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Year AY 23-24 Subject Title: Operating Systems Lab

EXPERIMENT No: 5 Assignment No: 7 TITLE: Conditional Statement

HATCH					
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	Experiment - 5				
	Name Sathriki Budhia PRN: 23070122186				
	Semester: IV Year: AY 23-24				
	Subject title: Os Lato				
	Experiment - 5				
	Hardware:				
	Computer running a Linux operating System, memory and disk				
	Mace, tor				
	- Software				
	Linux Operating System, Shell Interpreter, virtual lox				
	70				
	Theory				
	If atalement: It continues the service of the service of				
	If statement: It evaluates the specified condition. If the condition evaluates to true, the associated the code block enclosed between				
	then' and 'f' is executed. The condition is written inside				
	bquare brackets "[1'.				
	Syntax: if [condition]; then				
	# code to be executed if condition is true.				
	£				
	if -close photoment The "if-close" statement provides an alternative				
	code block to excecute if the condition in the "if statement				
	evaluates to false. If the condition is true, the code block after then'				
	is executed, otherwise the code after else is executed				
	if [condition]; then				
	# code to be executed if condition is true.				
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Aim: Implement shell script to demonstrate conditional statements

Learning Outcomes: 1. To understand the conditional statements

2. To Demonstrate the shell script to demonstrate conditional statements using Linux command.

Hardware/Software:

Theory:

Theory:	
	clac
	# code black to execute if condition false
	& STEELER OF CONDITION JORGE
	if else elif else ti statement (else if ladder)
	The "if elif cloe" statement allows testing multiple conditions
	Acquentially. It starts with an "I' to be a start matters
	Acquentially. It starts with an 'if statement, followed by zero
•	or more 'clif' statements, and ends with an optional 'clipe'
	statement. Each condition is evaluated in order, and the
	corresponding code black is executed for the first true condition
	syntax: if [condition 1]; then
	# code block to executed if condition I is true
	elif [candi bion 2]; then
	# code block to execute if conditions is true
	elae
	# code block to execute if all conditions are false
	5
•	
	if then else if the (nested): It allows conditional structures
	within other conditional structures. The inner "if" statement
	is evaluated only if the outer "if statements condition is
	true. This enables more complex decision - making by evaluating
	conditions within conditions.
	Syntax if [condition 1]; then
98121	if [condition 2]; then
	# code block to execute if both anditions are true
	5
	cloc
R. COL	# code to be executed if condition 1 is false
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Program: softcopy

- a) Shell script to print whether the number entered by the user is even or odd
- b) Shell script to print the largest of three numbers

```
1 #odd or even
 2 echo "Enter a number"
 3 read n
 4 if [ $n -eq 0 ]
 5 then
 6 echo "neither odd nor even"
 7 elif [ 'expr $n % 2' -eq 0 ]
 8 then
9 echo "even"
10 else
11 echo "odd"
12 ft
13 echo " "
14
15 #largest of 3 numbers
16 echo "Enter 3 numbers"
17 read a
18 read b
19 read c
20 if [ $a -ge $b ]
21 then
22 if [ $a -ge $c ]
23 then
24 echo "$a is the greatest number"
25 else
26 echo "$c is the greatest number"
27 fi
28 else
29 if [ $b -ge $c ]
30 then
31 echo "$b is the greatest number"
32 else
33 echo "$c is the greatest number"
34 fi
35 ft
36 echo " "
```

```
1 #odd or even
             2 echo "Enter a number"
             3 read n
             4 if [ $n -eq 0 ]
             5 then
             6 echo "neither odd nor even"
             7 elif [ 'expr $n % 2' -eq 0 ]
             8 then
             9 echo "even"
            10 else
            11 echo "odd"
            12 ft
            13 echo " "
            14
            15 #largest of 3 numbers
            16 echo "Enter 3 numbers"
            17 read a
            18 read b
            19 read c
            20 if [ $a -ge $b ]
            21 then
            22 if [ $a -ge $c ]
            23 then
            24 echo "$a is the greatest number"
38 #leap year or not
39 echo "Enter a year:"
40 read y
42 if [ $((y % 4)) -eq 0 ] && [ $((y % 100)) -ne 0 ]; then
      echo "$y is a leap year.
44 elif [ $((y % 400)) -eq 0 ]; then
       echo "$y is a leap year."
       echo "$y is not a leap year."
51 echo "Enter balance: "
                                                                        not
52 read bal
53 38 #leap year or not
54 e39 echo "Enter a year:"
55 r40 read y
57 142 if [ $((y % 4)) -eq 0 ] && [ $((y % 100)) -ne 0 ]; then
         echo "$y is a leap year.
59 e 44 elif [ $((y % 400)) -eq 0 ]; then
         echo "$y is a leap year."
   46 else
          echo "$y is not a leap year."
62 48 ft
64 50 #tax
65 51 echo "Enter balance: "
66 52 read bal
68 54 echo "Enter withdrawal: "
69 55 read wd
                                                                        d) Shell
                                                                        script to
71 57 if (( wd > bal )); then
          echo "Insufficient balance"
   59 else
```

41

43

45

46 else 47

50 #tax

56 41

58 43

61 47

63 49

67 53

70 56

72

73 74 460

58

tax=0

60

45

48 ft 49

Steps to execute the program: Create a shell script file using text editor like 'gedit'	nditions:
Write the code with proper spacing in it and soveit with sh	hdrawal
Open a terminal window on your system. Use 'cd' command to unwegate to the directory whose	ax as 4% of
Use book command to execute your file.	ıdrawal
cg tash at eresh.	ent balance
Conclusion:	
for making decisions based on conditions. These constructs.	
ranging from simple "if" statements to nested structures, enable precise control over script execution. Understanding their	
syntax allows developes to create efficient and adaptable scripts to meet various requirements effectively.	

Output:

```
Steps to execute the program:

Create a Shell script file using text editor like 'gedit'

Write the code with proper spacing in it and soveit with sh.

Open a terminal window an your system.

Use 'cd' command to wavegate to the directory whore the shell script file is located.

Use bash command to execute your file.

Go tash abe eresh.

Conclusion:

Conditional statements are essential in shell scripting for making decisions based on conditions. These constructs ranging from simple 'if' statements to nested structures, enable precise control over script execution. Understanding their syntax allows developed to create efficient and adaptable scripts to meet various requirements effectively.
```

```
user@satviki:~/Documents$ bash exp5.sh
Enter a number
even
Enter 3 numbers
5
5 is the greatest number
Enter a year:
2004
2004 is a leap year.
Enter balance:
5000
Enter withdrawal:
1000
Amount withdrawn: 1000
Tax deducted: 30
Amount withdrawn after tax: 970
```

Conclusion: assessment schemes.

Attendance	Discipline	Short oral	Correctness Timely of Lab	Total Signature marks	
			completion Report of Lab Report	of Teache with Date	er