NOTE: Capture the OUTPUT and THE ANSWERS for this exercise in the same file and upload the same in AUMS.Execute the following command before you run any script and capture the output

$date

$PS1= “roll number \d \h>”

1. Copy poem to your folder
   Try these commands
   Cat poem
   Cat poem | more
   ?.What is the difference between cat and more command?

   => ‘cat poem’ displays the content of poem.txt. If the file is large, and we use more then it will display one screenful of file content at a time.

   Tail -1 poem
   Tail +3 poem
   ?.What is the difference between these 2 commands?

   =>**'tail -1 poem' prints the last line from the end of file. 'tail +3 poem' outputs the contents from the 3rd line from the start of the file.**

2. Copy poem to a new file *“new_poem*”. Make some changes in “*new_poem*”.
   Try these commands
   Cmp poem new_poem.
   Diff poem new_poem.

   ?.What difference between cmp and diff commands?

   => **cmp compares the files byte by byte while diff compares the files line by line.**

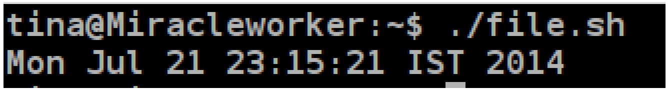
3. Print the following
   Your command, and each and every argument, total number of arguments, all arguments.
   Note: all these in separate lines

```
#!/bin/bash
echo "The command is [$0]"
echo "The first argument is [$1]"
echo "The second argument is [$2]"
echo "The total number of arguments is [$#]"
echo "All arguments are [$@]"
```

4. Print the following
   Today’s lab is shell programming
   We have dd files in /etc
   The value of $x is 100

```
#!/bin/bash
echo 'Today’s lab is shell programming'
echo 'We have dd files in /etc'
echo 'The value of $x is 100'
```

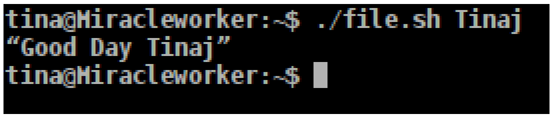
5. Write a script that would wait 5 seconds and then display the time



```
tina@Miracleworker:~$ ./file.sh
Mon Jul 21 23:15:21 IST 2014
```

```
#!/bin/bash
sleep 5
date
```

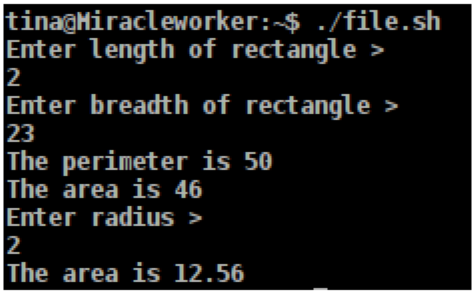
6. Write a script that will take a person's name as a parameter to the program name. The script should greet that person, as "Good Day name."



```
tina@Miracleworker:~$ ./file.sh Tinaj
“Good Day Tinaj”
tina@Miracleworker:~$
```

```
#!/bin/bash
echo “Good Day $1”
```

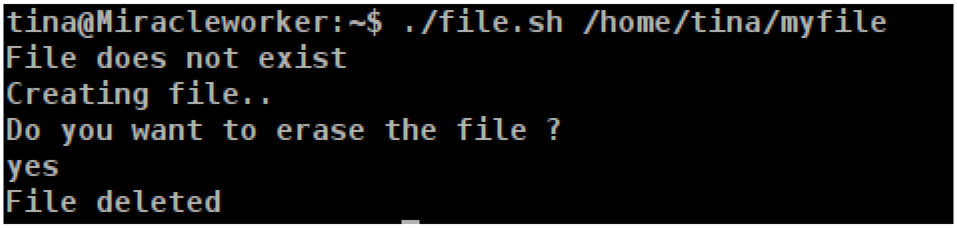
7. The length and breadth of a rectangle and radius of a circle are input through keyboard.
   Write a script to calculate the area and perimeter of a rectangle and area and circumference of the circle.



```
tina@Miracleworker:~$ ./file.sh
Enter length of rectangle >
2
Enter breadth of rectangle >
23
The perimeter is 50
The area is 46
Enter radius >
2
The area is 12.56
```

```
#!/bin/bash
echo "Enter length of rectangle >"
read length
echo "Enter breadth of rectangle >"
read breadth
echo "The perimeter is $((2 * ($length + $breadth)))"
echo "The area is $(($length * $breadth))"
echo "Enter radius >"
read radius
area=$(echo "scale=2;3.14 * ($radius * $radius)" | bc)
echo The area is $area
```

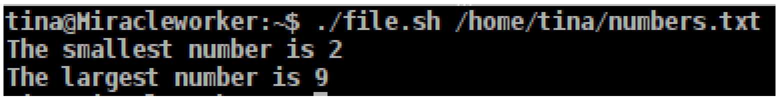
8. Write a script that would first verify if file “myfile” exits. If it does not, create it, and then ask the user for confirmation to erase it.



```
tina@Miracleworker:~$ ./file.sh /home/tina/myfile
File does not exist
Creating file..
Do you want to erase the file ?
yes
File deleted
```

```
#!/bin/bash
file=$1
if [ -f $file ];
then
   echo "File exists"
else
   echo "File does not exist"
   echo "Creating file.. "
   touch $file
   echo "Do you want to erase the file ? (yes/no) "
   read ans
   if [ "$ans" = "yes" ]
   then
      rm $file
      echo File deleted
   else
      echo File not deleted
      exit
   fi
fi
```

9. Given a file of numbers (one per line), write a script that will find the lowest and highest number
   (use read, sort, head, tail)

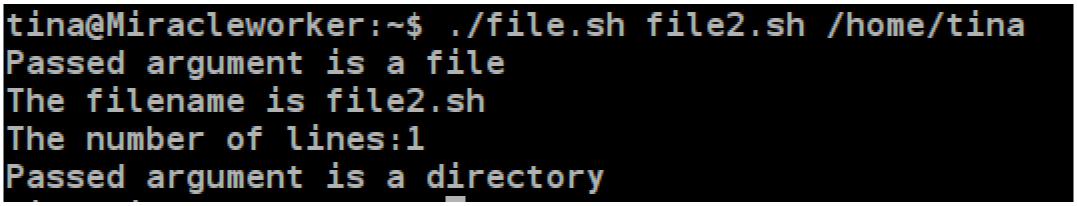


```
tina@Miracleworker:~$ ./file.sh /home/tina/numbers.txt
The smallest number is 2
The largest number is 9
```

```
#!/bin/bash
file=$1
file3=/home/tina/output.txt
touch $file3
sort $file -o $file3
largest=$(tail -1 $file3)
```

```
smallest=$(head -1 $file3)
echo The smallest number is $smallest
echo The largest number is $largest
```

10. Write a shell script which will receive any number of filename as arguments. The shell script should check whether every argument supplied is a file or directory. If it is a directory it should be appropriately reported.
    If it is a filename then name of the file as well as the number of lines present in it should be reported.



```
tina@Miracleworker:~$ ./file.sh file2.sh /home/tina
Passed argument is a file
The filename is file2.sh
The number of lines:1
Passed argument is a directory
```

```
#!/bin/bash

for var in "$@"

do

if [ -f $var ]; then

  echo "Passed argument is a file"

  echo "The filename is $var"

  echo "The number of lines:$(wc -l < $var)"

elif [ -d $var ]; then

  echo "Passed argument is a directory"

else

  echo "Not of valid type"

fi

done
```