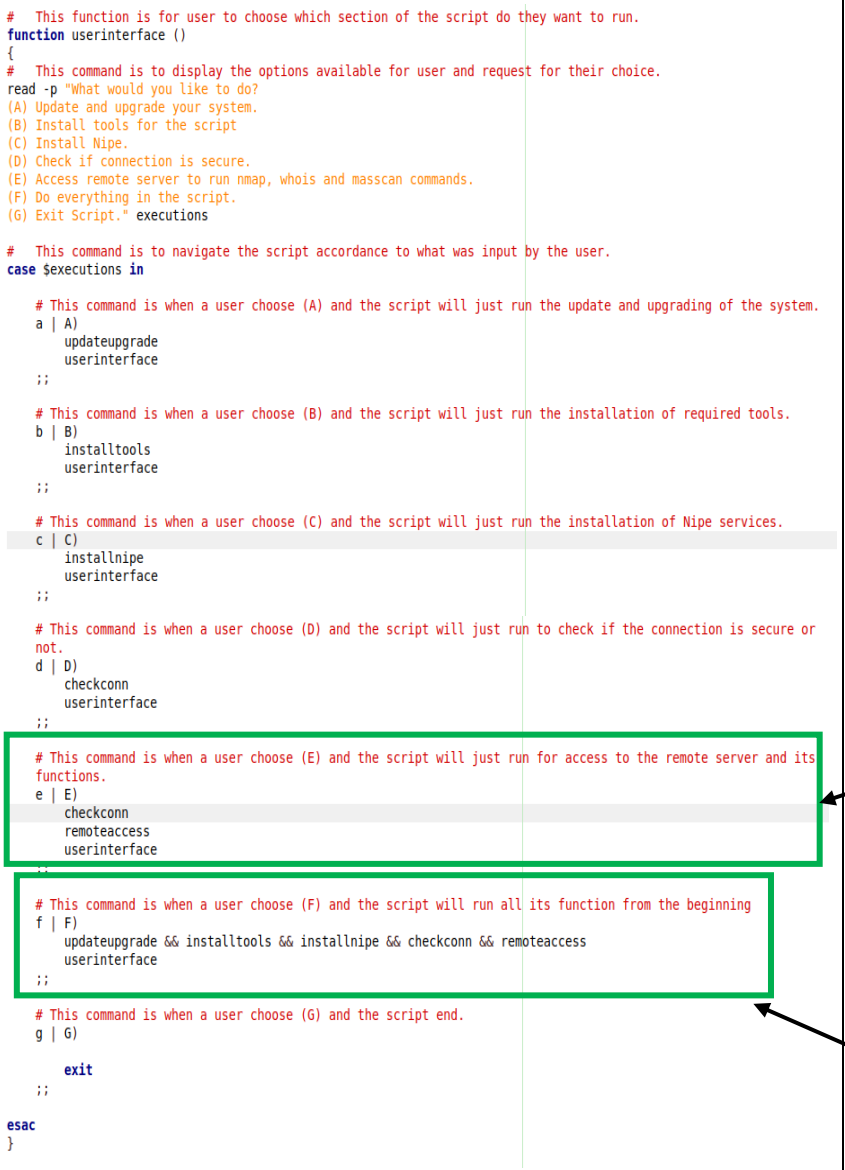
S/N	CODES	FUNCTIONS
1		• When a user runs the script, this is the user interface that the user will first see. • This will allow users to decide which part of the script do they want to run. a) Update and Upgrade b) Install Tools c) Install Nipe d) Check Connection e) Access remote server f) Do All g) Exit Script • Some users might already have nipe service installed, some already have the tools required, some have everything and just wants to access remote server and run the commands. • User can choose to just access a remote server and run the nmap, whois and masscan commands. But this choice will include the 'check connection' functions to make sure that the user IP address is always masked before entering the remote server. • For new user with a fresh system who wants to install everything, they can choose choice (F). The script includes all the functions available and runs in order of its intended execution phase.

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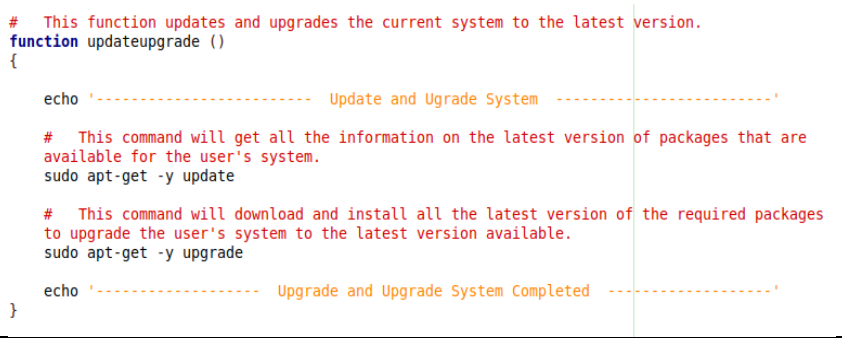
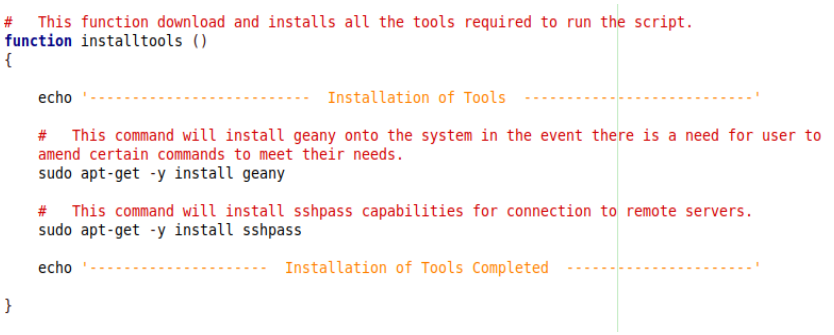
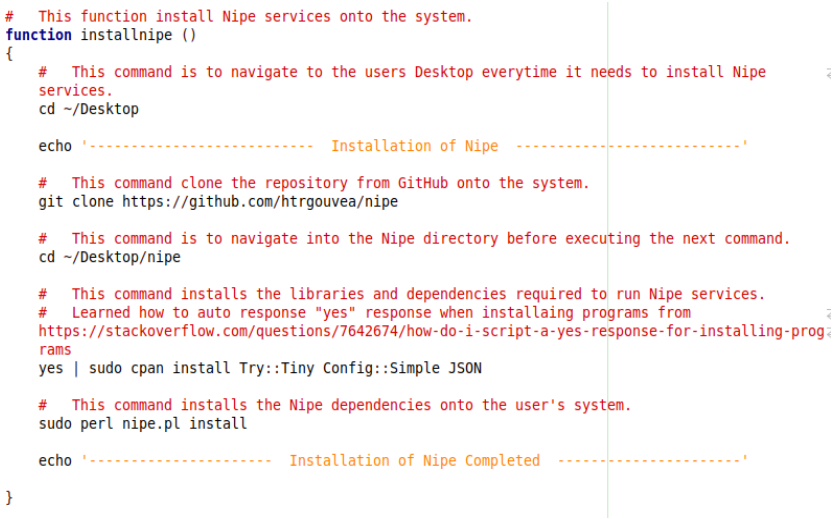
2	
	`#  This function updates and upgrades the current system to the latest version.`
	`function updateupgrade ()`
	`{`
	`  echo '------------------------  Update and Ugrade System  ------------------------'`
	`  #  This command will get all the information on the latest version of packages that are available for the user's system.`
	`  sudo apt-get -y update`
	`  #  This command will download and install all the latest version of the required packages to upgrade the user's system to the latest version available.`
	`  sudo apt-get -y upgrade`
	`  echo '------------------  Upgrade and Upgrade System Completed  ------------------'`
	`}`
		• This function is used to update and upgraded the user's system to the latest version possible to run the script and its tools.

3	
	`#  This function download and installs all the tools required to run the script.`
	`function installtools ()`
	`{`
	`  echo '------------------------  Installation of Tools  ------------------------'`
	`  #  This command will install geany onto the system in the event there is a need for user to amend certain commands to meet their needs.`
	`  sudo apt-get -y install geany`
	`  #  This command will install sshpass capabilities for connection to remote servers.`
	`  sudo apt-get -y install sshpass`
	`  echo '--------------------  Installation of Tools Completed  --------------------'`
	`}`
		• This function installs the required tools that is needed for the script.
		• Installation of geany function is for user to amend the script if required for their own needs.
		• Installation of sshpass is done as that is the main method used to access the remote server for this script.

4	
	`#  This function install Nipe services onto the system.`
	`function installnipe ()`
	`{`
	`  #  This command is to navigate to the users Desktop everytime it needs to install Nipe services.`
	`  cd ~/Desktop`
	`  echo '------------------------  Installation of Nipe  ------------------------'`
	`  #  This command clone the repository from GitHub onto the system.`
	`  git clone https://github.com/htrgouvea/nipe`
	`  #  This command is to navigate into the Nipe directory before executing the next command.`
	`  cd ~/Desktop/nipe`
	`  #  This command installs the libraries and dependencies required to run Nipe services.`
	`  #  Learned how to auto response "yes" response when installaing programs from https://stackoverflow.com/questions/7642674/how-do-i-script-a-yes-response-for-installing-programs`
	`  yes | sudo cpan install Try::Tiny Config::Simple JSON`
	`  #  This command installs the Nipe dependencies onto the user's system.`
	`  sudo perl nipe.pl install`
	`  echo '--------------------  Installation of Nipe Completed  --------------------'`
	`}`
		• This function installs the nipe services onto the user's system that is used to mask their external IP address.
		• Any user who runs this function will have the nipe directories placed at the Desktop.

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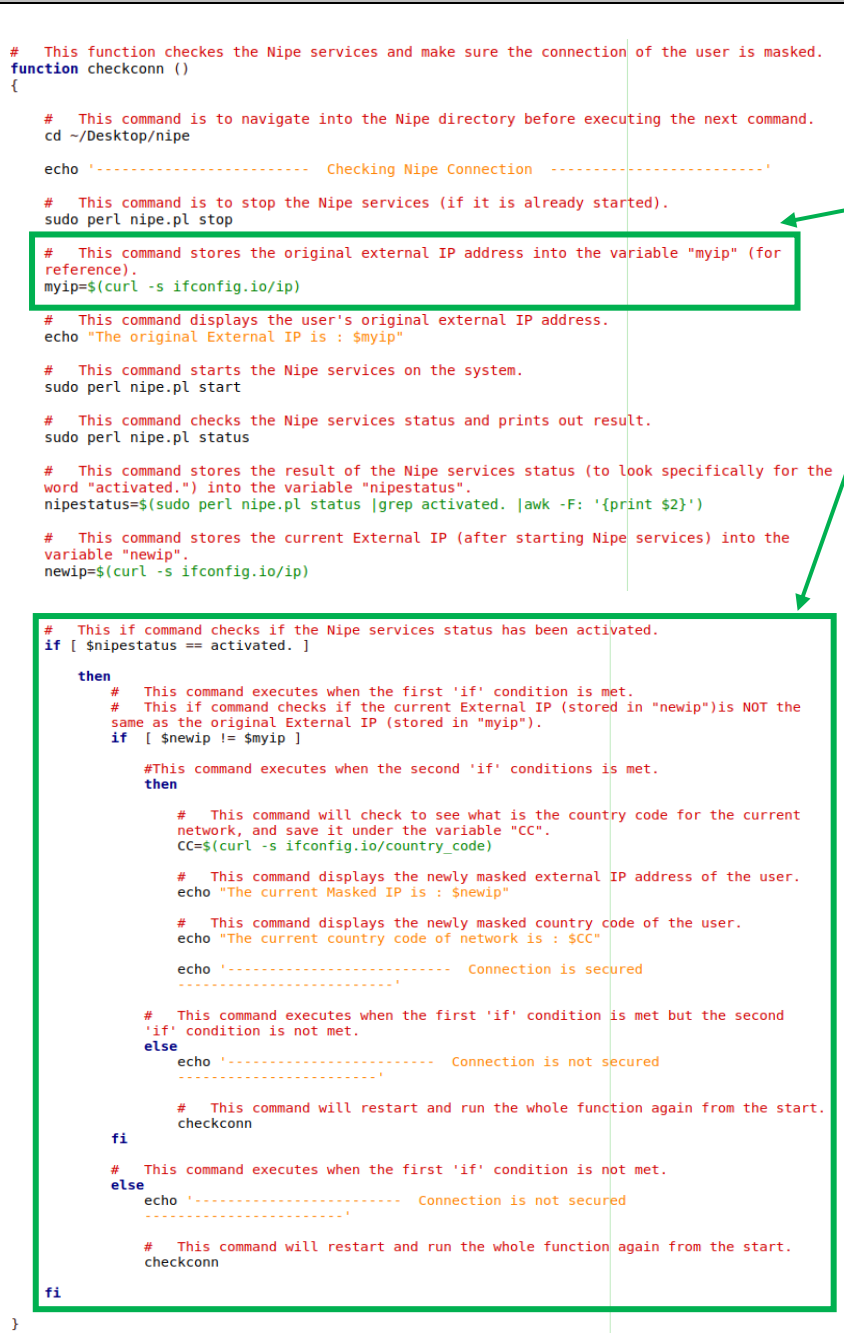
5		• This function runs and make sure that the network connection is masked. • The function will first store the original External IP address so that it can be used as a reference. It also prints out to show the user. • The function then starts the nipe services and do a check to ensure that the services is activated and the new External IP address is not the same as the original External IP address. • Sometimes the nipe services takes awhile to establish a connection and it prints out an error message to users. The function will continue to restart and try to see if it can eventually establish a connection. • Once a connection is confirmed, the function then prints out the new External IP address and country code just for user's knowledge and informs that the connection is secure.

S/N	CODES	FUNCTIONS
6		• This function runs the nmap, whois and masscan commands automatically once the user provides the required information to the script. a) Remote Server IP b) Remote Server Login ID c) Remote Server Password d) IP address that user wants to scan with nmap, whois and masscan. • The function will then access the remote server and runs the scans and save the output on the remote server. • For every scan, the function will remove any directories and result previously saved (if any) for the user input IPaddress. This is to ensure no duplicates of directories. • The function will then copy all the output files from the remote server back into the user's desktop. The function will also remove all the output files from the remote server so as not to leave any trace behind that activities are on going. • The function will then inform user how many files are saved. So if the user see the number is less than 3, it means some scans are not done properly.