Operating Systems

Lab #2

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The purpose of this list is to introduce Linux OS, its terminal, processes and exit codes of operations.

Task #1

Run your Linux terminal or online Linux terminal on website https://copy.sh/v86/?profile=linux26 :

```
/root% _
```
.

Task #2

Print:

    a) your curent directory,

    b) your user name.

Task #3

List all the files and subdirectories in your directory (folder) so that:

    a) files starting with . where also shown:

```
.                  .bash_history  .bash_profile  tests
..                 .bash_logout   test.lua
```
,

    b) files starting with . where also shown and the list began from largest files,

    c) files starting with . where also shown and the list began from recently accessed files,

    d) as in b) but for every item show also its owner, size and last access time:

```
total 6
drwx------    3 root     root         1024 Feb 12  2014 .
drwxr-xr-x   15 root     root         1024 Oct 16 19:57 ..
drwxr-xr-x    2 root     root         1024 Feb 19  2014 tests
-rw-r--r--    1 root     root          175 Sep 17  2013 .bash_logout
-rw-r--r--    1 root     root          161 Sep 17  2013 .bash_profile
-rw-r--r--    1 root     root          115 Oct 16  2013 test.lua
-rw-r--r--    1 root     root            0 Sep 17  2013 .bash_history
```

Task #4

Show general statistics about processes:

```
Mem: 6692K used, 120672K free, 0K shrd, 92K buff, 892K cached
CPU:    0% usr    2% sys    0% nic   96% idle    0% io    0% irq    0% sirq
Load average: 0.00 0.00 0.00 1/21 64
  PID  PPID USER       STAT    VSZ %VSZ %CPU COMMAND
   64    15 root       R       992   1%   4% top
   15    14 root       S       996   1%   0% -/bin/sh
   14     1 root       S       996   1%   0% {linuxrc} init
   19    14 root       S       996   1%   0% /sbin/getty -L ttyS0 9600 vt100
   16    14 root       S       996   1%   0% {linuxrc} init
   18    14 root       S       996   1%   0% {linuxrc} init
   17    14 root       S       996   1%   0% {linuxrc} init
    1     0 root       SW        0   0%   0% [swapper]
   10     2 root       SW        0   0%   0% [kseriod]
```

Task #5

Show information about processes starting from PID, then show command, user and PPID:

```
PID   COMMAND         USER      PPID
  1 swapper          root         0
  2 kthreadd         root         0
  3 ksoftirqd/0      root         2
  4 events/0         root         2
  5 khelper          root         2
  6 async/mgr        root         2
```

Task #6

Show table of processes:

```
1        12        bus          fs           loadavg      softirqs
2        13        cmdline      ide          locks        stat
3        14        cpuinfo      interrupts   meminfo      sys
4        15        crypto       iomem        misc         sysvipc
5        16        devices      ioports      mounts       timer_list
6        17        diskstats    irq          net          tty
7        18        dma          kallsyms     pagetypeinfo uptime
8        19        driver       kcore        partitions   version
9        54        execdomains  kmsg         scsi         vmallocinf
o
10       89        fb           kpagecount   self         vmstat
11       buddyinfo filesystems  kpageflags   slabinfo     zoneinfo
```

Where this table is located?

Task #7

a) Display exit code of your last operation.
b) Run command 'aabbcc'. Display its exit code.

Task #8

What is

a) an init process,
b) a daemon process,
c) a zombie process?