UFAZ - Bachelor of Computer Science

System Programming

PW10 : pipes / signals

For each exercice, we expect the student to write a program, compile it and run it without errors of several examples. Test sets and comments are as important as the code itself.

Exercice 1

Using V7 primitives, write a program which increments and displays a counter each time a `SIGINT` signal is received. After 5 times, it must stop. Incrementing and printing must not be performed in the `main` function.

Exercice 2

Enable the generation of `core` files (With `bash`, use the command `ulimit -c unlimited`). Using the code from the previous exercice, use the signal `SIGQUIT` (obtained by `^\` in a shell) to interrupt the process and generate a `core` file. Use `gdb` to figure out where the program stopped (commands `where`, `up/down`, `list`) and the value of the counter (command `print`).

Exercice 3

Using V7 primitives, write a program which expects a signal (any of them) and display its meaning (e.g. illegal instruction for `SIGILL`) and then terminates. You could use the library function `psignal` to display the meaning of the signal.