Operating Systems
Jacobs University Bremen
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Time: 15 min.

Quiz Sheet #6

Problem 6.1: *file systems* (1+2+2 = 5 points)

Answer the following questions. If in doubt, assume a typical `inode`-based Unix file system.

a) Where is the size of a file stored?

b) What is the name of the POSIX system call to remove a file? Why is the system call name a proper reflection of how the system call works?

c) What is the link count of a file or a directory? What is the smallest possible link count for regular files and directories? Explain.

Problem 6.2: *input/output and devices* (2+1+1+1 = 5 points)

a) What is vectored I/O (also called scatter/gather I/O)? What is the benefit of vectored I/O?

b) Explain the difference between block device files and character device files.

c) What is the meaning of major and minor device numbers?

d) Describe an example where double buffering is used to improve efficiency and to minimize unwanted side effects.