# 1. Запустить htop и посмотреть, сколько процессоров и оперативной памяти есть на сервере.

```
CPU[                                                                    0.0%]
Mem[||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||363M/984M]
Swp[                                                                  0K/0K]
ubuntu@ip-172-31-44-209:~$ nproc
1
```

1. Запустил htop. Так как только одна строчка CPU значит 1 процессор(можно командой nproc). В конце строчки Mem количество оперативной памяти — 984M.

# 2. Найти все программы с расширением .py.

```
ubuntu@ip-172-31-44-209:~$ sudo find / -name "*.py*"
/etc/python3.6/sitecustomize.py
/etc/python2.7/sitecustomize.py
/var/tmp/timer.py.swp
/snap/core/6964/etc/python3.5/sitecustomize.py
/snap/core/6964/usr/lib/python2.7/dist-packages/debconf.py
```

```
ubuntu@ip-172-31-44-209:~$ sudo find / -name "*.py" -print > list_py.txt
ubuntu@ip-172-31-44-209:~$ ll
total 616
drwxr-xr-x 9 ubuntu ubuntu   4096 Jun 15 11:56  ./
drwxr-xr-x 5 root   root     4096 Jun 13 10:27  ../
-rw-------  1 ubuntu ubuntu    186 Jun 15 11:33  .Xauthority
-rw-------  1 ubuntu ubuntu   3835 Jun 15 11:32  .bash_history
-rw-r--r--  1 ubuntu ubuntu    220 Apr  4  2018  .bash_logout
-rw-r--r--  1 ubuntu ubuntu   3771 Apr  4  2018  .bashrc
drwx------  6 ubuntu ubuntu   4096 Jun 11 17:55  .cache/
drwx------  5 ubuntu ubuntu   4096 Jun  9 14:28  .config/
drwx------  3 ubuntu ubuntu   4096 May 29 15:44  .gnupg/
drwxrwxr-x  5 ubuntu ubuntu   4096 Jun 11 17:56  .local/
drwx------  5 ubuntu ubuntu   4096 Jun  9 12:17  .mozilla/
-rw-r--r--  1 ubuntu ubuntu    807 Apr  4  2018  .profile
-rw-rw-r--  1 ubuntu ubuntu     72 May 31 17:03  .selected_editor
drwx------  2 ubuntu ubuntu   4096 May 28 20:45  .ssh/
-rw-r--r--  1 ubuntu ubuntu      0 May 29 15:45  .sudo_as_admin_successful
-rw-------  1 ubuntu ubuntu  12288 Jun  9 13:36  .swp
-rw-------  1 ubuntu ubuntu   7745 Jun 15 11:32  .viminfo
-rw-rw-r--  2 ubuntu ubuntu     25 Jun 10 09:33  123.txt
-rw-rw-r--  1 ubuntu ubuntu      6 May 31 16:38  'Privet!'
-rw-rw-r--  1 ubuntu ubuntu      8 May 31 16:39  file3
-rw-rw-rw-  1 ubuntu ubuntu     21 Jun 13 09:54  hello.py
-rw-rw-r--  1 ubuntu ubuntu     49 Jun 10 09:45  hello_linear.py
-rw-rw-r--  1 ubuntu ubuntu     22 Jun 10 09:59  hello_linear2.py
-rw-rw-r--  1 ubuntu ubuntu     27 Jun 10 09:41  linear.py
-rw-rw-r--  2 ubuntu ubuntu     25 Jun 10 09:33  link-to-123
-rw-rw-r--  1 ubuntu ubuntu 508850 Jun 15 11:56  list_py.txt
drwxrwxr-x  2 ubuntu ubuntu   4096 May 31 17:04  testdir/
-rw-rw-r--  1 ubuntu ubuntu     10 Jun  9 13:41  text.txt
ubuntu@ip-172-31-44-209:~$ mc
```

```
/home/ubuntu/list_py.txt
/etc/python3.6/sitecustomize.py
/etc/python2.7/sitecustomize.py
/snap/core/6964/etc/python3.5/sitecustomize.py
/snap/core/6964/usr/lib/python2.7/dist-packages/debconf.py
/snap/core/6964/usr/lib/python3/dist-packages/LibAppArmor/__init__.py
/snap/core/6964/usr/lib/python3/dist-packages/_version.py
/snap/core/6964/usr/lib/python3/dist-packages/blinker/__init__.py
/snap/core/6964/usr/lib/python3/dist-packages/blinker/_saferef.py
/snap/core/6964/usr/lib/python3/dist-packages/blinker/_utilities.py
/snap/core/6964/usr/lib/python3/dist-packages/blinker/base.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/__init__.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/big5freq.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/big5prober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/chardetect.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/chardistribution.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/charsetgroupprober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/charsetprober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/codingstatemachine.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/compat.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/constants.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/cp949prober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/escprober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/escsm.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/eucjpprober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/euckrfreq.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/euckrprober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/euctwfreq.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/euctwprober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/gb2312freq.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/gb2312prober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/hebrewprober.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/jisfreq.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/jpcntx.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/langbulgarianmodel.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/langcyrillicmodel.py
/snap/core/6964/usr/lib/python3/dist-packages/chardet/langgreekmodel.py
```

2. Нашел все ру файлы, но их оказалось слишком много, и я решил вывести их список в файл.

## 3. * Создать и запустить программу на Python, выводящую числа от 0 до 100 включительно.

```python
from time import sleep
for num in range(1,101):
    print(num)
    sleep(1)
```

```
ubuntu@ip-172-31-44-209:/home/user_new$ python timer.py
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
```

```
  PID USER        PRI  NI   VIRT    RES    SHR S CPU% MEM%    TIME+   Command
 1097 www-data     20   0   140M   5860   4132 S  0.0  0.6  0:00.00 nginx: worker process
 1069 whoopsie     20   0   451M  10924   9296 S  0.0  1.1  0:00.00 whoopsie -f
 1070 whoopsie     20   0   451M  10924   9296 S  0.0  1.1  0:00.00 whoopsie -f
 1055 whoopsie     20   0   451M  10924   9296 S  0.0  1.1  0:00.02 whoopsie -f
 3080 ubuntu       20   0  76640   7828   6776 S  0.0  0.8  0:00.01 systemd --user
 3081 ubuntu       20   0   255M   2564     12 S  0.0  0.3  0:00.00 (sd-pam)
 3172 ubuntu       20   0   107M   5420   4272 S  0.0  0.5  0:00.07 sshd: ubuntu@pts/0
 3229 ubuntu       20   0  23296   5292   3524 S  0.0  0.5  0:00.05 -bash
 3266 ubuntu       20   0   107M   3356   2332 S  0.0  0.3  0:00.00 sshd: ubuntu@notty
 3267 ubuntu       20   0  13060   2172   2012 S  0.0  0.2  0:00.00 sftp-server
 3355 ubuntu       20   0   107M   5256   3940 S  0.0  0.5  0:00.98 sshd: ubuntu@pts/1
 3405 ubuntu       20   0  23164   5136   3408 S  0.0  0.5  0:00.05 -bash
 3449 ubuntu       20   0   107M   3684   2664 S  0.0  0.4  0:00.00 sshd: ubuntu@notty
 3450 ubuntu       20   0  13060   2168   2012 S  0.0  0.2  0:00.00 sftp-server
 3662 ubuntu       20   0   107M   5344   4056 S  0.0  0.5  0:00.23 sshd: ubuntu@pts/2
 3742 ubuntu       20   0   107M   3400   2380 S  0.0  0.3  0:00.00 sshd: ubuntu@notty
 3743 ubuntu       20   0  23164   5264   3532 S  0.0  0.5  0:00.03 -bash
 3757 ubuntu       20   0  13060   2308   2148 S  0.0  0.2  0:00.00 sftp-server
 3760 ubuntu       20   0  69444   9604   7308 S  0.0  1.0  0:00.02 mc
 3762 ubuntu       20   0  23140   4920   3384 S  0.0  0.5  0:00.02 bash -rcfile .bashrc
 3801 ubuntu       20   0  24436   6124   3588 S  0.0  0.6  0:00.00 python timer.py
 3802 ubuntu       20   0  33228   5232   3628 R  0.0  0.5  0:00.07 htop
```

3. Создал скрипт, запустил его и нашел в htop.