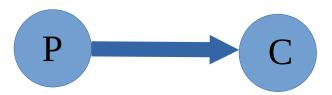
ARP 2021 - SECOND ASSIGNMENT

The second assignment is collection of 4 concurrent programs, whose aim is to measure the speed efficiency when transferring data between a producer and a consumer using different models.



The four programs may be run separately, or, preferably, by one interface after an interactive choice.

The four programs are based on a specific IPC transfer primitives, namely:

- 1. unnamed pipe
- 2. named pipe
- 3. socket
- 4. shared memory with circular buffer.

Common specifications for the four programs.

- 1. In the beginning, P fills an array A of random data
- 2. C has an array *B* of same dimension of *A*
- 3. C receives data and fills *B*
- 4. The time spent in transfer is measured and reported
- 5. The array dimension can be chosen by the user at any run (a maximum value of about 100 MB can be imposed).

Additional specification for program 4.

- 1. C implements a circular buffer *CB* whose dimension is fixed, much smaller than the amount of data to be transferred (e.g. few KB)
- 2. C fills *B* by transferring data from *CB*

The dimensions of *A*, *B* and *CB* are set interactively by the user through the interface.

Optional improvements may be done, like separate *konsoles*, use of dynamic memory, reporting on files. multiple executions etc. However, they are not compulsory.