Lab 11

(Chapter 16 Part1)

Lab Work

1. Write a Bourne shell script `cv` that takes the side of a cube as a command line argument and displays the volume of the cube. Do proper exception handling in your code. Show the script and its sample executions.

```
$ cat cv
#!/bin/sh
if [ $# != 1 ]
        then
                echo "Usage: $0 integer-argument"
                exit 1
fi
side="$1"
volume=`expr $side \* $side \* $side`
echo "The volume of the cube is $volume."
exit 0
```

2. Modify the `countup` script in Section 16.2 so that its takes two integer command line arguments. The script displays the numbers between the two integers (including the two numbers) in ascending order if the first number is smaller than the second, and in descending order if the first number is greater than the second. Name the script count_up_down. Do proper exception handling in your code. Show your script. Capture its sample executions with the following conditions: the first argument greater than the second, the first argument smaller than the second, and the two arguments the same.

```
$ cat count_up_down
#!/bin/sh
if [ $# != 2 ]
        then
                echo "Usage: $0 integer1 integer2"
                exit 1
fi
if [ "$1" -lt "$2" ]
```

```
        then
                target="$2"
                current="$1"
        else
                target="$1"
                current="$2"
fi
while [ "$current" -le "$target" ]
do
        echo -n "$current "
        current=`expr $current + 1`
done
echo
exit 0
```

3. Implement the script outlined in the last problem of Lab 10, but use functions to implement the service code for the various options

```
$ cat lab16p7
#Function Declarations
DisplayMenu()
{
        # Display menu
        echo
        clear
        echo "*******************************************************"
        echo "Please choose from the following options; type the option "
        echo "number and hit the <Enter> key."
        echo
        echo "a or A To list names of the files in the current directory"
        echo "b or B To display today's date and time"
        echo "c or C To invoke script for Problem 14"
        echo "d or D To display whether a file is a simple file or directory"
        echo "e or E To create a backup copy of a file"
        echo "f or F To start a telnet session"
        echo "g or G To start an ftp session"
        echo "h or H To exit the program."
        echo "*******************************************************"
        echo
        echo -n "Enter your choice and hit <Enter>: "
}
```

```
PerformTask()
{
    case "$choice" in
    a|A)
        ls -a
        ;;
    b|B)
        date
        ;;
    c|C)
        echo -n "Enter the list of login names: "
        read users
        ch15p14 `echo "$users"`
        ;;
    d|D)
        echo -n "Please enter file name: "
        read filename
        if [ -f "$filename" ]
            then
                echo "$filename is an ordinary file."
            elif [ -d "$filename" ]
            then
                echo "$filename is a directory."
            else
                echo -n "$filename does not exist, or it is neither an "
                echo "ordinary file not a directory."
        fi
        ;;
    e|E)
       echo "Warning! This will overwrite a file of the same name with "
       echo "extension .bak! "
       echo -n "Please enter file name: "
       read filename
       cp -f $filename $filename.bak
       ;;
    f|F)
        echo -n "Please enter the host name or IP address: "
        read host
        telnet "$host"
        ;;
    g|G)
```

```
            echo -n "Please enter the host name or IP address: "
            read host
            ftp "$host"
            ;;
        h|H)
            clear
            echo "Bye now! "
            sleep 2
            clear
            exit 0
            ;;
        *)
            echo "Bad option, try again."
            ;;
        esac
        echo "Hit <Enter> to continue."
        read ignore
}

#Begin Main Program
while [ 1 ]
do
DisplayMenu
read choice
PerformTask
done
```