1. Get me the IP address of a particular domain (guvi.in).

```
vagrant@ubuntu-bionic: ~

vagrant@ubuntu-bionic:~$ clear
vagrant@ubuntu-bionic:~$ nslookup guvi.in
Server:         127.0.0.53
Address:        127.0.0.53#53

Non-authoritative answer:
Name:   guvi.in
Address: 172.67.70.207
Name:   guvi.in
Address: 104.26.5.88
Name:   guvi.in
Address: 104.26.4.88
Name:   guvi.in
Address: 2606:4700:9c6a:d255:c1fe:491:60b8:c78e

vagrant@ubuntu-bionic:~$ dig guvi.in

; <<>> DiG 9.11.3-1ubuntu1.18-Ubuntu <<>> guvi.in
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 10959
;; flags: qr rd ra; QUERY: 1, ANSWER: 3, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;guvi.in.                       IN      A

;; ANSWER SECTION:
guvi.in.                93      IN      A       172.67.70.207
guvi.in.                93      IN      A       104.26.5.88
guvi.in.                93      IN      A       104.26.4.88

;; Query time: 1 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Tue Nov 05 13:15:51 UTC 2024
;; MSG SIZE  rcvd: 84
```

mtr guvi.in

```
vagrant@ubuntu-bionic: ~                                                    —     □     ✕
                              My traceroute  [v0.92]
ubuntu-bionic (10.0.2.15)                                      2024-11-05T13:17:37+0000
Keys:  Help   Display mode   Restart statistics   Order of fields   quit
                                                     Packets              Pings
Host                                               Loss%   Snt   Last   Avg  Best  Wrst StDev
1. _gateway                                         0.0%    12    1.5   1.6   0.8   2.7   0.6
2. 192.168.81.7                                     0.0%    12   25.0  20.4   8.1  40.6  10.0
3. ???
4. ???
5. ???
6. 172.27.251.99                                    0.0%    11   53.2  44.3  29.5  93.4  18.7
7. 192.168.138.224                                  0.0%    11   48.3  42.9  30.9  65.4  10.3
   192.168.138.226
8. ???
9. ???
10. ???
11. ???
12. ???
13. 49.44.220.133                                   0.0%    11   42.5  65.7  36.3 119.2  27.9
14. 104.26.4.88                                     0.0%    11   47.3  52.4  40.0  79.8  10.3
```

How do I find my CPU/memory usage of my server?

top

```
vagrant@ubuntu-bionic: ~

top - 13:23:24 up 20 min,  1 user,  load average: 0.00, 0.02, 0.07
Tasks:  93 total,   1 running,  49 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.0 us,  0.0 sy,  0.0 ni, 99.8 id,  0.0 wa,  0.0 hi,  0.2 si,  0.0 st
KiB Mem :  1008516 total,   364220 free,    88060 used,   556236 buff/cache
KiB Swap:        0 total,        0 free,        0 used.   773976 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU %MEM     TIME+ COMMAND
 1045 root      20   0  247456   2112   1676 S   0.3  0.2   0:00.82 VBoxService
 2468 root      20   0       0      0      0 I   0.3  0.0   0:00.36 kworker/0:4
 2684 vagrant   20   0   42124   3692   3144 R   0.3  0.4   0:00.03 top
    1 root      20   0  159764   8952   6572 S   0.0  0.9   0:08.23 systemd
    2 root      20   0       0      0      0 S   0.0  0.0   0:00.08 kthreadd
    4 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/0:0H
    6 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 mm_percpu_wq
    7 root      20   0       0      0      0 S   0.0  0.0   0:00.46 ksoftirqd/0
    8 root      20   0       0      0      0 I   0.0  0.0   0:00.48 rcu_sched
    9 root      20   0       0      0      0 I   0.0  0.0   0:00.00 rcu_bh
   10 root      rt   0       0      0      0 S   0.0  0.0   0:00.02 migration/0
   11 root      rt   0       0      0      0 S   0.0  0.0   0:00.03 watchdog/0
   12 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/0
   13 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/1
   14 root      rt   0       0      0      0 S   0.0  0.0   0:00.04 watchdog/1
   15 root      rt   0       0      0      0 S   0.0  0.0   0:00.35 migration/1
   16 root      20   0       0      0      0 S   0.0  0.0   0:00.58 ksoftirqd/1
   17 root      20   0       0      0      0 I   0.0  0.0   0:01.87 kworker/1:0
   18 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/1:0H
   19 root      20   0       0      0      0 S   0.0  0.0   0:00.11 kdevtmpfs
   20 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 netns
   21 root      20   0       0      0      0 S   0.0  0.0   0:00.00 rcu_tasks_kthre
   22 root      20   0       0      0      0 S   0.0  0.0   0:00.04 kauditd
```

htop

```
vagrant@ubuntu-bionic: ~                                                    —    □    ✕

  1  [                                            0.0%]   Tasks: 27, 19 thr; 1 running
  2  [                                            0.0%]   Load average: 0.00 0.01 0.06
  Mem[|||||||||||||||||||||||||||||||        86.6M/985M]   Uptime: 00:23:07
  Swp[                                           0K/0K]

  PID USER      PRI  NI  VIRT   RES   SHR S CPU% MEM%   TIME+  Command
    1 root       20   0  156M  8952  6572 S  0.0  0.9  0:08.23 /sbin/init
 1998 vagrant    20   0  105M  5252  4112 S  0.0  0.5  0:03.62 sshd: vagrant@pts/0
  450 root       20   0 43496  4592  3276 S  0.0  0.5  0:01.35 /lib/systemd/systemd-udevd
 1045 root       20   0  241M  2112  1676 S  0.0  0.2  0:00.92 /usr/sbin/VBoxService
  424 root       19  -1 94652 14220 13620 S  0.0  1.4  0:00.83 /lib/systemd/systemd-journald
 1052 root       20   0  241M  2112  1676 S  0.0  0.2  0:00.41 /usr/sbin/VBoxService
  903 messagebu  20   0 50152  4540  3852 S  0.0  0.5  0:00.35 /usr/bin/dbus-daemon --system --address=systemd: --nofork
 1048 root       20   0  241M  2112  1676 S  0.0  0.2  0:00.33 /usr/sbin/VBoxService
  897 root       20   0  167M 17440  9288 S  0.0  1.7  0:00.32 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-start
  991 root       20   0  183M 20120 12208 S  0.0  2.0  0:00.31 /usr/bin/python3 /usr/share/unattended-upgrades/unattende
  707 systemd-n  20   0 79924  4984  4472 S  0.0  0.5  0:00.30 /lib/systemd/systemd-networkd
 1999 vagrant    20   0 23220  5160  3456 S  0.0  0.5  0:00.22 -bash
  717 systemd-r  20   0 70496  4940  4472 S  0.0  0.5  0:00.19 /lib/systemd/systemd-resolved
  913 root       20   0 70448  5952  5336 S  0.0  0.6  0:00.15 /lib/systemd/systemd-logind
  915 root       20   0  281M  6928  6040 S  0.0  0.7  0:00.13 /usr/lib/accountsservice/accounts-daemon
  887 root       20   0  107M  2092  1876 S  0.0  0.2  0:00.11 /usr/sbin/irqbalance --foreground
  857 syslog     20   0  256M  4336  3560 S  0.0  0.4  0:00.09 /usr/sbin/rsyslogd -n
 1027 root       20   0 14896  2044  1912 S  0.0  0.2  0:00.09 /sbin/agetty -o -p -- \u --noclear tty1 linux
  932 root       20   0  281M  6928  6040 S  0.0  0.7  0:00.08 /usr/lib/accountsservice/accounts-daemon
 1868 vagrant    20   0 76652  7704  6696 S  0.0  0.8  0:00.08 /lib/systemd/systemd --user
 1858 root       20   0  105M  7152  6148 S  0.0  0.7  0:00.07 sshd: vagrant [priv]
 1015 root       20   0 16420  2440  2288 S  0.0  0.2  0:00.06 /sbin/agetty -o -p -- \u --keep-baud 115200,38400,9600 tt
F1Help  F2Setup F3Search F4Filter F5Tree  F6SortBy F7Nice - F8Nice + F9Kill  F10Quit
```

```
vagrant@ubuntu-bionic: ~

vagrant@ubuntu-bionic:~$ free -h
              total        used        free      shared  buff/cache   available
Mem:           984M         85M        355M        612K        543M        756M
Swap:            0B          0B          0B
vagrant@ubuntu-bionic:~$
```

```
vagrant@ubuntu-bionic: ~

vagrant@ubuntu-bionic:~$ vmstat 1
procs ----------memory---------- ---swap-- -----io---- -system-- ------cpu-----
 r  b   swpd   free   buff  cache   si   so    bi    bo   in   cs us sy id wa st
 1  0      0 364168  14512 542388    0    0   186   131   35   55  1  2 97  0  0
 0  0      0 364168  14512 542388    0    0     0     0   19   26  0  0 100  0  0
 0  0      0 364168  14512 542388    0    0     0     0   29   45  0  0 100  0  0
 0  0      0 364168  14512 542424    0    0     0     0   15   26  0  0 100  0  0
 0  0      0 364168  14512 542424    0    0     0     0   17   29  0  0 100  0  0
 0  0      0 364168  14512 542424    0    0     0     0   16   30  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0    12   24   43  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   24   42  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   32   39  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   12   23  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   19   34  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   18   33  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   26   46  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   13   24  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   18   30  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   15   24  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   17   29  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   24   43  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   42   52  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   13   24  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   19   29  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   18   32  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   27   45  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   14   27  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   18   31  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   17   31  0  0 100  0  0
 0  0      0 364168  14520 542424    0    0     0     0   18   31  0  0 100  0  0
```

Test the connectivity between 2 nodes?

```
vagrant@ubuntu-bionic: ~

vagrant@ubuntu-bionic:~$ ping guvi.in
PING guvi.in (104.26.4.88) 56(84) bytes of data.
64 bytes from 104.26.4.88 (104.26.4.88): icmp_seq=1 ttl=52 time=61.6 ms
64 bytes from 104.26.4.88 (104.26.4.88): icmp_seq=2 ttl=52 time=45.2 ms
64 bytes from 104.26.4.88 (104.26.4.88): icmp_seq=3 ttl=52 time=60.5 ms
64 bytes from 104.26.4.88 (104.26.4.88): icmp_seq=4 ttl=52 time=179 ms
64 bytes from 104.26.4.88 (104.26.4.88): icmp_seq=5 ttl=52 time=322 ms
64 bytes from 104.26.4.88 (104.26.4.88): icmp_seq=6 ttl=52 time=71.8 ms
^C
--- guvi.in ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5064ms
rtt min/avg/max/mdev = 45.276/123.481/322.249/99.311 ms
```

2. I have deployed an application in guvi.com:9000, and logs show my app is running, but I'm unable to view the page. Check whether my port is open or not ?

```
vagrant@ubuntu-bionic: ~

vagrant@ubuntu-bionic:~$ telnet guvi.com 9000
Trying 172.67.146.154...
Trying 104.21.79.166...
Trying 2606:4700:3037::ac43:929a...
Trying 2606:4700:3031::6815:4fa6...
telnet: Unable to connect to remote host: Network is unreachable
vagrant@ubuntu-bionic:~$ sudo ufw status
Status: active

To                         Action      From
--                         ------      ----
22                         ALLOW       Anywhere
2222                       ALLOW       Anywhere
9000                       ALLOW       Anywhere
22 (v6)                    ALLOW       Anywhere (v6)
2222 (v6)                  ALLOW       Anywhere (v6)
9000 (v6)                  ALLOW       Anywhere (v6)

vagrant@ubuntu-bionic:~$
```