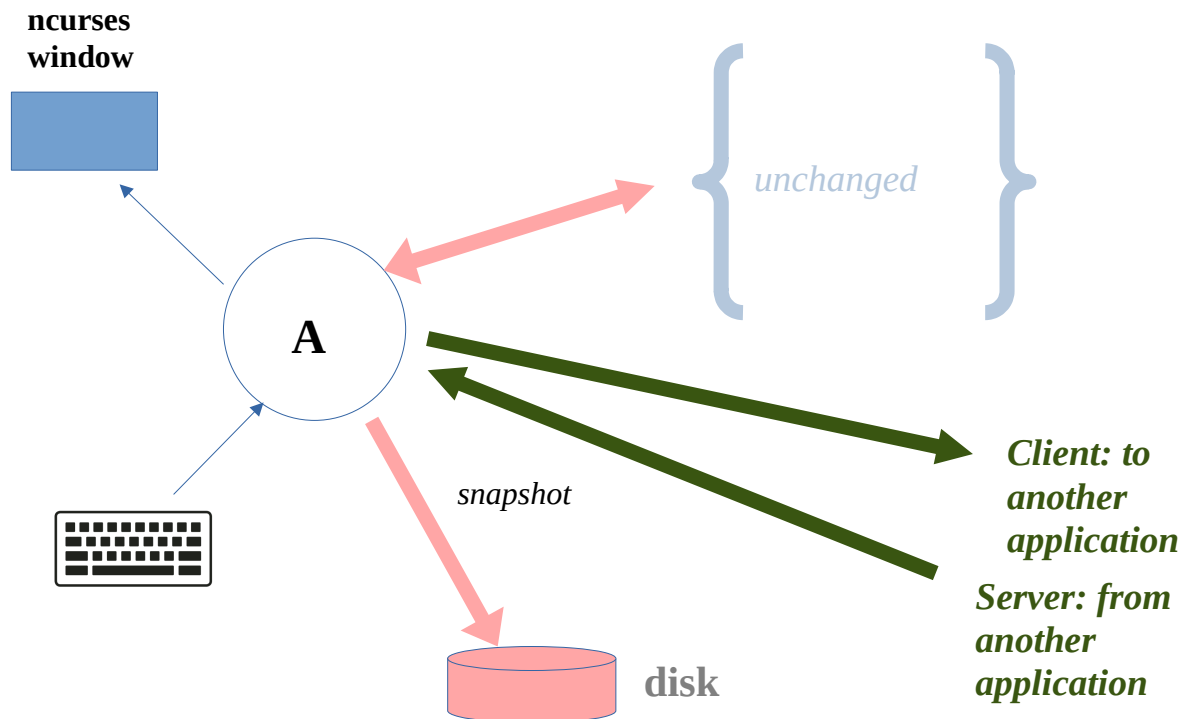# ARP 2022-2023 - THIRD ASSIGNMENT

The code to design, develop, test and deploy is a modified version of Assignment 2, including client/server features. We refer to this as "application".

ncurses window

unchanged

A

snapshot

disk

Client: to another application

Server: from another application

In the modified application, process B, shared memory and the second ncurses window are unchanged. Process A includes two new features:
1. client connection toward a similar application running on a different machine in the network
2. server connection for a similar application running on a different machine in the network

Therefore the application, when launched, asks for one execution modality:
1. *normal*, as assignment 2
2. *server*: the application does not use the keyboard for input: it receives input from another application (on a different machine) running in client mode
3. *client*: the application runs normally as assignment 2 and sends its keyboard input to another application (on a different machine) running in server mode

When selecting modes 2 and 3 the application obviously asks address and port of the companion application.

Possible (non mandatory) evaluated additional features:
• changing the modality during execution, without exiting
• disconnecting, reconnecting to a different machine

Protocol
To assure that any application is able to properly connect to any other application (implemented by some other student/group), a communication protocol must be defined.
IP protocol: TCP
data: a byte stream of *char*, one per key pressed.
(flush data if necessary).

Core topics:
same as assignment 2
Sockets

<u>Note: the companion applications must be developed by different students and properly work together</u>