Simple Filesystems
with Python and FUSE

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Python

http://www.python.org/

FUSE - Filesystem in Userspace

http://fuse.sourceforge.net/

Why FUSE?

- Non-privileged users
- Simple installation
- Multiple language bindings
  C, C++, Java, C#, Python, Perl, Ruby, Lua, etc.
- Easy filesystem experiments

FUSE based filesystems

- ◉ redisfs - http://www.steve.org.uk/Software/redisfs/
- ◉ Gluser - http://www.gluster.org/
- ◉ sshfs - http://fuse.sourceforge.net/sshfs.html
- ◉ gmailfs - http://sr71.net/projects/gmailfs/
- ◉ WikipediaFS - http://wikipediafs.sourceforge.net/
- ◉ s3fsc - https://github.com/tongwang/s3fs-c

FUSE API

getattr(path)
readlink(path)
mknod(path, mode, dev)
mkdir(path, mode)
unlink(path)
symlink(target, name)
rename(old, new)
link(srcpath, targetpath)
fsinit(self)
chmod(path, mode)
chown(path, uid, gid)

open(path, mode)
create(path, mode)
read(path, length, offset)
write(path, data, offset)
getattr(path)
truncate(path, len)
flush(path)
release(path)
fsync(path)
readdir(path)
rmdir(path)

http://sourceforge.net/apps/mediawiki/fuse/index.php?title=FUSE_Python_Reference

Another FUSE Presentation

http://www.slideshare.net/matteobertozzi/python-fuse

I learned lots from this,
inspired some of my examples

My Approach

Implement the fewest methods necessary for getting the job done

Live Examples

Questions?

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