

Solution

1. Write a command that will change the file protection of the file myfile so that everyone can read the file. The execute and write protections should remain what they are – assume that you do not know the execute and write protections.

chmod +r myfile

2. What is the value of variable V1 after the following command is executed (assume the value of variable V2 is 21)?

V1="echo \$V2"

echo 21

3. What is the value of variable V1 after the following command is executed (assume the value of variable V2 is 21)?

V1=`echo \$V2`

21

4. What will the following script (prog1) output if the command was called as follows:

```
prog1 10 20 40
s=0
for i in $*
do
s=`expr $s + $i`
done
echo $s
```

70

5. What will the following script (prog2) output if the command was called as follows:

```
prog2 100 20
if [ $1 -lt $2 ]
then
echo "A"
else
echo "B"
fi
```

B

6. Write an expr command that will output the product of \$a and \$b (\$a times \$b).

expr \$a * \$b

7. What is the difference between the following two commands (assume that script1 is an executable script).

script1

bash script1

The first executes the script in the current shell, the second creates a new shell, and executes the script there.

8. What will be the value of the BASH variable V15 after the execution of this statement? Assume that the value of TEMP is 8.

V15='expr \$TEMP + 2'

expr \$TEMP + 2

9. What will be the value of the BASH variable V16 after the execution of the following statement? Again assume that the value of TEMP is 8.

V16="expr \$TEMP + 2"

expr 8 + 2

10. Write a BASH program that accepts input only from the command line.

If the user enters q17 -Math, the program prints the name of all Math majors.

If the user enters q17 -avg, the program prints the average grade for the first exam.

If the user enters q17 followed by any other option, the print prints "Not an option".

If the user enters just q17, the program prints "No options."

```

if [ $# -eq 0 ] ; then

    echo "No options"

elif [ $1 = "-Math" ] ; then

    grep "Math" data | cut -d ":" -f 2

elif [ $1 = "-avg" ] ; then

    awk -F ":" '{ count++; total += $4}

    END {print total/count}' data

else

    echo "Not an option"

fi

```

15. Write a script that will ask the user to input a College. The menu of choices includes Saint Rose, RPI, Skidmore, and Exit. If the user chooses Saint Rose, the program prints "In Albany.", and displays the menu again. If the user chooses RPI, the program prints "In Troy.", and displays the menu again. If the user chooses Skidmore, the program prints "In Saratoga.", and displays the menu again. If the user chooses Exit, the program stops. If the user enters anything else, the program prints "Not an option" and displays the menu again.

```

echo "Select a College:"
select reply in "Saint Rose" "RPI" "Skidmore" "Exit"
do
case $reply in
"Saint Rose")
echo "In Albany";;
"RPI")
echo "In Troy";;
"Skidmore")
echo "In Saratoga";;
"Exit")
break;;
*)
echo "Not an option";;
esac
done

```