# BASH Lab 1 Beginning Scripting

## Hand in

Hand in the answers to the questions below.

## A Simple Script

Often in a security incident, you want to collect information in one place. Write a script that will run all four of these commands and redirect the output of these commands to a file: ifconfig -a , cat /etc/resolv.conf , cat /etc/hosts , netstat -nap

### Question 1

What networking info do those commands give you?

ifconfig shows the interfaces and IP addresses of the machine.  
resolv.conf shows the address of the DNS the machine uses to resolve DNS queries  
hosts shows any manual DNS entries that the machine has (This is checked first. The machine only sends a DNS query if the entry is not in the hosts file. The hosts file has priority.)

## Back Ticks

The command, which, shows you the location (file path) of the file that runs a command. Run which man to find out where the man command lives. If you want to see the rights associated with the file for man, you could paste the results of which man into ls -l. Instead, use command substitution ( ` back ticks) to run ls -l on the result of which man.

### Question 2

What command did you use?

ls -l `which man`

## Single quotes, double quotes, and back ticks

### Question 3

Which one (single quotes, double quotes, or back ticks) will expand any variables in a string, ie, change $SHELL to /bin/bash?

“ (double quotes) expand the variables inside the string

### Question 4

Which one will print everything literally, ie, $SHELL stays $SHELL?

‘ (single quotes) print everything exactly like it is entered.

### Question 5

Which one will insert its results as an argument for a command?

` (back tick) will insert its results as an argument for a command

We'll use this string to test your knowledge of what ' and " do:

Hostname=$HOSTNAME ; Current User=`whoami` ; Message=\$ is USD

### Question 6

First, we'll enclose the string in single quotes and echo it. What output will the following command show?

echo 'Hostname=$HOSTNAME ; Current User=`whoami` ; Message=\$ is USD'

Hostname=$HOSTNAME ; Current User=`whoami` ; Message=\$ is USD

### Question 7

Now we'll enclose the string in double quotes. What will the output show?

echo "Hostname=$HOSTNAME ; Current User=`whoami` ; Message=\$ is USD"

Hostname=ubuntu ; Current User=john ; Message=$ is USD