

Laboratory 9

Deadline: 2 weeks

Implement immediate files in the Minix File System, for files of size up to 32 bytes. Implement only for the file system mounted at */home*.

Think about what functionalities need to be changed to implement immediate files. Some broad points:

- File creation: you can start by creating the file as an immediate one. When a file grows beyond 32B, then you can make it a regular file.
- File read: if it is an immediate file, you can respond with the inode structure contents. If not, you can follow the default behavior of looking up zones.
- File write: similar to read. You must take care to ensure that if you want to write to the inode structure, then the new file size is still within 32B. When a regular file shrinks to less than 32 bytes, there is no need to come back to immediate mode.
- File delete: deleting immediate files does not require any handling of zones.

Helpful files:

- www.minix3.org/theses/gerofi-minix-vfs.pdf
- <https://koala.cs.pub.ro/redmine/attachments/download/105/minix.pdf>

Submit: a single zip file (format: <roll-number-1>_lab9.zip) with all modified source files and a shell script. The shell script must copy the modified source files to the correct directories, and build the system. The evaluator will simply run the shell script, reboot the system, and check for the desired behavior.