DTL Assignment: Bash Scripting

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Batch: S3

Creating file

```
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ vim file.sh
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ chmod 777 file.sh
```

```
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ vim file.sh
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ bash file.sh
My first shell script
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ sh file.sh
My first shell script
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ ./file.sh
My first shell script
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ . file.sh
My first shell script
```

First shell script

```
1 # My first shell script
2 echo "My first shell script"
3
```

```
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ vim file1.sh
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ ./file.sh
```

```
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ vim file1.sh
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ chmod 755 file1.sh
aman2003@Aman-Sayyad:~/Documents/Latex/BashScript$ ./file1.sh
```

```
Hello user
Tody is Friday 20 January 2023 02:33:22 AM IST
Number of user login: 1
Calender:
     January 2023
Su Mo Tu We Th Fr Sa
 1  2  3  4  5  6  7
 8  9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31
```

```
1 # script to print user information who currently login, date and time
2
3 clear
4 echo "Hello user"
5 echo -e "Tody is \c"; date
6 echo -e "Number of user login: \c"; who | wc -l
7 echo "Calender:"
8 cal
9 exit 0
~
```

```
a
aman2003@Aman-Sayyad:~/Documents/DTL$ vim file3
aman2003@Aman-Sayyad:~/Documents/DTL$ bash file3
12
Bus
```

```
1 # storing variables
2 num=12
3 vech=Bus
4 echo $num
5 echo $vech
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim file3
aman2003@Aman-Sayyad:~/Documents/DTL$ bash -v file3
# storing variables
num=12
vech=Bus
echo $num
12
echo $vech
Bus
```

```
1 # echo command
2
3 echo -e "An apple a day keeps away \a\t\tdoctors\b\n"
4 echo -n "Hello everyone"
5 echo -n "\\ "
```

```
a
aman2003@Aman-Sayyad:~/Documents/DTL$ vim file3
aman2003@Aman-Sayyad:~/Documents/DTL$ bash file3
12
Bus
```

```
1 # storing variables
2 num=12
3 vech=Bus
4 echo $num
5 echo $vech
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim file3
aman2003@Aman-Sayyad:~/Documents/DTL$ bash -v file3
# storing variables
num=12
vech=Bus
echo $num
12
echo $vech
Bus
```

```
1 # echo command
2
3 echo -e "An apple a day keeps away \a\t\tdoctors\b\n"
4 echo -n "Hello everyone"
5 echo -n "\\ "
```

```
1 # Shell Arithmetic
2
3 a=23
4 b=45
5 add=`expr $a + $b`
6 sub=`expr $a - $b`
7 modulo=`expr $a % $b`
8 multi=`expr $a \* $b`
9 echo -e "a = $a \t b = $b"
10 echo "Addition: $add"
11 echo "Substraction: $sub"
12 echo "Modulus: $modulo"
13 echo "Multiplication: $multi"
14
15 echo -e "\nAnother way"
16 echo "Addition: `expr $a + $b`"
17 echo "Substraction: `expr $a - $b`"
18 echo "Modulu: `expr $a % $b`"
19 echo "Multiplication: `expr $a \* $b`"
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim file5.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash file5.sh
a = 23    b = 45
Addition: 68
Substraction: -22
Modulus: 23
Multiplication: 1035

Another way
Addition: 68
Substraction: -22
Modulu: 23
Multiplication: 1035
```

```
 1 #exit status
 2
 3 expr 1 + 3
 4 echo -e "Exit status - $?\n"
 5
 6 echo welcome
 7 echo -e "Exit status - $?\n"
 8
 9 hello everyone
10 echo -e "Exit status - $?\n"
11
12 date
13 echo -e "Exit status - $?\n"
14
15 echon $?
16 echo -e "Exit status - $?\n"
17
18 rm unknownfile
19 echo -e "Exit status - $?\n"
20
21
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim file6.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash file6.sh
4
Exit status - 0

welcome
Exit status - 0

file6.sh: line 9: hello: command not found
Exit status - 127

Sunday 22 January 2023 10:38:36 PM IST
Exit status - 0

file6.sh: line 15: echon: command not found
Exit status - 127

rm: cannot remove 'unknownfile': No such file or directory
Exit status - 1
```

```
  1 #if else
  2 # script to delete file
  3
  4 a=foo
  5 touch $a
  6 if rm $a
  7 then
  8 echo -e "File $a deleted."
  9 fi
~
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim if_else.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash if_else.sh
File foo deleted.
```

```bash
 1  #if else
 2  #to check entered number is positive or negative
 3
 4  a=23
 5  b=424
 6  echo $z
 7  if [ $# -eq 0 ]
 8  then
 9  echo "$0 : You must give/supply one integers"
10  exit 1
11  fi
12
13  if test $1 -gt 0
14  then
15  echo "$1 number is positive"
16  else
17  echo "$1 number is negative"
18  fi
~
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim if_else1.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash if_else1.sh 2

2 number is positive
aman2003@Aman-Sayyad:~/Documents/DTL$ 
```

```bash
 1  #nested if else
 2
 3  osch=0
 4
 5  echo "1. Unix (Sun os)"
 6  echo "2. Linux (Red Hat)"
 7  echo -n "Select your os choice [1 or 2]: "
 8  read osch
 9
10  if [ $osch -eq 1 ] ; then
11          echo "You Pick up Unix (Sun os)"
12  else
13          if [ $osch -eq 2 ] ; then
14                  echo "You pick up Linux (Red Hat)"
15          else
16                  echo "What you don't like Unix/Linux OS."
17          fi
18  fi
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim nested_if.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash nested_if.sh
1. Unix (Sun os)
2. Linux (Red Hat)
Select your os choice [1 or 2]: 1
You Pick up Unix (Sun os)
```

```
1 # for loop
2
3 for i in 1 2 3 4 5
4 do
5 echo "Welcome $i times"
6 done
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim testfor.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash testfor.sh
Welcome 1 times
Welcome 2 times
Welcome 3 times
Welcome 4 times
Welcome 5 times
```

```
 1 # for loop
 2
 3 for i in 1 2 3 4 5
 4 do
 5 echo "Welcome $i times"
 6 done
 7
 8 echo -e "\nOther way\n"
 9 for (( i=0 ; i<=5 ; i++ ))
10 do
11         echo "Welcome $i times"
12 done
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim testfor.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash testfor.sh
Welcome 1 times
Welcome 2 times
Welcome 3 times
Welcome 4 times
Welcome 5 times

Other way

Welcome 0 times
Welcome 1 times
Welcome 2 times
Welcome 3 times
Welcome 4 times
Welcome 5 times
```

```
 1 #nested for loop
 2
 3 for (( i = 1; i <= 5; i++))
 4 do
 5         for(( j = 1; j <= 5; j++))
 6         do
 7                 echo -n "$i "
 8         done
 9
10         echo ""
11 done
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim nested_for.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash nested_for.sh
1 1 1 1 1
2 2 2 2 2
3 3 3 3 3
4 4 4 4 4
5 5 5 5 5
```

```bash
 1 #while loop
 2 #  table of number entered
 3
 4 if [ $# -eq 0 ]
 5 then
 6         echo "Error - Number missing from command line argument"
 7         echo "Syntax: $0 number"
 8         echo "Use to print multiplication table for given number"
 9 fi
10
11 n=$1
12 i=1
13 while [ $i -le 10 ]
14 do
15         echo "$n x $i = `expr $n \* $n`"
16         i=`expr $i + 1`
17 done
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim while.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash while.sh 4
4 x 1 = 16
4 x 2 = 16
4 x 3 = 16
4 x 4 = 16
4 x 5 = 16
4 x 6 = 16
4 x 7 = 16
4 x 8 = 16
4 x 9 = 16
4 x 10 = 16
```

```bash
 1 #case
 2
 3 if [ $# -eq 0 ]
 4 then
 5         echo "Enter the vehicle name"
 6         echo "Syntax: $0 vehicle_name"
 7 elif [ -z $1 ]
 8 then
 9         echo "Unknown vehicle"
10 else
11         rental=$1
12 fi
13
14 case $rental in
15         "car") echo "For $rental Rs.20 per k/m";;
16         "van") echo "For $rental Rs.10 per k/m";;
17         "jeep") echo "For $rental Rs.5 per k/m";;
18         "bicycle") echo "For $rental 20 paise per k/m";;
19         *) echo "Sorry, I can get a $rental for you";;
20 esac
21
```

```
aman2003@Aman-Sayyad:~/Documents/DTL$ vim case.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash case.sh
Enter the vehicle name
Syntax: case.sh vehicle_name
Sorry, I can get a  for you
aman2003@Aman-Sayyad:~/Documents/DTL$ bash case.sh vehicle
Sorry, I can get a vehicle for you
aman2003@Aman-Sayyad:~/Documents/DTL$ vim case.sh
aman2003@Aman-Sayyad:~/Documents/DTL$ bash case.sh van
For van Rs.10 per k/m
aman2003@Aman-Sayyad:~/Documents/DTL$ vim case.sh
```