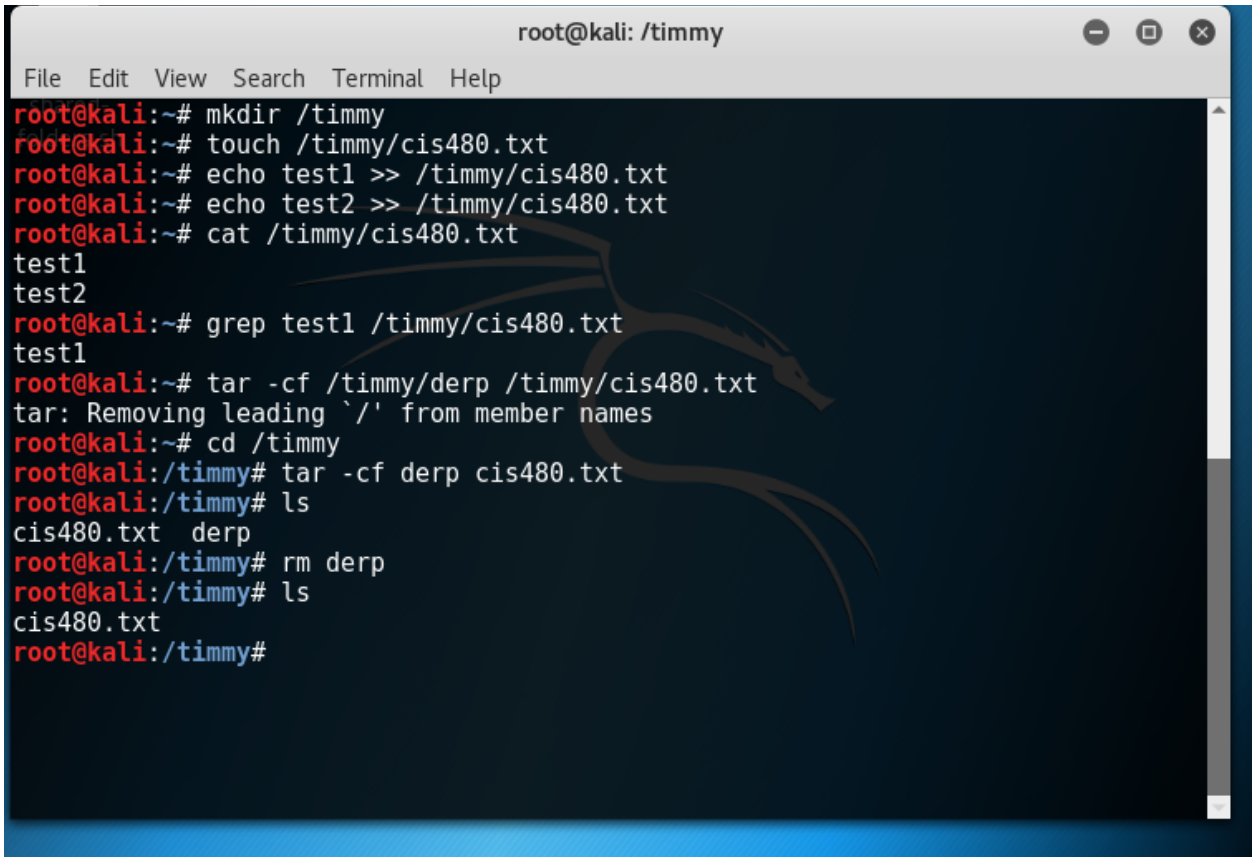
Lab 1 – Testing Kali Linux

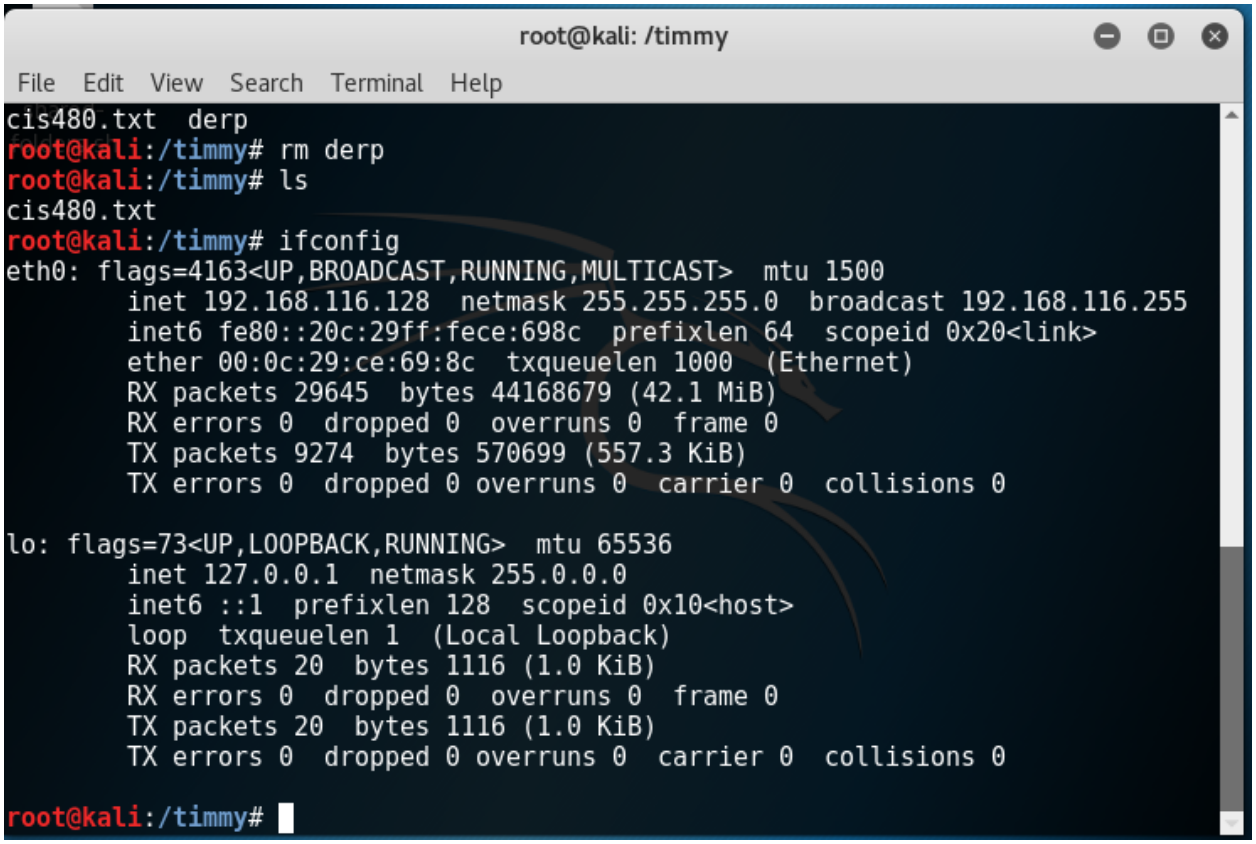
- This is an individual assignment, and worth 20 points.
- The due date and time is 4:00 Thur, September 7 (Sec 01) / 7:00 Thur, September 7 (Sec 76).
- You need to provide your answers to the "Lab1-Outcome.docx." Change the file name following the naming convention suggested below.
- Naming convention is as follows: homework, hypen, last name, first initial, and extension (e.g., Lab1-Outcome-ImG.docx). If you do not follow the convention, I will deduct 1.
- Make screenshots small so that you can save space.

Tasks

- (Task 1) For this task, you should read the file "Basic Linux Commands for Linux Terminal Beginners (pcsteps.com).pdf" on posted the Blackboard.
    - Open a terminal.
    - On root, create a directory with your first name.
    - Within the directory you created, create an empty file named "cis480.txt".
    - Using "echo" command, add the text "test1" to the text file.
    - Using "echo" command, append the text "test2" to the text file.
    - Using "cat" command, display the content in the "cis480.txt".
    - Using "grep" command, search for "test1".
    - On root, using "tar" command, compress everything in your directory.
    - Delete the compressed file.
- Show the commands you executed and outcomes in one or two screenshots.
- (Task 1) Take screenshots of the outcome.


root@kali: /timmy
File Edit View Search Terminal Help
root@kali:~# mkdir /timmy
root@kali:~# touch /timmy/cis480.txt
root@kali:~# echo test1 >> /timmy/cis480.txt
root@kali:~# echo test2 >> /timmy/cis480.txt
root@kali:~# cat /timmy/cis480.txt
test1
test2
root@kali:~# grep test1 /timmy/cis480.txt
test1
root@kali:~# tar -cf /timmy/derp /timmy/cis480.txt
tar: Removing leading `/' from member names
root@kali:~# cd /timmy
root@kali:/timmy# tar -cf derp cis480.txt
root@kali:/timmy# ls
cis480.txt derp
root@kali:/timmy# rm derp
root@kali:/timmy# ls
cis480.txt
root@kali:/timmy#

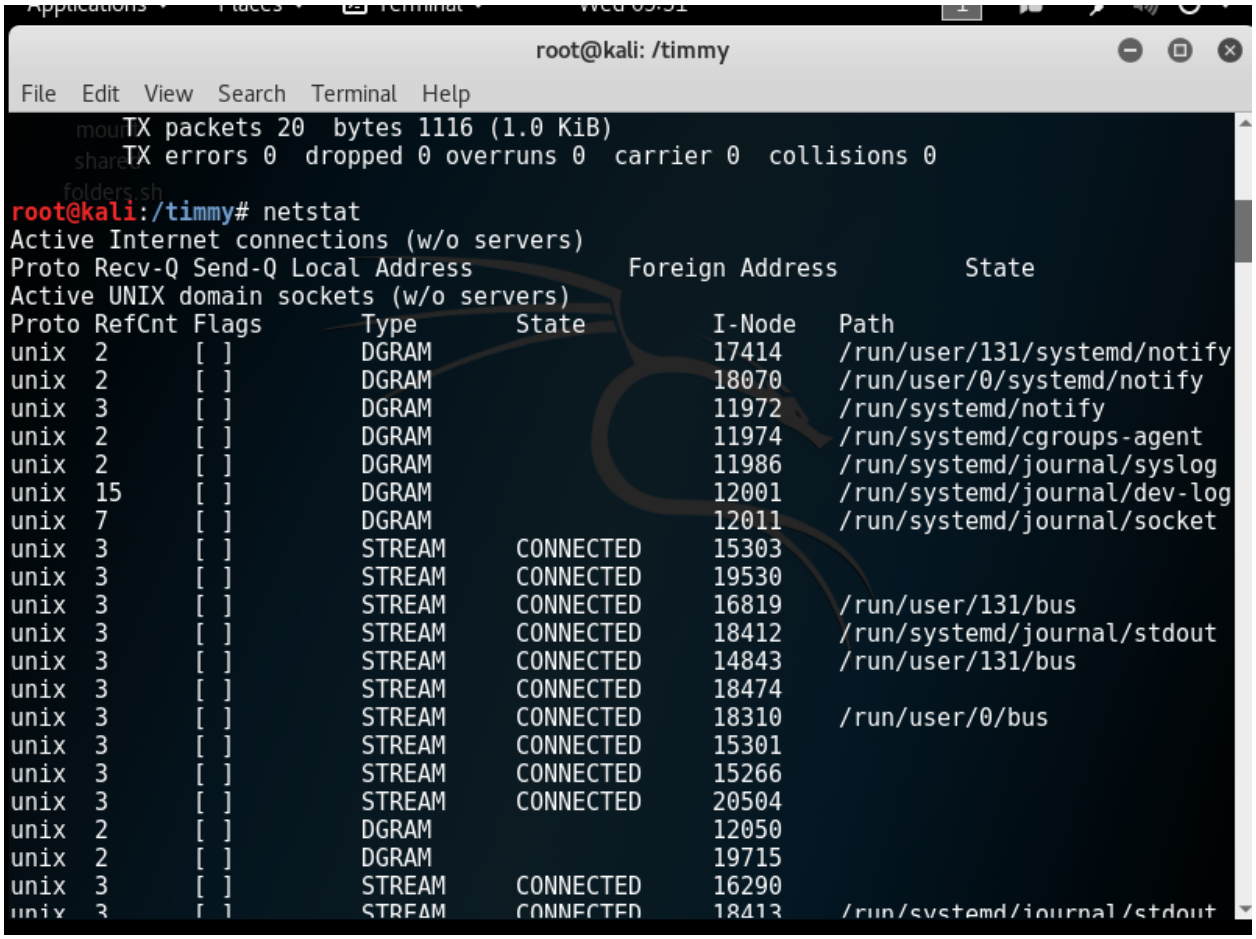
- (Task 2) Let's try **ifconfig** command. The Windows equivalent is ipconfig. The commands you can use are:
    - ifconfig --help (for help)
    - ifconfig (to get the IP address of your system)
- Run a **ifconfig** command to display <u>the IP address, netmask, broadcast associated with the Kali</u>. Take a screenshot of the outcome.
    - (Task 2) Take a screenshot of the outcome.



(Task 3) Let's next try **netstat** to display the ports that are open in your system. The state of each port can be listening, waiting, or connected. **netstat** by default does not tell which service is leading a port to be open.

- Run a **netstat** command to display the listening server sockets. Take a screenshot of the outcome. If the screen displays too many entries, you can resize the screen after zooming in/out (View > Zoom In/Out).

  (Task 3) Take a screenshot of the outcome.



- (Task 4) Next, let's try **traceroute** (tracert in Windows) to trace the route to the destination by sending ICMP Echo Request messages.
    - traceroute (for options)
    - traceroute www.louisville.edu
- Run a **traceroute** command to trace the route to www.louisvilleky.gov. Take a screenshot of the outcome.
    - (Task 4) Take a screenshot of the outcome.

```
C:\Users\tim.mahan>tracert www.louisvilleky.gov

Tracing route to www.louisvilleky.gov [50.19.81.233]
over a maximum of 30 hops:

  1     *        *       77 ms  10.200.255.254
  2     2 ms     2 ms     2 ms  jsr-wlan-v705-1.louisville.edu [136.165.223.126]
  3     7 ms     2 ms     2 ms  eks-gig-v309.bb.louisville.edu [136.165.254.93]
  4    10 ms     3 ms     2 ms  mitc-gig-v307.bb.louisville.edu [136.165.254.138]
  5    32 ms     4 ms     2 ms  rtr-blk-v903.kec.net [199.120.154.41]
  6     3 ms     3 ms     3 ms  rtr-ky-ron-i2-blk.kec.net [199.120.154.82]
  7     3 ms     2 ms     2 ms  128.163.164.170
  8     7 ms     7 ms     7 ms  et-7-0-0.4079.sdn-sw.cinc.net.internet2.edu [162.252.70.88]
  9     8 ms     7 ms    10 ms  et-7-0-0.4079.sdn-sw.indi.net.internet2.edu [162.252.70.87]
 10    13 ms    13 ms    13 ms  et-3-1-0.4079.rtsw.chic.net.internet2.edu [162.252.70.78]
 11    32 ms    29 ms    32 ms  et-0-1-0.4079.sdn-sw.ashb.net.internet2.edu [162.252.70.60]
 12    27 ms    27 ms    31 ms  et-10-0-0.4079.rtr.ashb.net.internet2.edu [162.252.70.75]
 13    28 ms    27 ms    31 ms  64.57.30.39
 14     *        *        *     Request timed out.
 15     *        *        *     Request timed out.
 16  2466 ms  2319 ms  2147 ms  54.239.110.175
 17    30 ms    31 ms    28 ms  54.239.111.31
 18    51 ms    52 ms    69 ms  52.93.24.8
 19    28 ms    28 ms    28 ms  52.93.24.5
 20     *        *        *     Request timed out.
 21     *        *        *     Request timed out.
 22     *        *        *     Request timed out.
 23     *        *        *     Request timed out.
 24     *        *        *     Request timed out.
 25    89 ms    29 ms    29 ms  ec2-50-19-81-233.compute-1.amazonaws.com [50.19.81.233]

Trace complete.
```

- (Task 5) Let's try **ping** to test the connection to a host.
  Run a **ping** command to test the connection to www.louisvilleky.gov. Send the ECHO REQUEST message five times only. For this, you have to use count option (-c). Take a screenshot of the outcome.

(Task 5) Take a screenshot of the outcome.