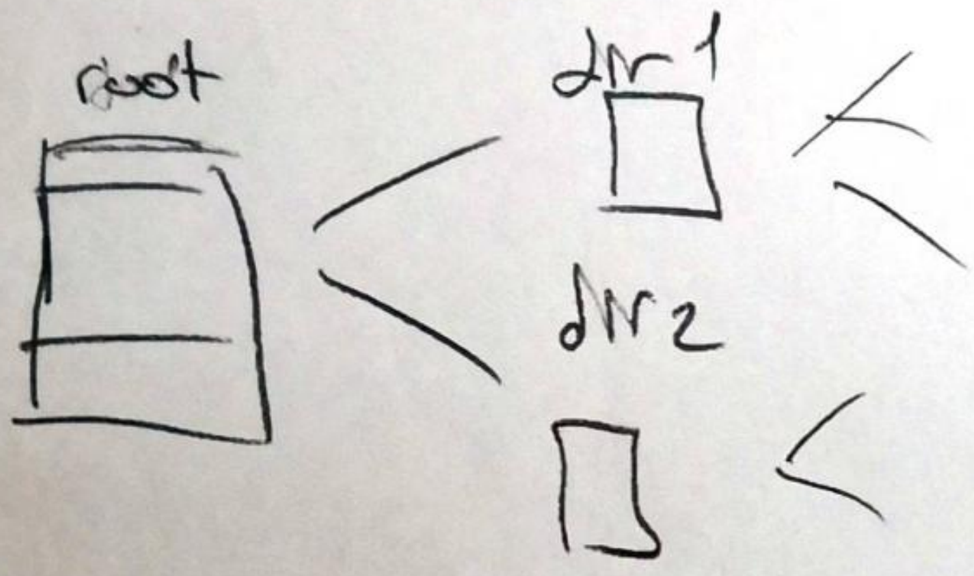
a) In windows systems we have it called Create Process. In linux, fork is designed to copy all the resources its motter process has. In windows and also in given question there is no motter - child relationship between processes needed so instead of copying all registers, heap, stack etc. I would just create a new empty memory and registers and run new program using execve for newly created process.

b)



c) LRU is efficient but requires special hardware to implement aging and counters. The more efficient version of it is LFU (Least Frequently Used). It uses R bit and a field to hold frequency. If page it refrenced R bit is set to 1, in every page operation frequency field sihifted one bit right, the left most bit is set R bit's value, R bit is set to 0.
LRU's requirenent for special hardware makes it expensive.

Berke Bolgin
171044065
BB