Aeronautics Institute of Technology — ITA
Computer Science Division — IEC

CES-33 Operating Systems
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The mini-shell project
April 6, 2021

For the mini-shell project milestone 2, we will continue to develop our command-line interpreter. From the previous version, we implemented how to fork-execve processes and bind their input-output to form pipes. Now, it is time to move forward and send jobs to the background or bring them to the foreground. Another vital aspect is signal handling; e.g., if the user sends a CTRL+C, the shell must ignore it and forward it to the foreground job.

Therefore, the goals of milestone 2 is to implement for the mini-shell:

1. A job control; and
2. A signal handling.

Pay special attention to the GNU tutorial[1] on this topic. Follow the concepts and functions they describe. Afterward, implement an inspired version of it. In milestone 2, the code organization and data structures must receive an effort to become competitive. Use the first week to restructure the code, then increase the base with the new functionalities (job control and signal handling).

Attention:

1. Use DC (*disciplina consciente*) and do the mini-shell project by yourself. No sharing solutions. You can brainstorm the problem and strategies to tackle, but it disallowed sharing code and other artifacts.
2. Mandatory use of C language. Provide a `makefile` to compile your mini-shell.
3. Deadline: April 25, 2021. (submitted in classroom)

[1] `https://www.gnu.org/software/libc/manual/html_node/Job-Control.html`