Practical Work 06

Shell Script 2

Lab: Your Work (1)

1. Access to your account in remote server
   - **`ssh your_student_id@os.cammob.ovh`**
2. Go to your home directory **`~/public_html/your.full.name/lab06/`**
3. Inside **`lab05`**, create "**`scripts`**", "**`data`**" and "**`backups`**" directory:
   - **`mkdir scripts data backups`**
4. Create some testing data files:
   - **`touch data/file1.txt data/file2.txt data/file3.log`**

Lab: Your Work (2)

1. **Objective:**
    a. Count number of files from input directory by using loops **for** & **conditions**
2. **Task:**
    a. Create a shell script "**`count_files.sh`**" to read a path from user input
    b. Check the **inputted path** is directory or regular file:
        i. If **empty**, then
            1. *Show error message*
        ii. If **NOT directory**, then
            1. *Show error message*
        iii. If **directory**, then
            1. *Increase the counter*
    c. Show number of files you counted in success state

Lab: Your Work (3)

1. **Objective:** Use **case** statement
2. **Task:**
   a. Create a shell script "**`count_options.sh`**"
   b. Show menus ask user to input:
      "1" to use program count files
      "i" to show about this program
      "Q" or "q" to quit the program
   c. If user input **"1"**, then
      i. *Copy code from LAB 2* ***(ask user to input a path and count all files)***
   d. If user input **"i"**, then
      i. *Show the information of this program and owner name, year of creation, and version name*
   e. If user input **"q"** or **"Q"**, then quit the program

Lab: Your Work (4)

1. **Objective:** Use loops **while** and **run shell script** from another shell script file
2. **Task:**
   a. Copy shell script "**`count_options.sh`**" to "**`count_program.sh`**"
   b. Loop until user chooses to quit by using “while”
      i. *Until user input “q” or “Q” in menu options to exit the program*
   c. Remove all codes in the block of shell script in LAB 2 (ask user to input a path and count all files)
      i. Replace it by using run shell script from another shell script file:

         `./count_files.sh`

Assignment W06-1

1. Access to your account in remote server
   a. **`ssh your_student_id@os.cammob.ovh`**
2. Inside directory "**`~/public_html/your.full.name/lab06/scripts/`**"
3. Create a script named "**`backup_files.sh`**"
   a. Ask user to input **<source directory>** (e.g., data/)
   b. Ask user to input **<backup directory>** (e.g., backup/)
   c. Check that **<source>** exists and is a directory
   d. If **<backup>** does not exist, then create it
   e. Use a "**for**" loop to copy "***.txt**" files from **<source>** to **<backup>**
   f. Print a summary of how many **files** were copied

Assignment W06-2

1. Access to your account in remote server
   a. `ssh your_student_id@os.cammob.ovh`
2. Inside directory "`~/public_html/your.full.name/lab06/scripts/`"
3. Copy program "**count_program.sh**" from lab 4 to "**backup_program.sh**"
   a. Add another option to the list
      i. "B" or "b" to backup all files in a directory
   b. Run "**backup_files.sh**" if user chooses this option

Submit Your Assignment W06-1 & W06-2

1. Screenshot your command lines from the terminal
2. Screenshot your shell script files from browser access to:
   a. **`lab06/scripts/count_files.sh`**
   b. **`lab06/scripts/backup_files.sh`**
   c. **`lab06/scripts/backup_program.sh`**
3. Upload your PDF file contains those screenshots into eLearning

Answer Lab 2

- Create scripts/count_files.sh with contents similar to:

```
#!/bin/bash
read -p "Please enter path: " DIR

if [[ -z "$DIR" ]]; then
  echo "ERROR: Your inputted is empty!"
  exit 1
fi

if [[ ! -d "$DIR" ]]; then
  echo "ERROR: $DIR is not a directory!"
  exit 1
fi

COUNT=0
for FILE in "$DIR"/*; do
  if [[ -f "$FILE" ]]; then
    COUNT=$((COUNT + 1))
  fi
done

echo "      Number of files in $DIR: $COUNT       "
echo "+-------------------------------------------------+"
```

Answer Lab 3

- Create scripts/count_options.sh with contents similar to:

```
#!/bin/bash
echo "Welcome to program: count number of files"
echo "-----------------------------------------"
echo "\"p\"        : to use program count files"
echo "\"i\"        : to show about this program"
echo "\"q\" or \"Q\" : to quit the program"
echo "-----------------------------------------"
read -p "Please select an option: " CHOICE

case "$CHOICE" in
  q|Q)
      echo "Option quit is selected! Bye!"
      exit 1
      ;;
  p)
      echo "Option "program" is selected:"
      # copy all codes from count_files.sh to this section
      ;;
  i)
      echo ".-----------------------------------------."
      echo "|               About This Program         |"
      echo "'-----------------------------------------'"
      echo "This program is use for counting the number of files inside a directory."
      echo "Created by: $(whoami)"
      echo "Year: $(date +%Y)"
      echo "Version: 1.0"
      echo "x-----------------------------------------x"
      ;;
  *)
      echo "Invalid option"
      ;;
esac
```

Answer Lab 4

- Create scripts/count_program.sh:

```
#!/bin/bash
while :; do

echo "Welcome to program: count number of files"
echo "-----------------------------------------"
echo "\"p\"        : to use program count files"
echo "\"i\"        : to show about this program"
echo "\"q\" or \"Q\" : to quit the program"
echo "-----------------------------------------"
read -p "Please select an option: " CHOICE

case "$CHOICE" in
  q|Q)
      echo "Option \"quit\" is selected! Bye!"
      exit 1
      ;;
  p)
      echo "Option \"program\" is selected:"
      ./count_files.sh
      ;;
  i)
      echo ".-------------------------------------------."
      echo "|               About This Program          |"
      echo "'-------------------------------------------'"
      echo "This program is use for counting the number of files inside a directory."
      echo "Created by: $(whoami)"
      echo "Year: $(date +%Y)"
      echo "Version: 1.0"
      echo "x-------------------------------------------x"
      ;;
  *)
      echo "Invalid option"
      ;;
esac

done
```