CS 309
Assignment 4

1. What does the following script do?

```
#! /bin/bash
[ $# -lt 1 ] && set -- .

find "$@" -type d -depth -print |
    while read dir
    do
[ `ls "$dir" | wc -l` -lt 1 ] || continue
echo >&2 "$0: removing empty directory: $dir"
rmdir "$dir" || exit $?
    done
exit 0
```

2. What does the following script do?

```
#!/bin/bash
STARTDIR="/"

echo "Script started at $(date +'%T on %D') \n
Searching through the following directories:\n"

set -- $STARTDIR

a=1
while (($# >= $a))
do
echo $'\t' $1 # display the directory pathname being searched
shift
done

# end of display output for the user.

find ${STARTDIR} -name core -type f -exec file {} \; |
awk -F: '/core file/ {print $1}' | xargs -t rm

# now tell the user that the script has completed
echo "Script completed at $(date +'%T on %D') \n"
```

3. Create a shell script that will output the network configuration information for your system including the IP address, DNS server, domain name and gateway address. This information is in several files or can be gotten from some commands.

4. Create a shell script that will execute a command in every home directory. For example, you give it the command "chmod 700 .bashrc" and it executes it in every home directory.

5. Create a shell script that will save the checksum of every file in /usr/bin and /usr/sbin. The cksum command will give you a 32-bit CRC checksum for a file as well as the number of bytes. You would normally dump the output from this script to a file so that you could compare results at a later time, so the output should include the filename and the checksum.