

Basic Bash Scripts:

```
#!/bin/bash
echo "A Quick System Audit Script"
date
echo ""
echo "Machine Type Info:"
echo $MACHTYPE
echo -e "Uname info: $(uname -a) \n"
echo -e "IP Info: $(ip addr | grep inet | tail -2 | head -1) \n"
echo "Hostname: $(hostname -s) "
echo "DNS Servers: "
cat /etc/resolv.conf
echo "Memory Info:"
free
echo -e "\nCPU Info:"
lscpu | grep CPU
echo -e "\nDisk Usage:"
df -H | head -2
echo -e "\nWho is logged in: \n $(who) \n"
```

```
#!/bin/bash
```

```
#Check if script was run as root. Exit if false.
```

```
if [ $UID -ne 0 ]
```

```
then
```

```
    echo "Please run this script with sudo."
```

```
    exit
```

```
fi
```

```
# Define Variables
```

```
output=$HOME/research/sys_info.txt
```

```
ip=$(ip addr | grep inet | tail -2 | head -1)
```

```
suids=$(find / -type f -perm /4000 2> /dev/null)
```

```
# Check for research directory. Create it if needed.
```

```
if [ ! -d $HOME/research ]
```

```
then
```

```
    mkdir $HOME/research
```

```
fi
```

```
# Check for output file. Clear it if needed.
```

```
if [ -f $output ]
then
    rm $output
fi

echo "A Quick System Audit Script" >> $output
date >> $output
echo "" >> $output
echo "Machine Type Info:" >> $output
echo -e "$MACHTYPE \n" >> $output
echo -e "Uname info: $(uname -a) \n" >> $output
echo -e "IP Info:" >> $output
echo -e "$ip \n" >> $output
echo -e "Hostname: $(hostname -s) \n" >> $output
echo "DNS Servers: " >> $output
cat /etc/resolv.conf >> $output
echo -e "\nMemory Info:" >> $output
free >> $output
echo -e "\nCPU Info:" >> $output
lscpu | grep CPU >> $output
echo -e "\nDisk Usage:" >> $output
df -H | head -2 >> $output
echo -e "\nWho is logged in: \n $(who -a) \n" >> $output
echo -e "\nSUID Files:" >> $output
echo $suids >> $output
echo -e "\nTop 10 Processes" >> $output
ps aux --sort -%mem | awk {'print $1, $2, $3, $4, $11'} | head >> $output
fi
```

```
#!/bin/bash
```

```
# Create Variables
```

```
nums=$(seq 0 9)
```

```
states=('Nebraska' 'California' 'Texas' 'Hawaii' 'Washington')
```

```
ls_out=$(ls)
```

```
suids=$(find / -type f -perm /4000 2> /dev/null)
```

```
# Create For Loops
```

```
# Create a loop that adds 2 to each number and prints out the result
```

```
for num in ${nums[@]};
```

```
do
```

```
    new_num=$(( $num + 2 ))
```

```
    echo $new_num
```

done

Create a loop that looks for 'Hawaii'

for state in \${states[@]};

do

if [\$state == 'Hawaii'];

then

echo "Hawaii is the best!"

else

echo "I'm not a fan of Hawaii."

fi

done

Create a `for` loop that prints out each item in your variable that holds the output of the `ls` command.

for x in \${ls_out[@]};

do

echo \$x

done

Bonus

Create a for loop to print out suids on one line for each entry

for suid in \${suids[@]};

do

echo \$suid

done