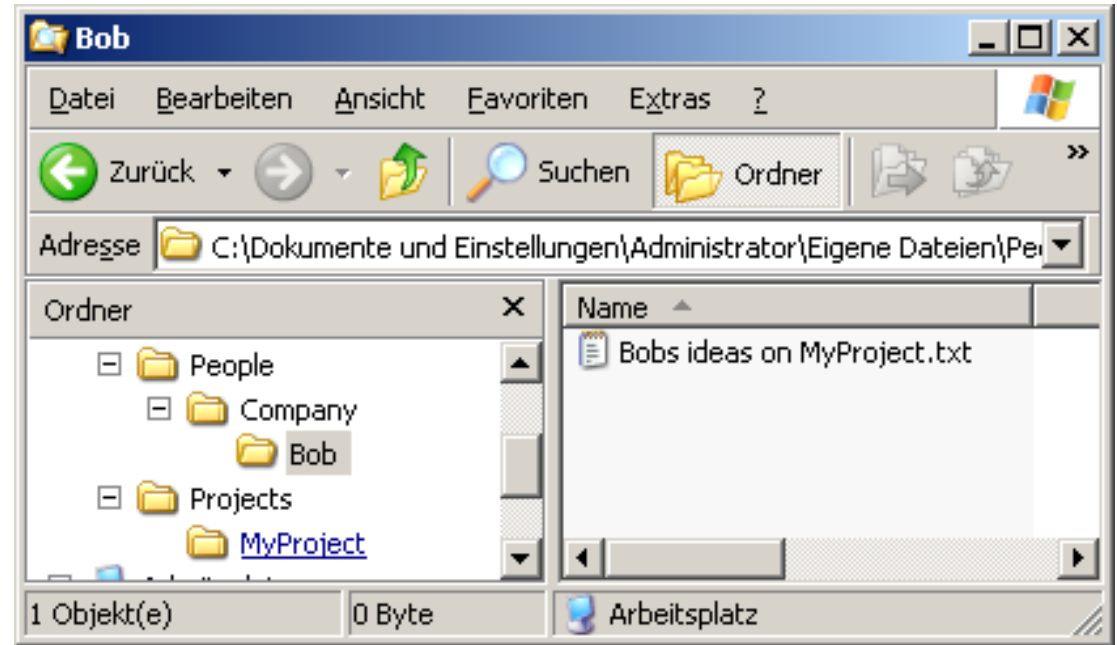
groundbreaking idea

(Re-)Presentation of information should
not depend on **storage** method

but

only depend on **retrieval** method!



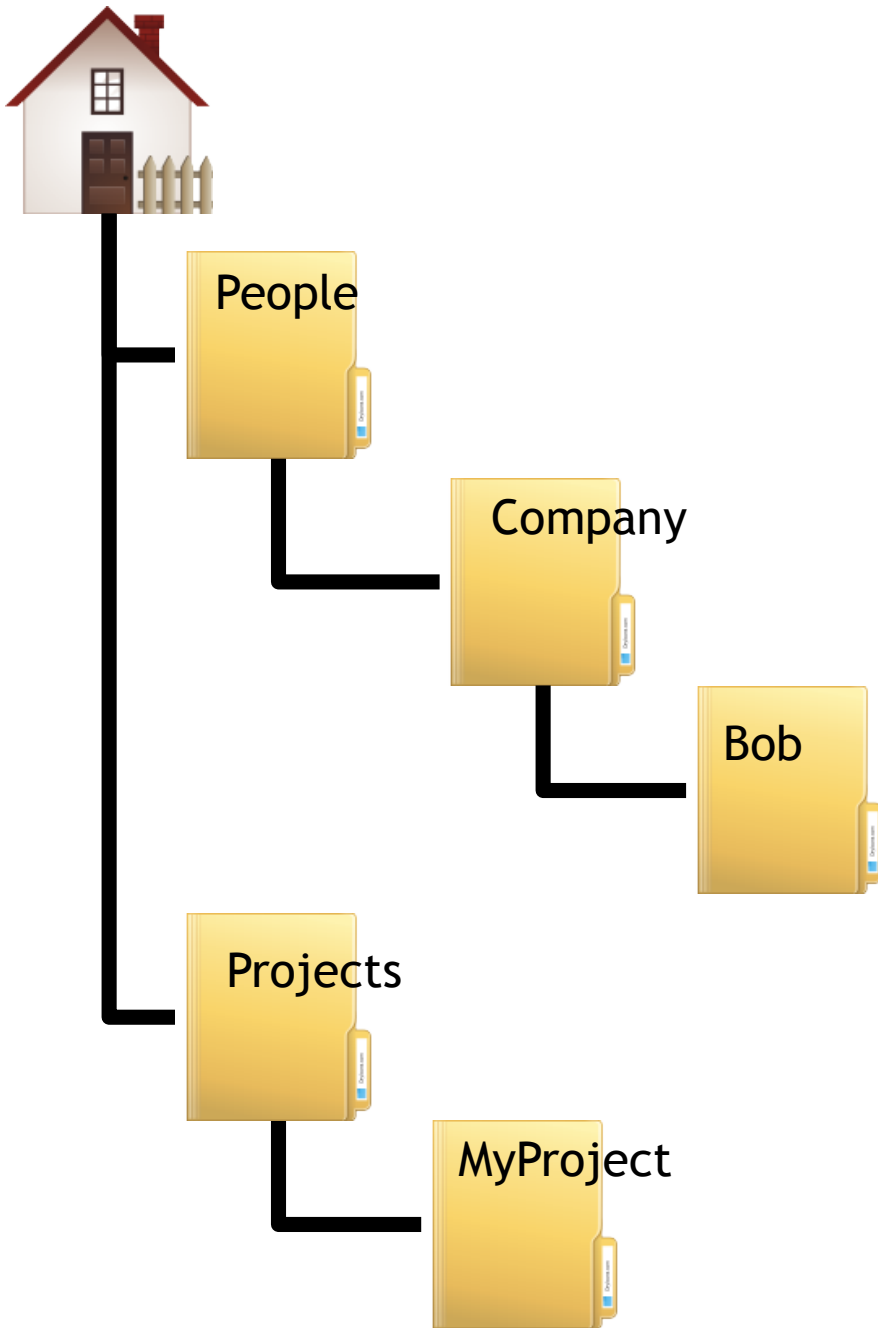


browsing/navigation



teleporting

strict hierarchies

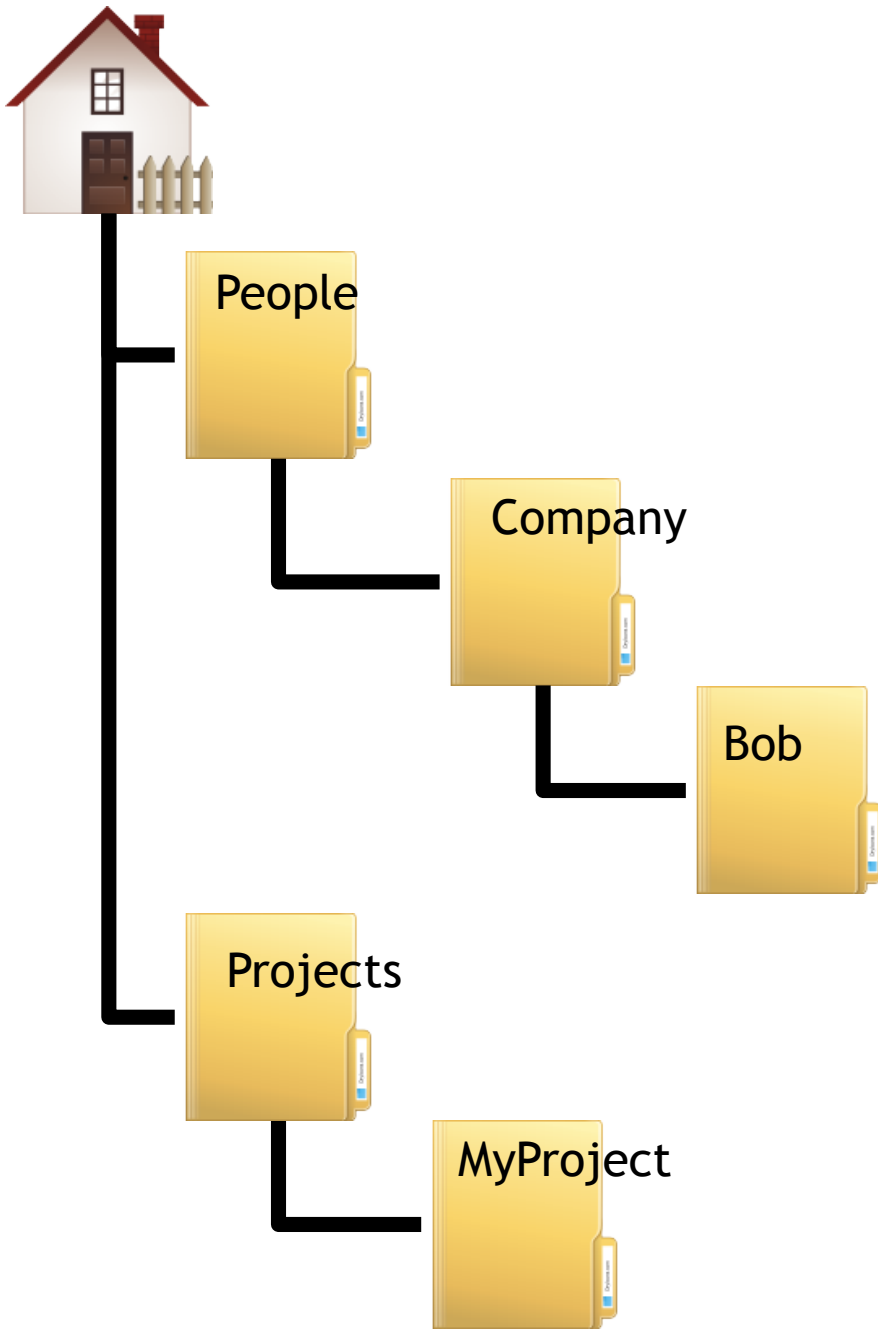


Example of:
informations are
(only) represented
related to storage

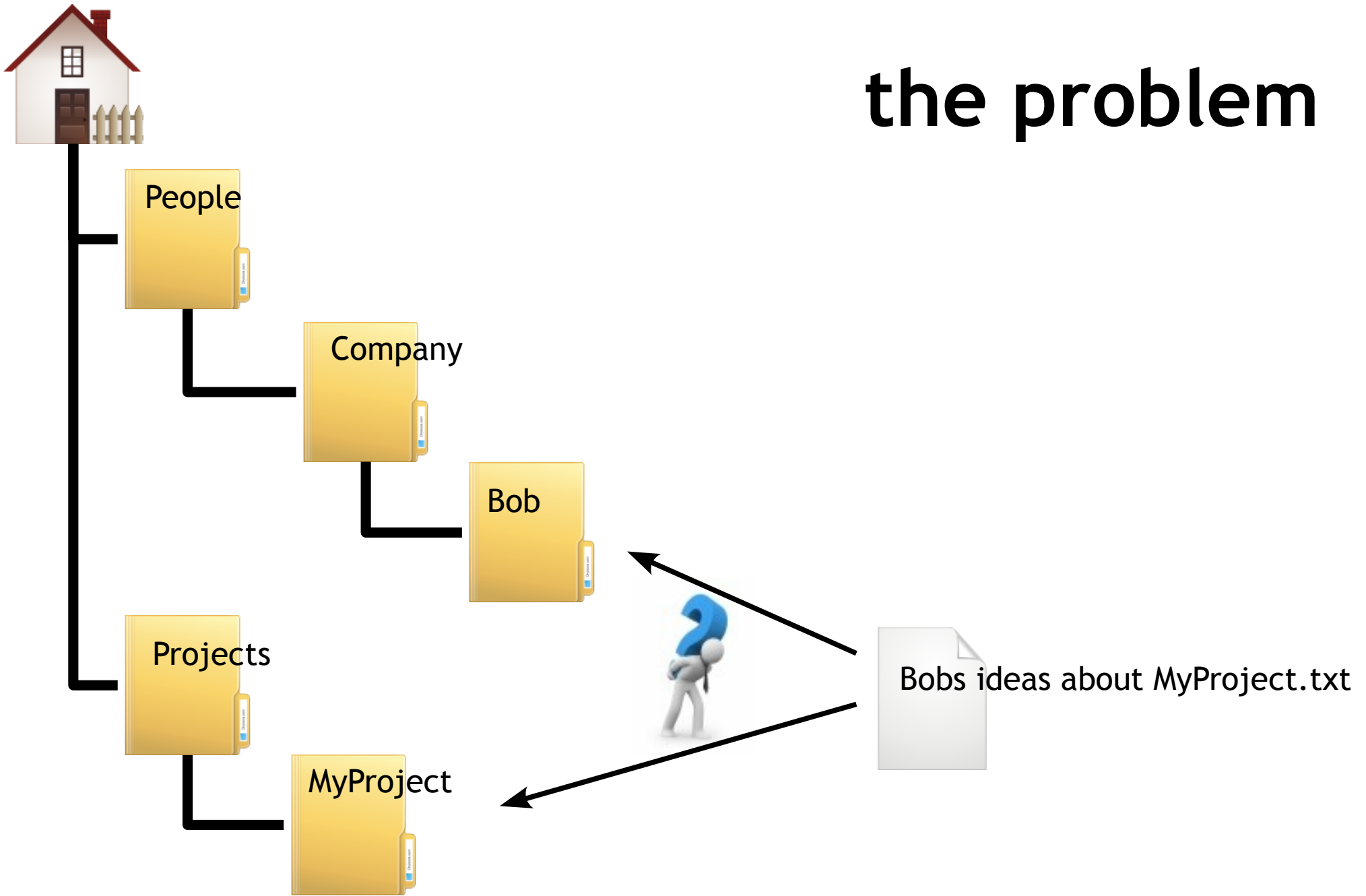
the problem with file placement

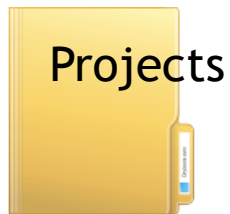
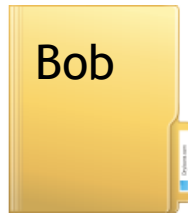
consider you want to *store a file* ...

example szenario



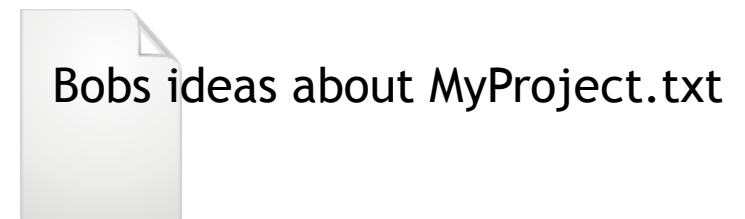
the problem





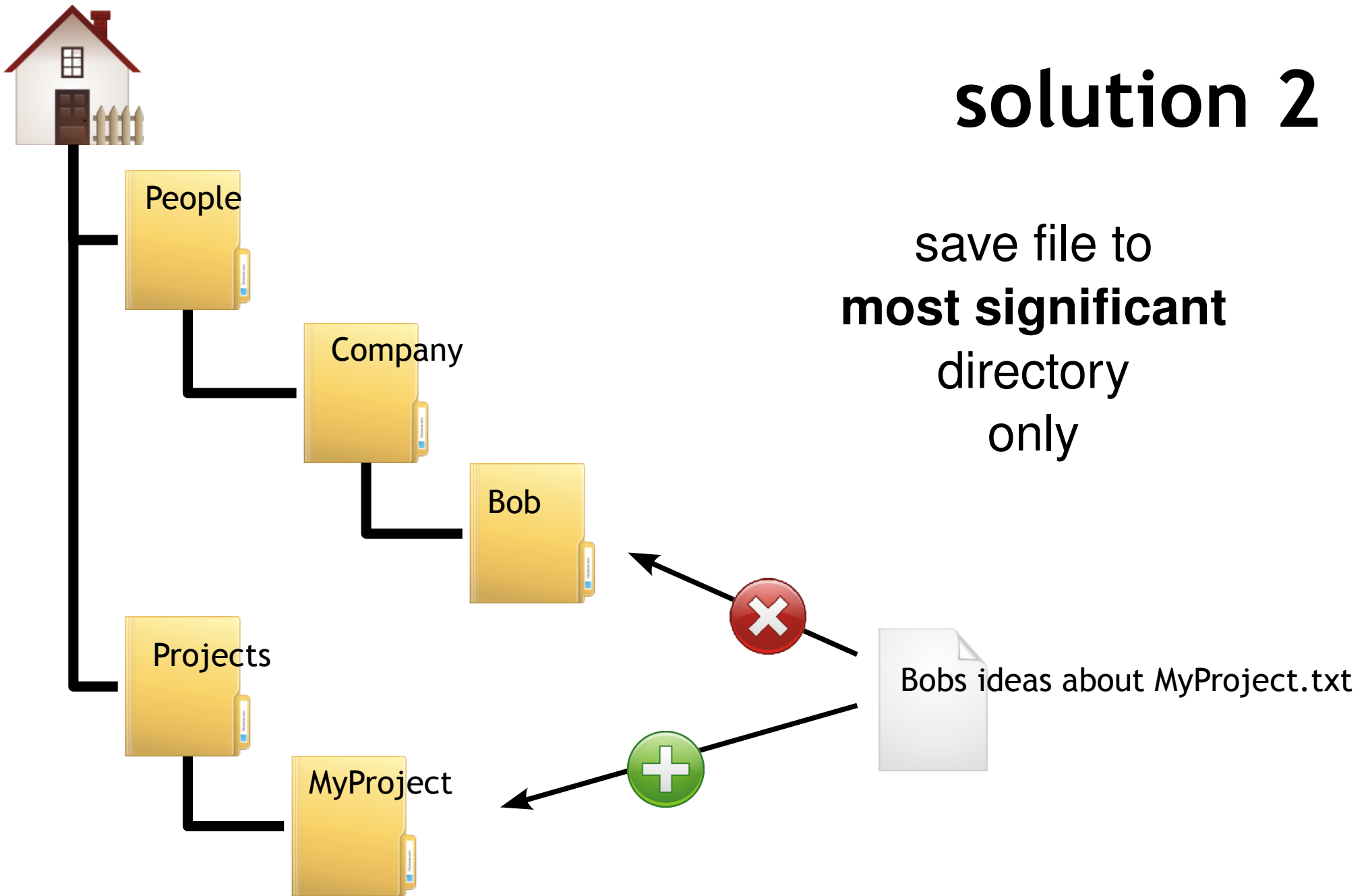
solution 1

save file to
all
directories

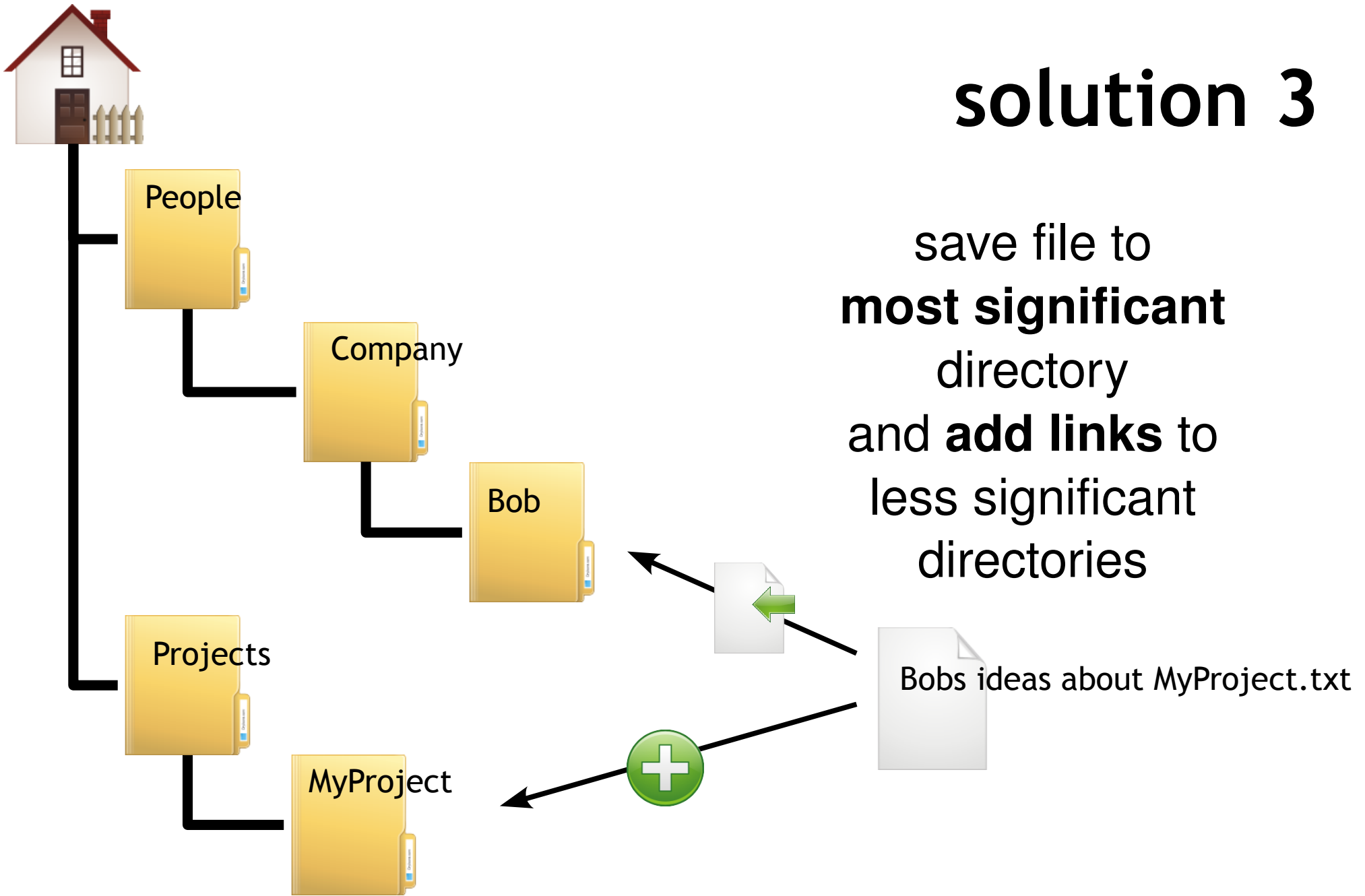


solution 2

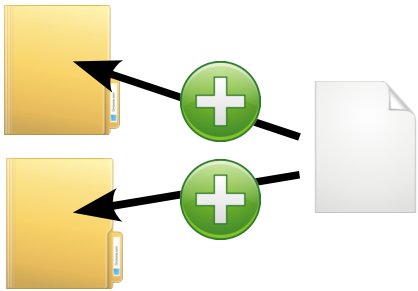
save file to
most significant
directory
only



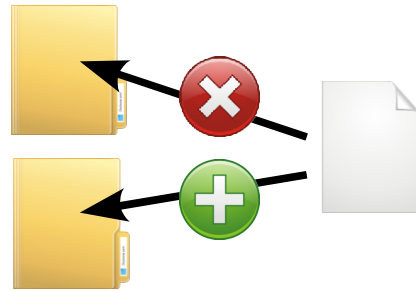
solution 3



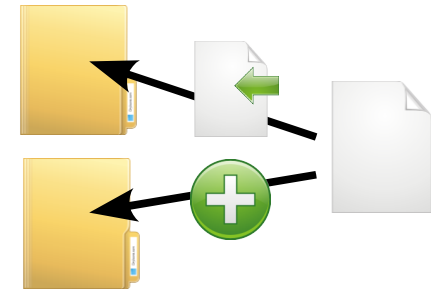
disadvantages



storage space
inconsistency

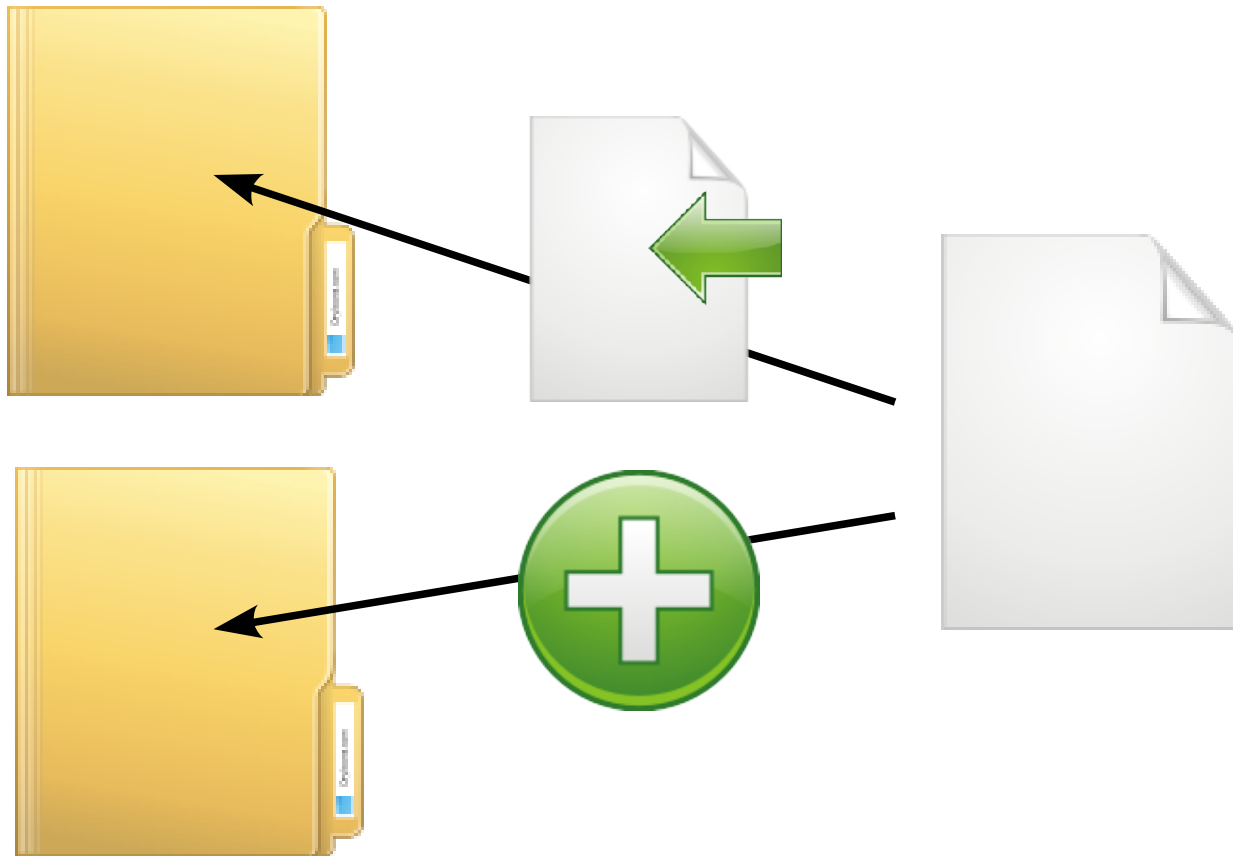


remember
locations
finding stuff



broken links

best solution

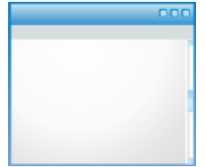


implementation issues



minimal task effort

compatible with existing apps



browsing retrieval method

transparency

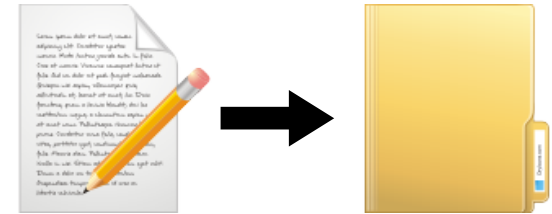


tagstore - adding a file



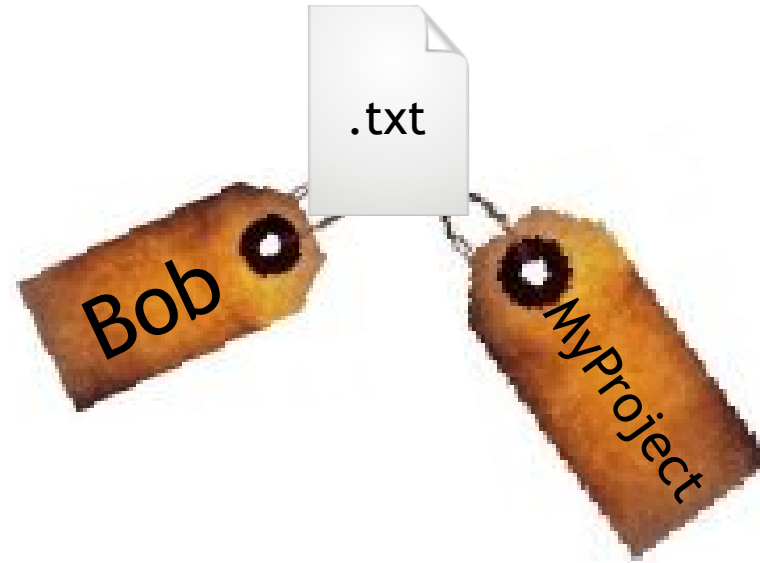
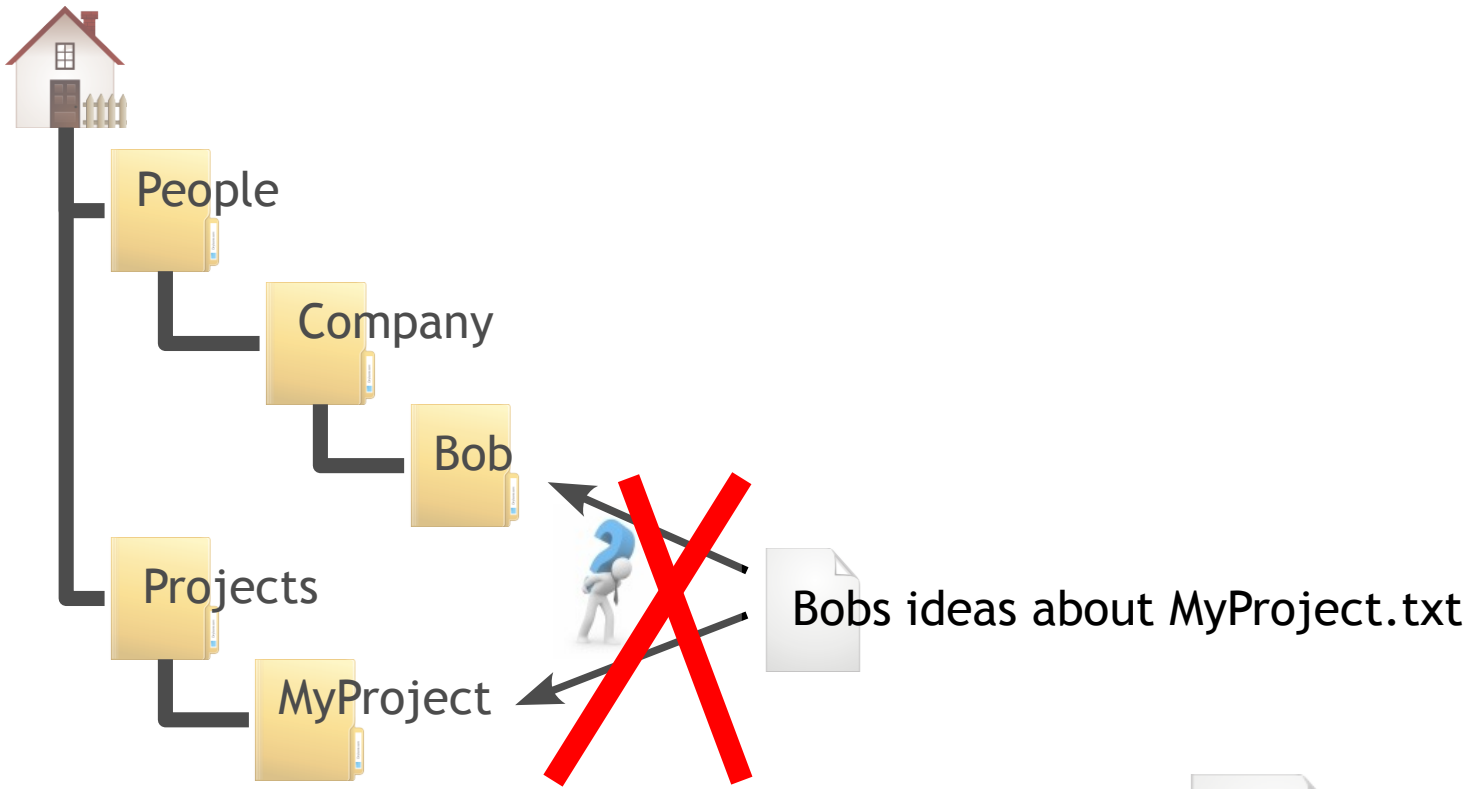
user creates file

user saves file in
(single) tagstore directory

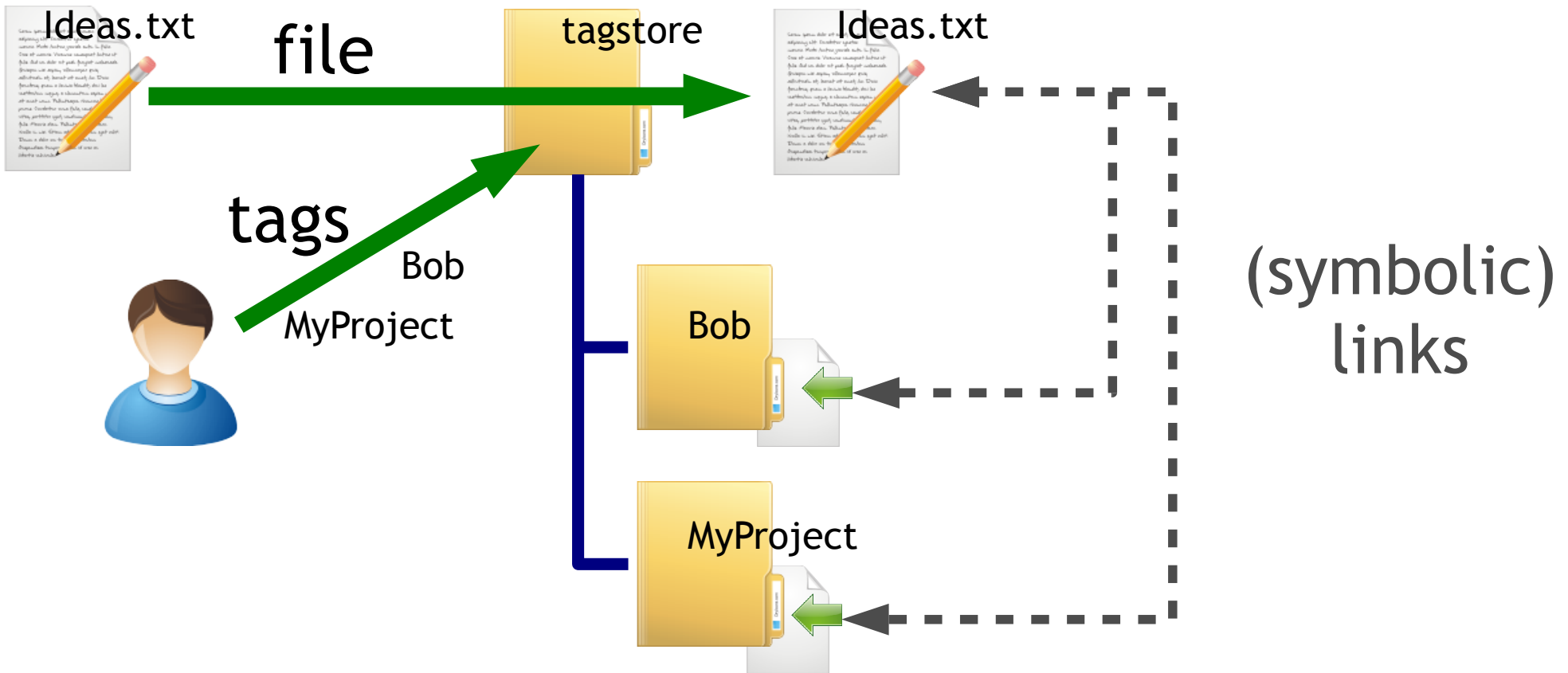


tagstore asks for tags

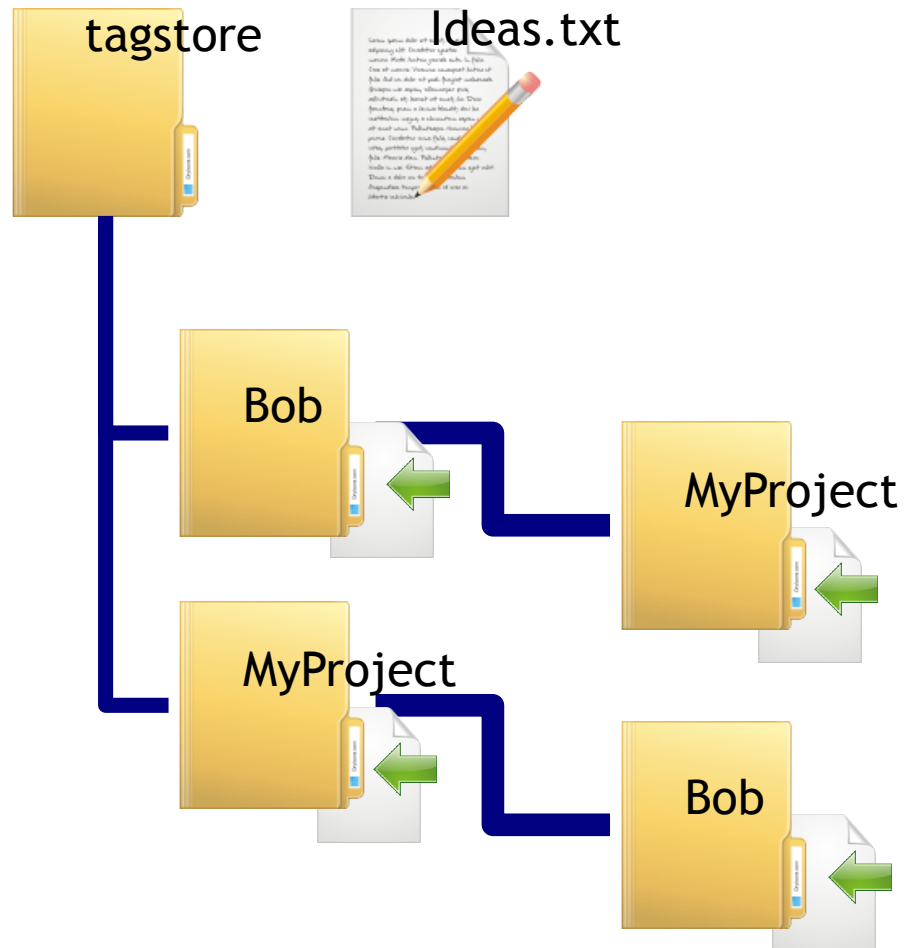
tags?



background action

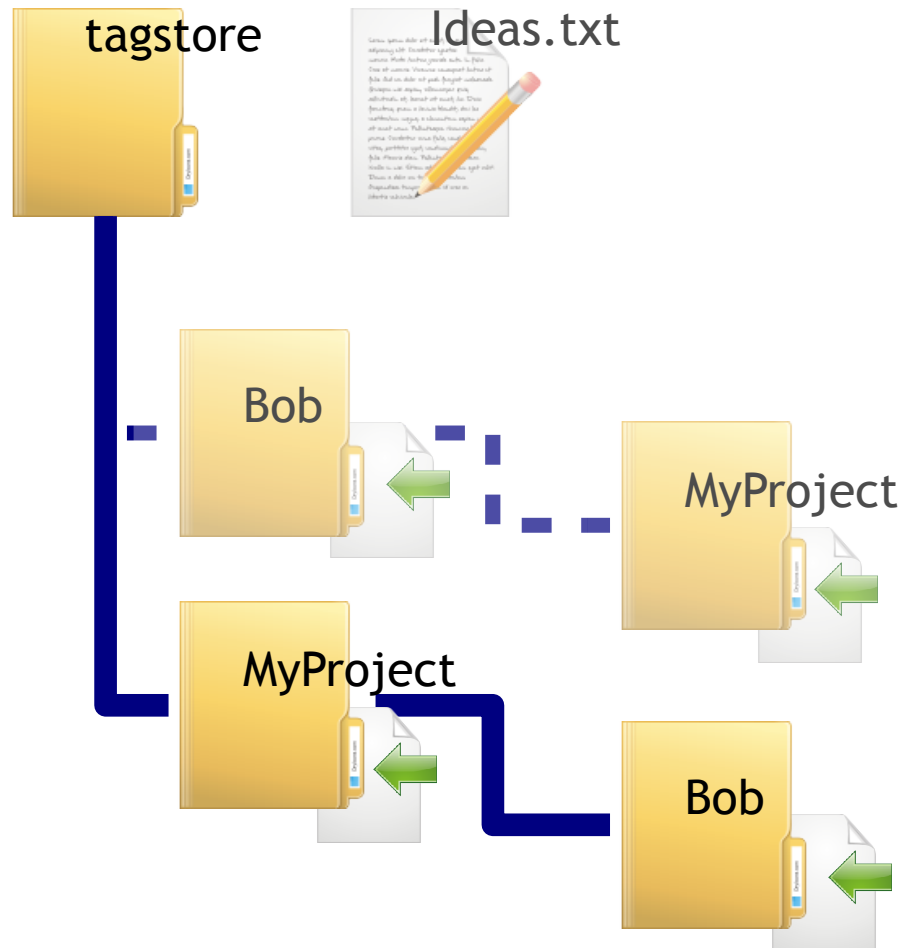


background action



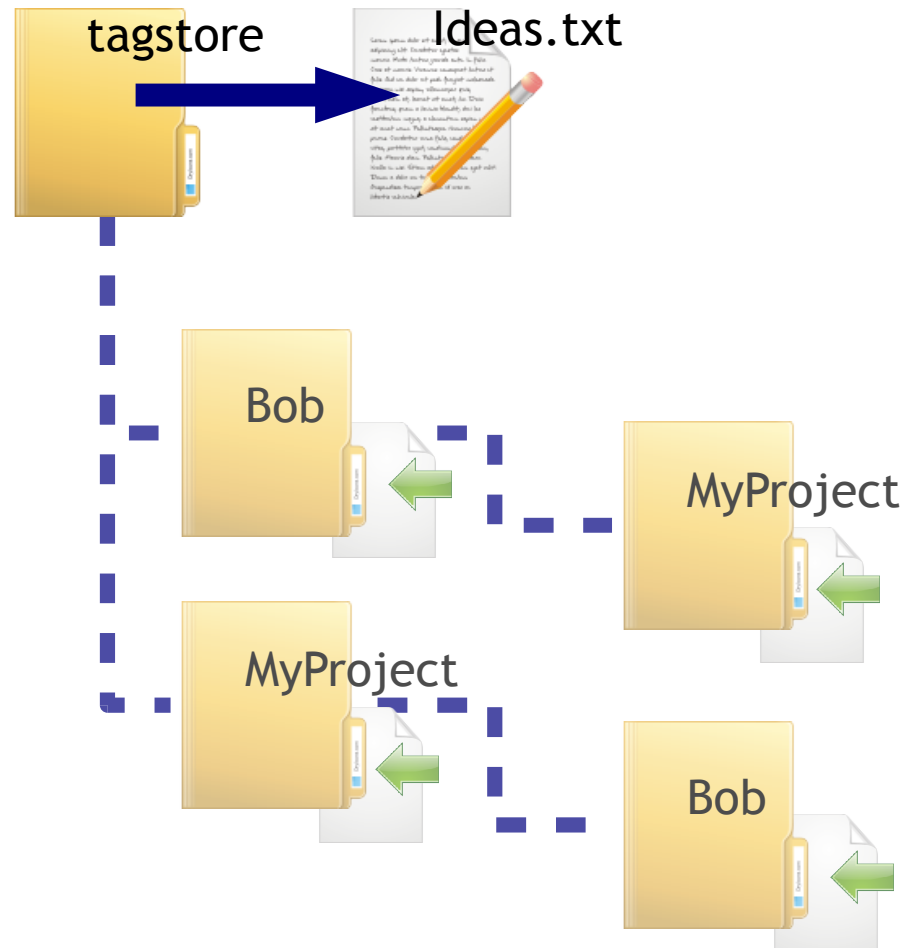
accessing files

the project file from Bob



accessing files

the file „Ideas.txt“



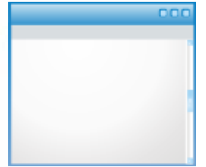
implementation issues



minimal task effort



compatible with existing apps



browsing retrieval method



transparency



one thing at **one** place



each thing at **its** places

*tag*store



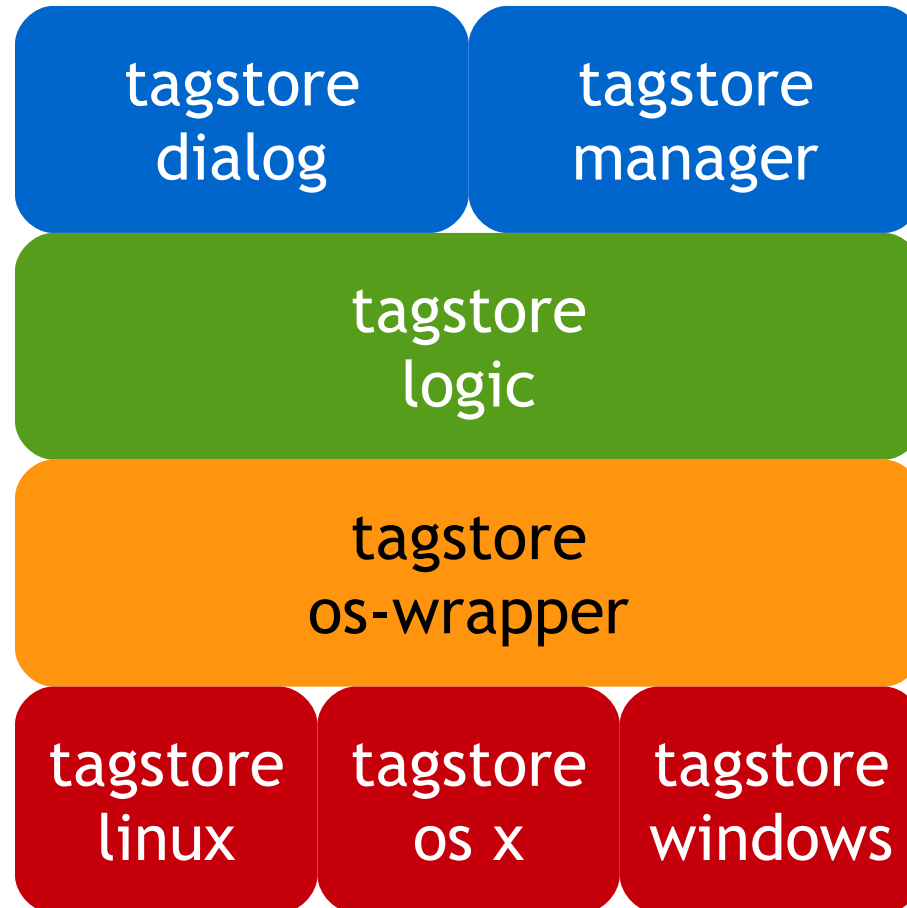
(Re-)Presentation of information should **not**
depend on **storage** method

but

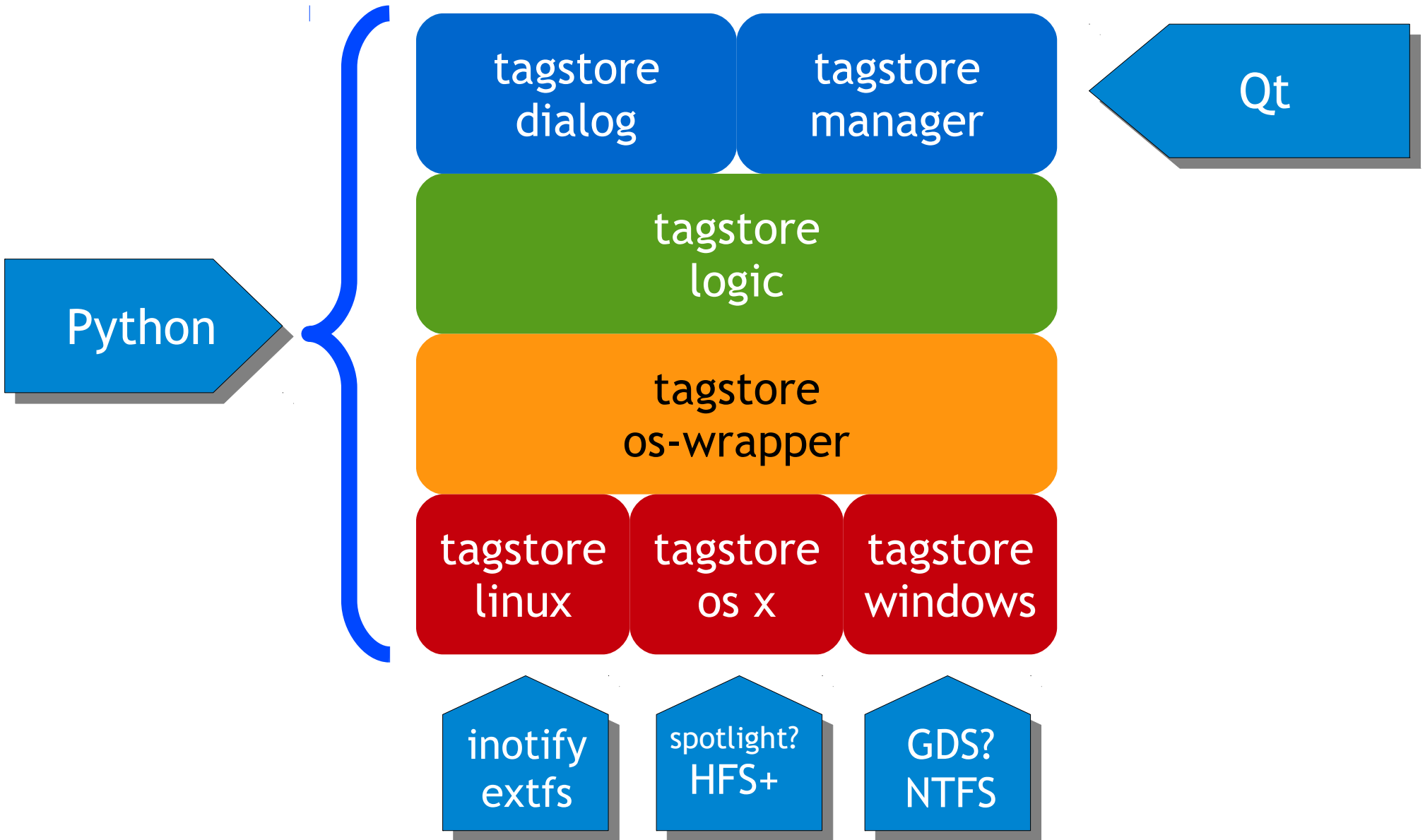
only depend on **retrieval** method!



tagstore architecture



tagstore architecture



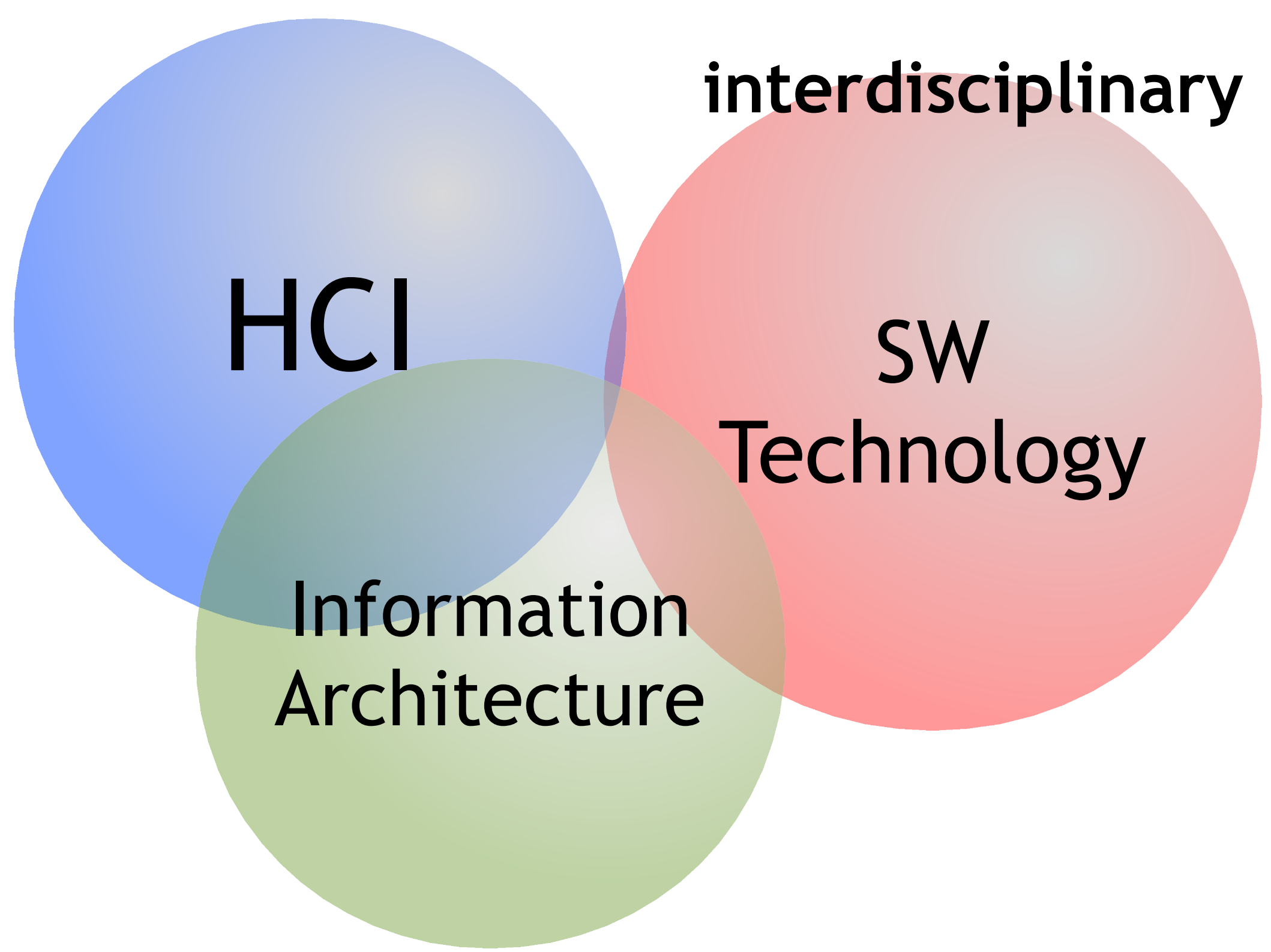
interdisciplinary

HCI

SW

Technology

**Information
Architecture**



research questions



HCI

User tests

Interface design

User-centric approach

Watch users vs. ask users

Short term tests vs. long term tests

...

research questions

Tags vs. hierarchy

Hierarchy of tags?

Tag organisation, tag farming

Recommender systems

Categorizing vs. describing

How people are using tags

Tag history of users (usage over time)

Tags & method as a unit

Expiry dates and information

...



**Information
Architecture**

research questions



SW
Technology

Prototype platform development

Agile development

Heavily configurable

Multi-platform

Multi-purpose

Multi-language

Usage paradigm & SW development requirements

...

cooperation

Institut für Wissensmanagement
Knowledge Management Institute (KMI)



IICM Institut für
Informationssysteme
und Computer Medien

*tag*store

advanced storing & retrieval of informations

Karl.Voit@IST.TUGraz.at

semantics



semantic relationship:

tag *is_assigned_to* file

Semantic Desktop



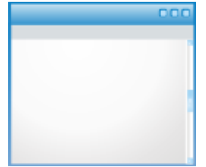
only

backends use DB



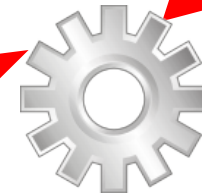
minimal task effort?

compatible with existing apps



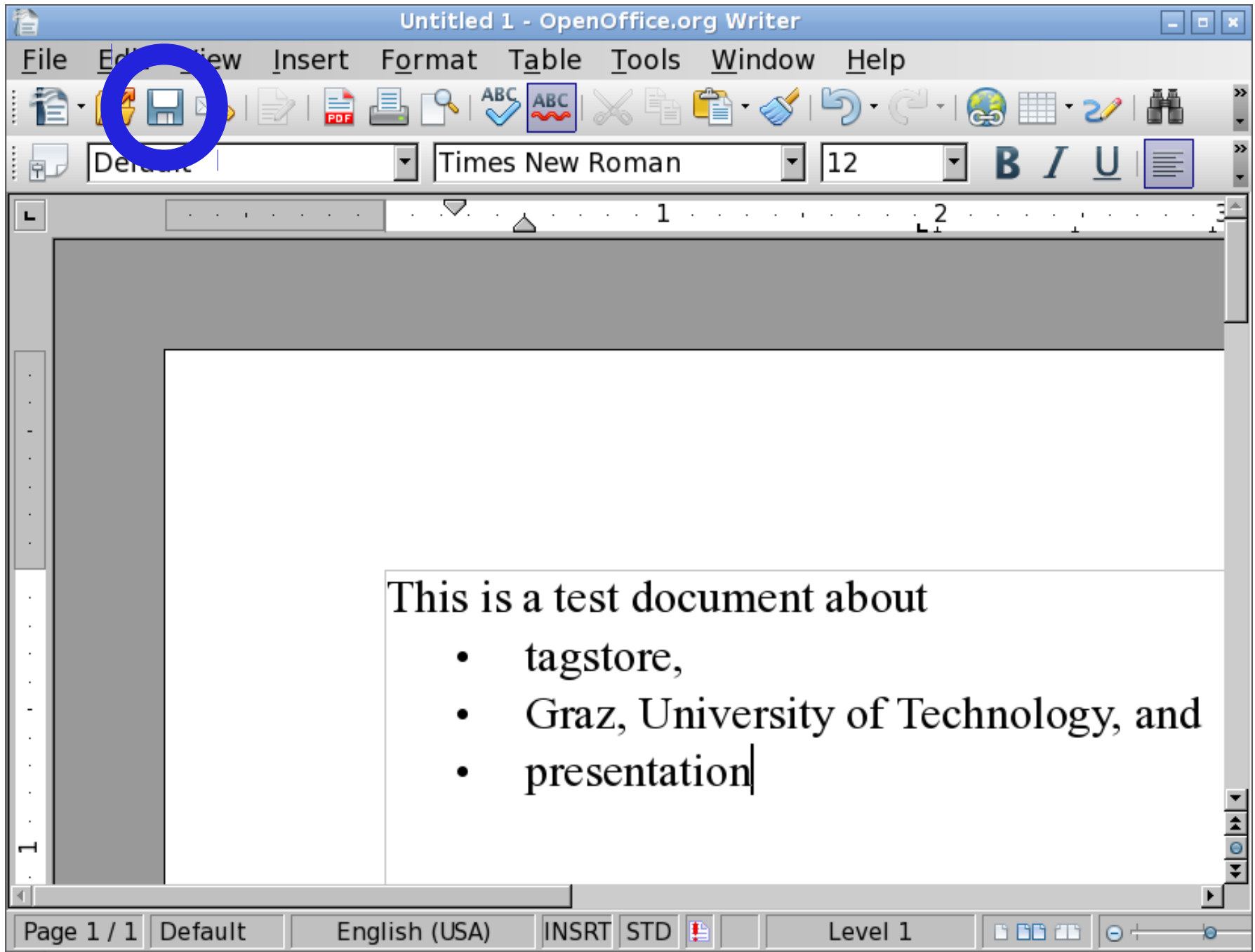
browsing retrieval method

transparency

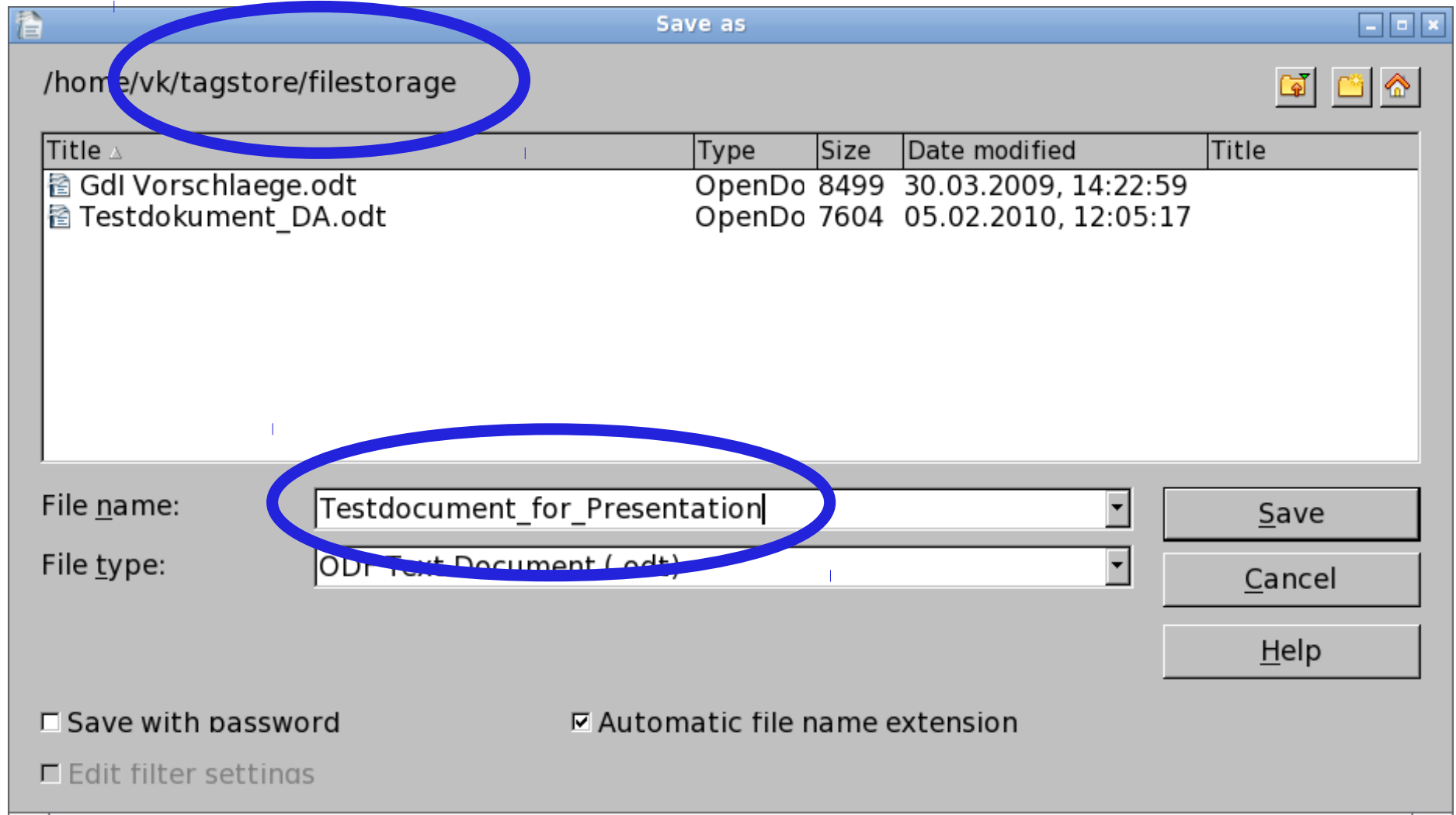


prototype

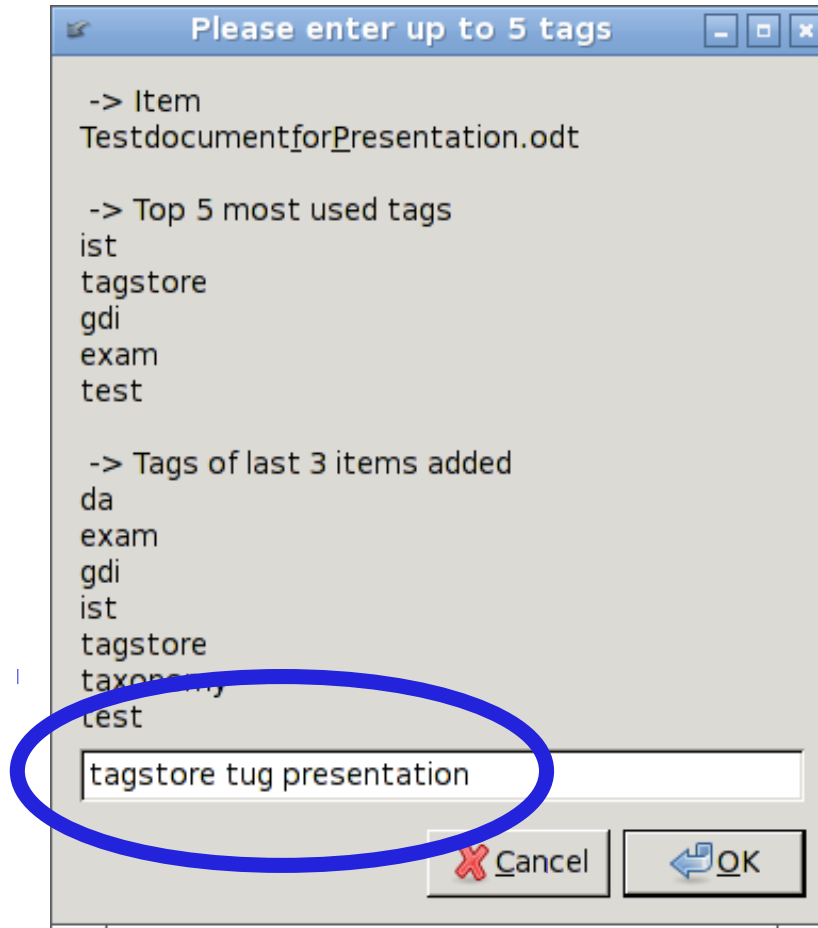
prototype



prototype



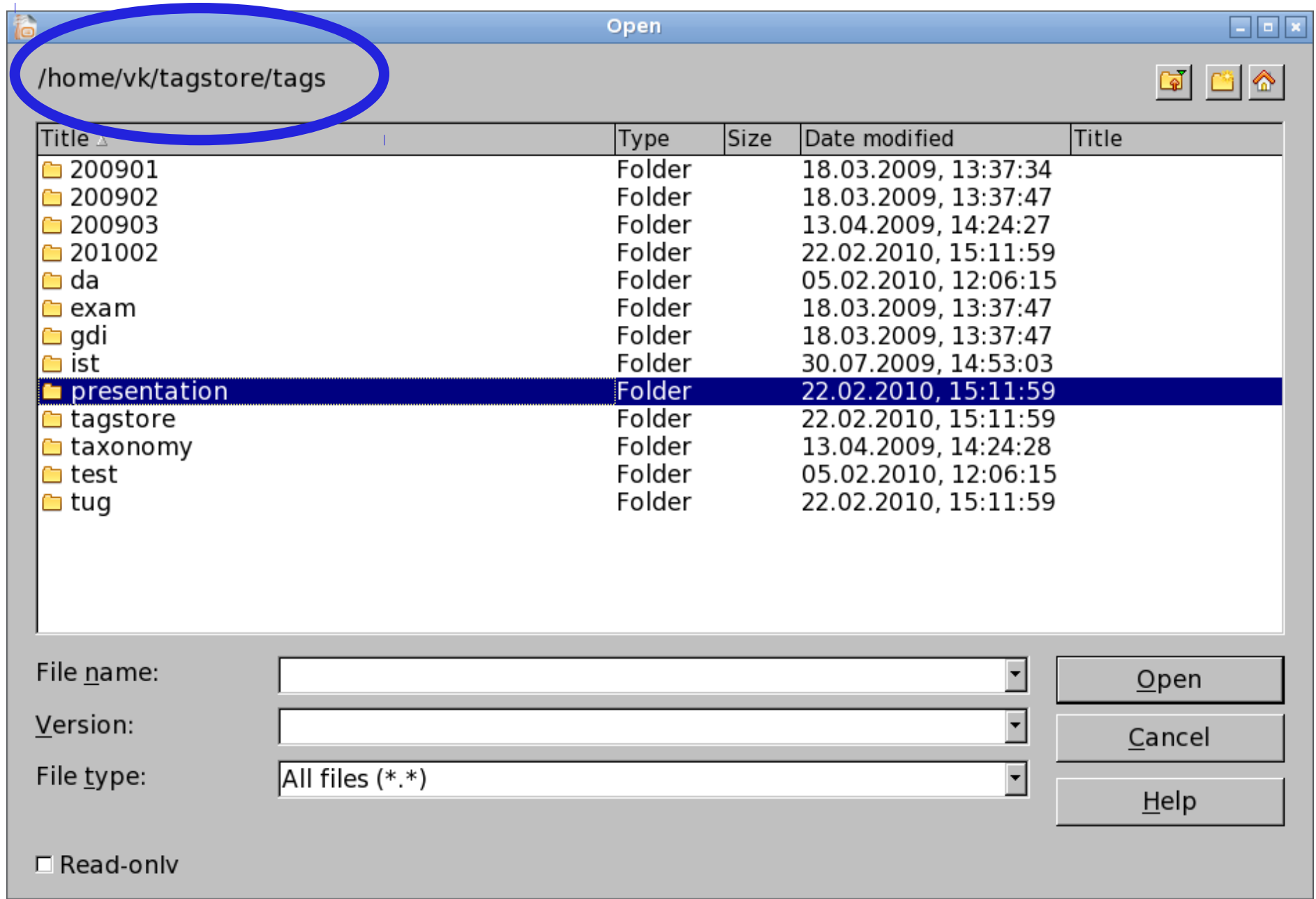
prototype



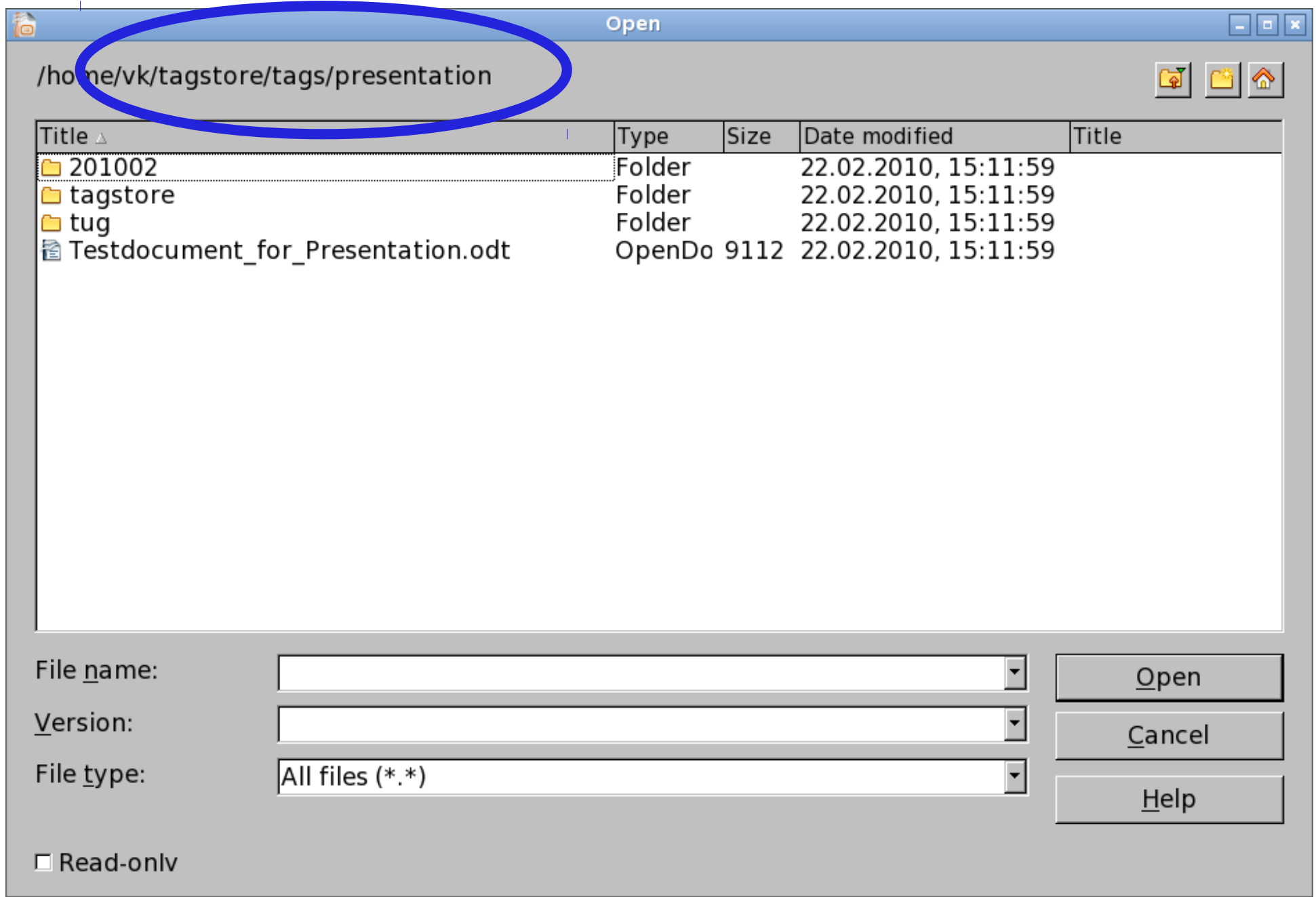
prototype

000 retrieval process

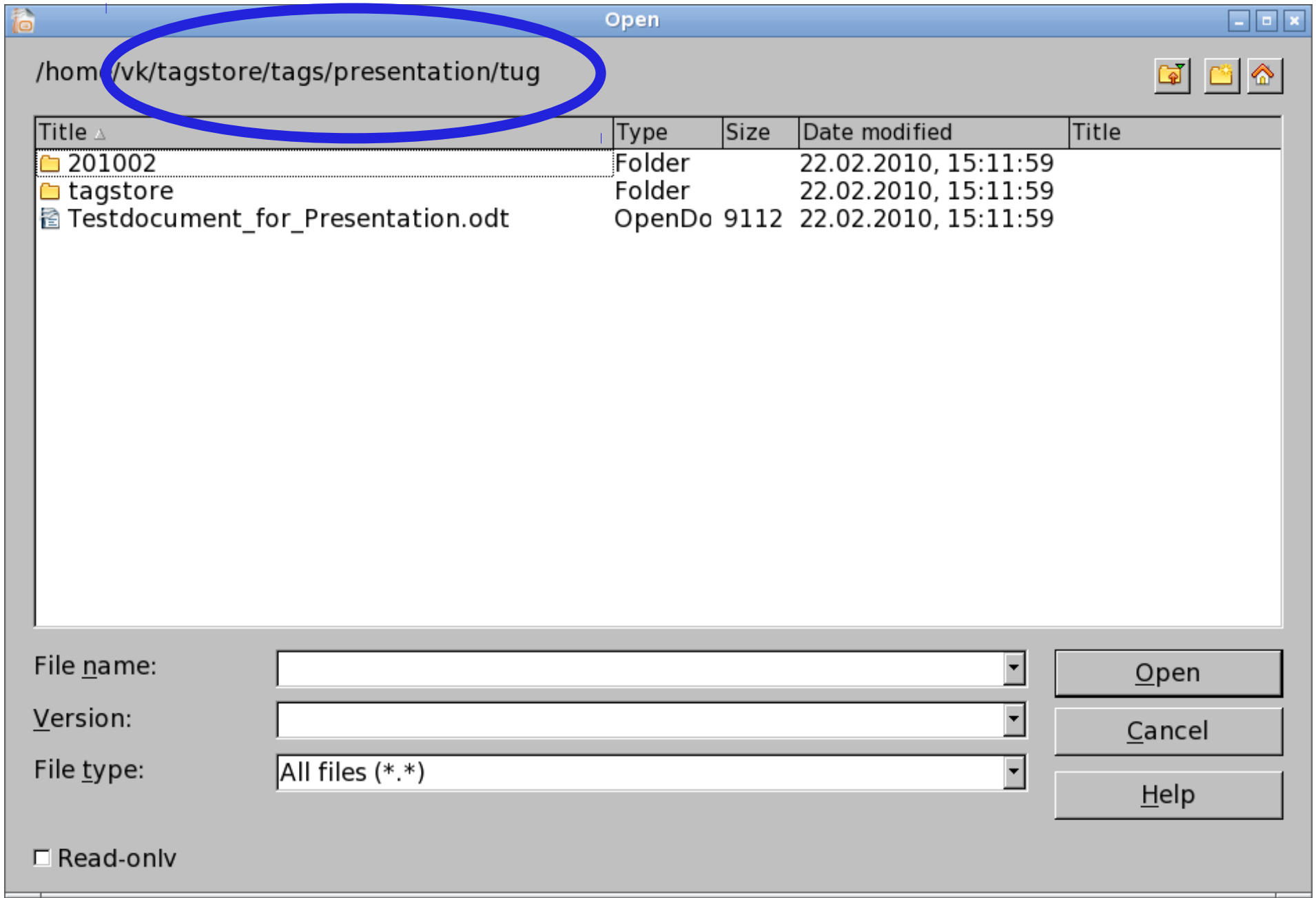
prototype



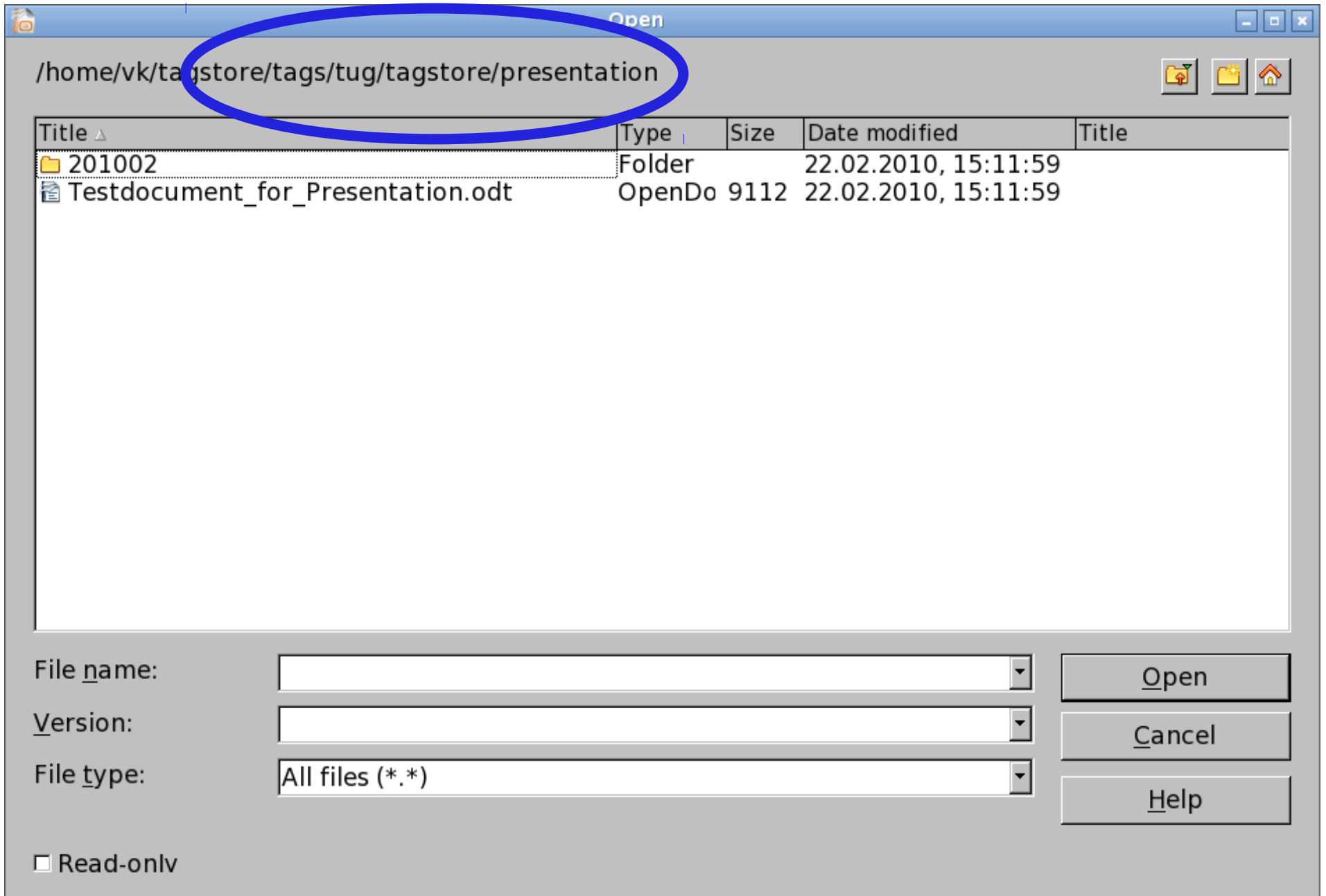
prototype



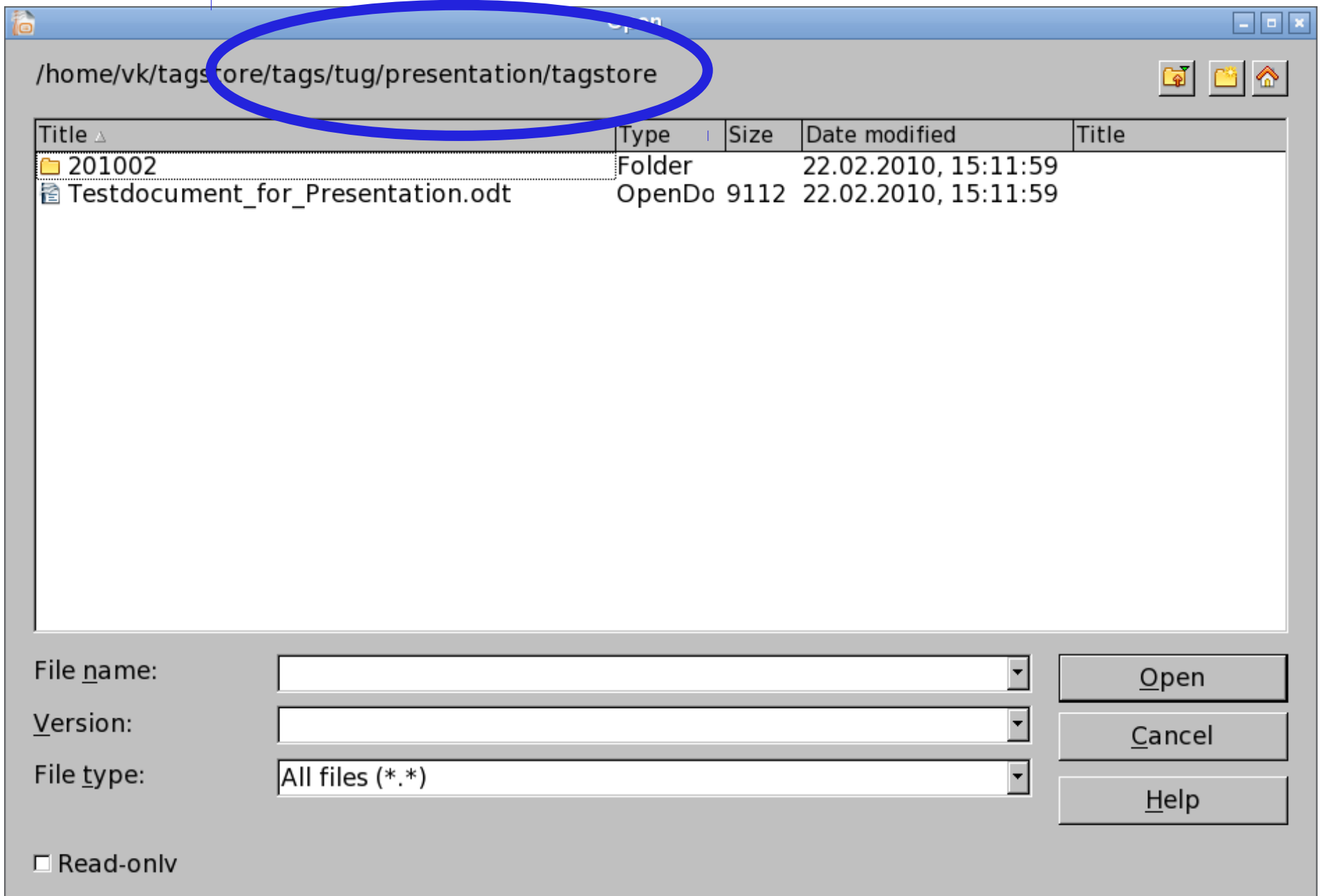
prototype



prototype



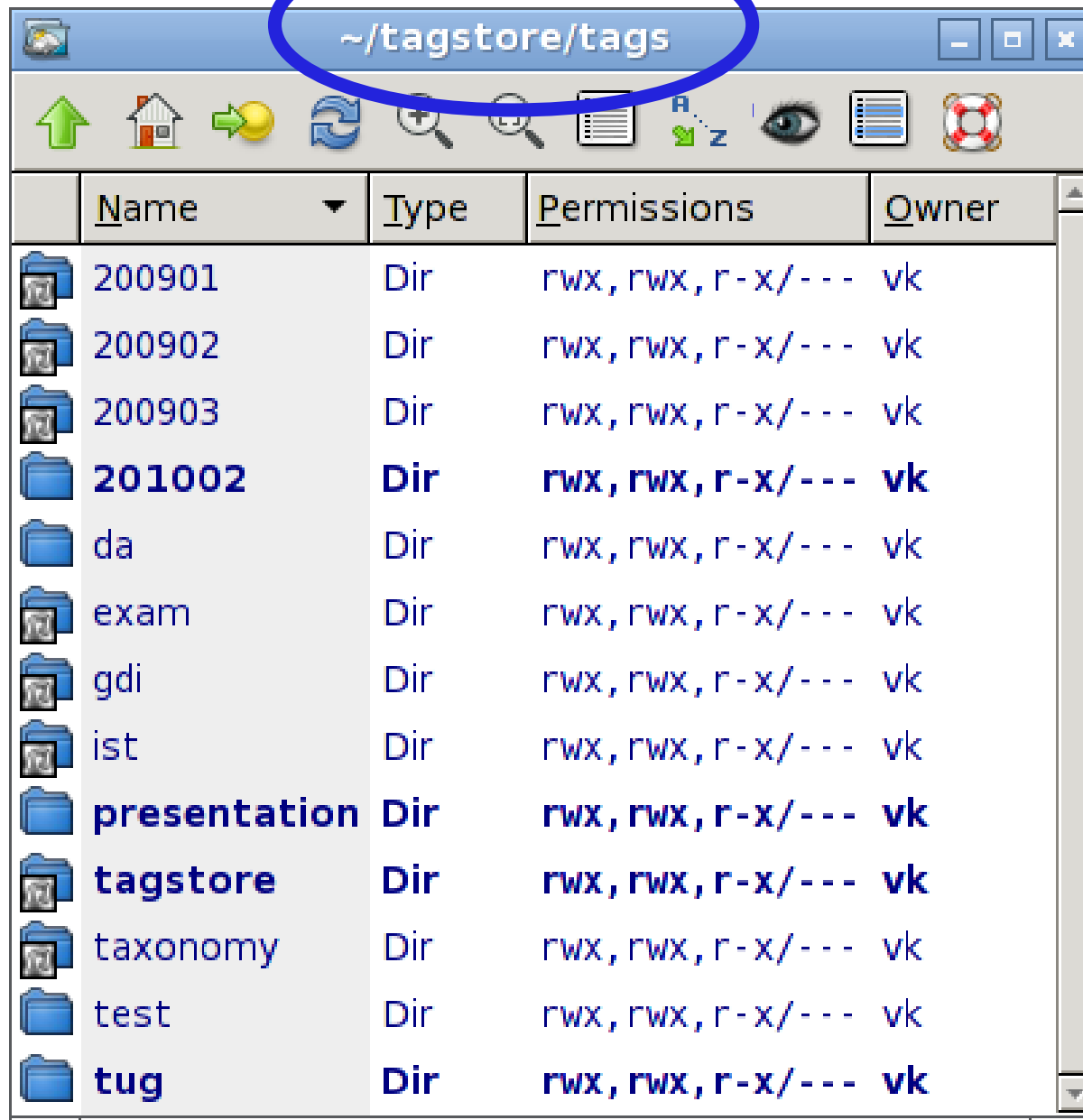
prototype



prototype

ROX retrieval process

prototype



A terminal window showing the directory listing for the path `~/tagstore/tags`. The path is circled in blue. The window title is `~/tagstore/tags`. The terminal output is as follows:

Name	Type	Permissions	Owner
200901	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
200902	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
200903	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
201002	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
da	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
exam	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
gdi	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
ist	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
presentation	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
tagstore	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
taxonomy	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
test	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>
tug	Dir	<code>rwX, rwX, r-X/---</code>	<code>vk</code>

prototype

~/tagstore/tags/presentation

Name	Type	Permissions	Owner	Group	Size	Last Modified
201002	Dir	rwX, rwX, r-x/---	vk	vk		15:11:59 22 Feb 2
tagstore	Dir	rwX, rwX, r-x/---	vk	vk		15:11:59 22 Feb 2
Testdocument_for_Presentation.odt	Link	rwX, rwX, rwX/---	vk	vk	63 B	15:11:59 22 Feb 2
tug	Dir	rwX, rwX, r-x/---	vk	vk		15:11:59 22 Feb 2

~/tagstore/tags/presentation/tagstore

Name	Type	Permissions	Owner	Group	Size	Last Modified
201002	Dir	rwX, rwX, r-x/---	vk	vk		15:11:59 22 Feb 2010
Testdocument_for_Presentation.odt	Link	rwX, rwX, rwX/---	vk	vk	63 B	15:11:59 22 Feb 2010
tug	Dir	rwX, rwX, r-x/---	vk	vk		15:11:59 22 Feb 2010

~/tagstore/tags/presentation/tagstore/tug

Name	Type	Permissions	Owner	Group	Size	Last Modified
201002	Dir	rwX, rwX, r-x/---	vk	vk		15:11:59 22 Feb 2010
Testdocument_for_Presentation.odt	Link	rwX, rwX, rwX/---	vk	vk	63 B	15:11:59 22 Feb 2010

~/tagstore/tags/presentation/tug

Name	Type	Permissions	Owner	Group	Size	Last Modified
201002	Dir	rwX, rwX, r-x/---	vk	vk		15:11:59 22 Feb 2010
tagstore	Dir	rwX, rwX, r-x/---	vk	vk		15:11:59 22 Feb 2010
Testdocument_for_Presentation.odt	Link	rwX, rwX, rwX/---	vk	vk	63 B	15:11:59 22 Feb 2010

~/tagstore/tags/presentation/tug/tagstore

Name	Type	Permissions	Owner	Group	Size	Last Modified
201002	Dir	rwX, rwX, r-x/---	vk	vk		15:11:59 22 Feb 2010
Testdocument_for_Presentation.odt	Link	rwX, rwX, rwX/---	vk	vk	63 B	15:11:59 22 Feb 2010