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INFO0940  
OPERATING SYSTEMS

Project #2

Academic year 2019-2020



# YOUR SECOND PROJECT

## Improving the previous shell...

1. Add sys built-in commands to your shell;
2. You must use your code from the first assignment;
3. No report! Only code;
4. You are free concerning the code structure;
5. Very small and easy project (but more based on **research**)

Use previous tips (man, grep, find, ...) and google to find the right information


# THE OSHELL V2

You must add 3 built-in commands:

1. `sys netstats`: Print the list of network interfaces with some network statistics;
2. `sys stats pid`: Get particular information of a specific process identified by its pid;
3. `sys devstats`: Display the number of devices for 3 power management runtime states ("*active*", "*suspended*", and "*unsupported*") respectively\*.

\*<https://www.kernel.org/doc/html/v4.15/driver-api/pm/devices.html>

# THE OSHELL V2



```
OShell> sys netstats
[eno1]: Rx (pkts: 10714258, err: 3.32865787%, drop: 4.04732656%) -
Tx (pkts: 1198733, err: 28.08306885%, drop: 0.28079647%)
[virbr0-nic]: Rx (pkts: 0, err: 0.000000000 %, drop: 0.000000000%) -
Tx (pkts: 0, err: 0.000000000%, drop: 0.000000000%)
[eno2]: Rx (pkts: 0, err: 0.000000000 %, drop: 0.000000000%) -
Tx (pkts: 0, err: 0.000000000%, drop: 0.000000000%)
[lo]: Rx (pkts: 982, err: 1.12016296%, drop: 1.01832986%) -
Tx (pkts: 982, err: 0.000000000%, drop: 3.05498981%)

OShell> sys stats 254
Process name: kswapd0
Process state: S (sleeping)
Process thread(s): 1

OShell> sys devstats
Active: 141
Suspended: 32
Unsupported: 582
```

# THE OSHELL V2: REQUIREMENTS

## Others:

- Group of **two** that you will **keep** the whole semester
- Submit a tar file on the submission platform
- More information on the statements (available this evening).

You should be good programmers: We want clean code (good style), without error, warning and memory leak (use `valgrind`).

Don't forget: We detect **plagiarism** so don't try...

Plagiarism = **0 for the course!**

# THE OSHELL V2: REQUIREMENTS

**Deadline: 25th March 2020**

*Happy Coding!*