Operating Systems – OS

Lab Task 10 (OS-010)

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Tasks

Solution:

Task 1:

Put the code in a .sh file and execute. See the results.

```
muhammadroshaanidrees56177@Ubuntu:~$ mkdir Lab10
muhammadroshaanidrees56177@Ubuntu:~$ cd Lab10
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ touch task1.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ cat>task1.sh
echo "The following is the output of $0 script:"
echo "The total number of command line argument:4#"
echo "The first parameter:$1"
echo "The second parameter:$2"
```

```
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ chmod u+x task1.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ ./task1.sh
The following is the output of ./task1.sh script:
The total number of command line argument:0
The first parameter:
The second parameter:
muhammadroshaanidrees56177@Ubuntu:~/Lab10$
```

Practice:

Practice the following code and execute. After that change the file and then execute. See the results.

```
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ touch practice.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ cat>practice.sh
dog=lassie
test $dog = lassie
echo $?

test $dog = pluto
echo $?
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ chmod u+x practice.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ ./practice.sh
0
1
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ ./practice.sh
1
1
muhammadroshaanidrees56177@Ubuntu:~/Lab10$
```

Practice 2:

Practice the following code, execute and see the results.

```
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ touch practice2.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ cat <practice2.sh
# Scripts which compares two numbers

A=1
B=10

if test $B -gt $A
then
        echo " $B greater then $A "
fi

muhammadroshaanidrees56177@Ubuntu:~/Lab10$ chmod u+x practice2.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ ./practice2.sh
 10 greater then 1
muhammadroshaanidrees56177@Ubuntu:~/Lab10$
```

Task 2:

Put the code in a .sh file, execute the scripts and see the results.

```
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ touch task2.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ cat <task2.sh
echo "Enter a number between (1-5)"
read NUMBER

       case "$NUMBER" in

       1)      echo "You pressed one.";;
       2)      echo "You pressed two.";;
       3)      echo "You pressed three.";;
       4|5|five)      echo "You pressed four/five.";;
       *)      echo "You pressed invalid number.";;

       esac

muhammadroshaanidrees56177@Ubuntu:~/Lab10$ chmod u+x task2.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ ./task2.sh
Enter a number between (1-5)
2
You pressed two.
muhammadroshaanidrees56177@Ubuntu:~/Lab10$
```

Task 3:

There are three semesters in an academic year i.e. Fall (Aug-Jan), Spring (Feb-May) and Summer (JunJuly). Write a script which read current month from the user and determine running semester. For example if user enters current month either 1 or January or Jan the script should display “Fall Semester”. Hint: use CASE structure.

```
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ touch task3.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ cat <task3.sh

echo "Enter current month (e.g., Jan, February, 6):"
read month

case $month in
  1|01|Jan|January|8|08|Aug|August|9|09|Sep|September|10|Oct|October|11|Nov|November|12|Dec|December)
      echo "Fall Semester"
      ;;
  2|Feb|February|3|Mar|March|4|Apr|April|5|May)
      echo "Spring Semester"
      ;;
  6|Jun|June|7|Jul|July)
      echo "Summer Semester"
      ;;
  *) echo "Invalid Month Entered." ;;
esac

muhammadroshaanidrees56177@Ubuntu:~/Lab10$ chmod u+x task3.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ ./task3.sh
Enter current month (e.g., Jan, February, 6):
11
Fall Semester
```

Task 4:

Copy script that is written in above program and implement again but this time pass input using arguments like script Jan.

```
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ touch task4.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ cat <task4.sh

month=$1

case $month in
  1|01|Jan|January|8|08|Aug|August|9|09|Sep|September|10|Oct|October|11|Nov|November|12|Dec|December)
      echo "Fall Semester"
      ;;
  2|Feb|February|3|Mar|March|4|Apr|April|5|May)
      echo "Spring Semester"
      ;;
  6|Jun|June|7|Jul|July)
      echo "Summer Semester"
      ;;
  *) echo "Invalid Month Entered." ;;
esac

muhammadroshaanidrees56177@Ubuntu:~/Lab10$ chmod u+x task4.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ ./task4.sh Jan
Fall Semester
muhammadroshaanidrees56177@Ubuntu:~/Lab10$
```

Task 5:

Write a script which first picks hours from the system date and then greets the user according to following conditions. use if else structure to solve this example Hours 00 – 11 “Good Morning” Hours 12-17 “Good Afternoon” Hours 18-23 “Good night” Hint:- To take system hours use: date +%H, use **if then elif then else**

```
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ touch task5.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ cat <task5.sh
# Script to greet user based on current system hour

# Get current hour (24-hour format, 00-23)
hour=$(date +%H)

# Convert hour to integer (remove leading zero)
hour=$((10#$hour))

# Determine greeting based on hour
if [ $hour -ge 0 ] && [ $hour -le 11 ]; then
    echo "Good Morning"
elif [ $hour -ge 12 ] && [ $hour -le 17 ]; then
    echo "Good Afternoon"
elif [ $hour -ge 18 ] && [ $hour -le 23 ]; then
    echo "Good Night"
else
    echo "Error: Invalid hour"
fi

muhammadroshaanidrees56177@Ubuntu:~/Lab10$ chmod u+x task5.sh
muhammadroshaanidrees56177@Ubuntu:~/Lab10$ ./task5.sh
Good Afternoon
muhammadroshaanidrees56177@Ubuntu:~/Lab10$
```
