Shell Script Programs with a For Loop

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Adding Comments

When we want to place a comment in a Shell Script, we type the pound sign (#) in front of the phrase or sentence. The first comment usually defines the program to anyone opening and reading the executable file. We can also write copyright information in this area. Comments for each line can be written at the end of the coded expression as shown in the example.

```
# days is a program that outputs the days of the week
for DAYS in Sunday Monday Tuesday Wednesday Thursday Friday Saturday
do
    echo $DAYS
done
```

The For Loop

The For loop begins with the **for** command and then a variable name such as **DAYS**. Then, we write in and the set of strings or numbers that will be assigned to the variable DAYS. In our example, we have the set of words representing the days of the week.

```
# days is a program that outputs the days of the week
for DAYS in Sunday Monday Tuesday Wednesday Thursday Friday Saturday
do
    echo $DAYS
done
```

Running the Loop

Next, we type do, followed by an action which is to output the name of the day. After each day of the week is printed to the monitor. The program is done.

```
# days is a program that outputs the days of the week for DAYS in Sunday Monday Tuesday Wednesday Thursday Friday Saturday do echo $DAYS done
```

When we are done in the text editor, we can save the file as **days.exe** or just **days**. If we save the file as **days**, we can convert it to an executable file by typing in the Bash command **chmod ugo+x days**. To run the program type **sh days**.

For Loops in a Condition Statement

We can insert for loops in a if- then-else condition statement. In our example, we will ask if the computer user wants the list of the days of the week or the days of the month. If they type D, then the get the days of the week. If they input M, they get the abbreviation for each month name.

```
# days months is a program that outputs the day of the week or months of the year
echo "This program outputs the day of the week or months if the year
                                                                      # program definition
echo -n "Do you want days of the week or months of the year? D or M?
                                                                      # choice
read choice
                                                                      # user prompt
if [ "$choice" = "D" ]
then
          # output days
          for DAYS in Sunday Monday Tuesday Wednesday Thursday Friday Saturday
          do
           echo SDAYS
          done
Else
          # output months
          for MONTHS in Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
          do
           echo $MONTHS
          done
fi
                                                              # end of program
```

Writing Shell Scripts with Loops

When we are done in the text editor, we can save the file as days_months.exe or just days_months. If we save the file as days_months, we can convert it to an executable file by typing in the Bash command chmod ugo+x days_months. To run the program type sh days_months. When prompted for our choice, we can type D or M and our answer will give us one of the lists.

Write another program. Ask the computer user a question and utilize the if-then-else statement and the for loop.