**Zobia Nasim CS-22031**

**LAB SESSION 10**

**QUESTION 01** What test command should be used to test that /usr/bin is

a directory or a file?\_

test -d /usr/bin && echo "/usr/bin is a directory" || echo "/usr/bin is not a directory"

**OUTPUT:**

/usr/bin is a directory

**QUESTION 02** Write a script that takes two strings as input compares them and depending upon the results of the comparison prints the results.

#!/bin/bash

echo "Enter the first string: " read str1 echo "Enter the second string: " read str2 if [ "$str1" == "$str2" ]; then

echo "Strings are equal." else

echo "Strings are not equal." fi

**OUTPUT**

Enter the first string: 4

Enter the second string: 5

Strings are not equal.

**QUESTION 03** Write a script that takes a number (parameter) from 1-3 as input and uses case to display the name of corresponding month.

#!/bin/bash

echo "Enter a number (1-3) for the month: " read month case $month in

1) echo "January" ;;

2) echo "February" ;;

3) echo "March" ;;

echo "Invalid choice. Please enter a number between 1 and 3." ;

esac

**OUTPUT**

Enter a number (1-3) for the month:

3

March

**QUESTION 04.** Write a script that calculates the average of all even

numbers less than or equal to your roll number and prints the result.

roll\_number=001 sum=0

count=0

for ((i=2; i<=$roll\_number; i+=2)); do sum=$((sum + i))

count=$((count + 1))

done

average=$((sum / count))

echo "Average of even numbers up to 001: $average"

**OUTPUT**

00.

**QUESTION 05**. Write a function that displays the name of the week days

starting from Sunday if the user passes a day number. If a number provided is not between 1 and 7 an error message is displayed.

#!/bin/bash

display\_week\_day() { day\_number=$1 case $day\_number in

1)echo "Sunday" ;;

2) echo "Monday" ;;

3) echo "Tuesday" ;;

4) echo "Wednesday" ;;

5) echo "Thursday" ;

; 6) echo "Friday" ;;

7) echo "Saturday" ;; \*)

echo "Error: Invalid day number. Enter a number between 1 and 7." ;; esac "

**OUTPUT**

Enter a day number (1-7):

1

Sunday

**QUESTION 06** Write scripts that displays the parameters passed along with the parameter number using while and until statements.

echo "Using while loop:" count=1

while [ $# -gt 0 ]; do

echo "Parameter $count: $1" shift count=$((count + 1)) done

echo "Using until loop:" until [ $# -eq 0 ]; do

echo "Parameter $count: $1" shift count=$((count + 1))

done

**QUESTION 07** Write a script that displays the following menu: • Quotient • Remainder Depending on user’s choice, the result of division must be displayed and the loop breaks. The two numbers (dividend and divisor) must be supplied at runtime as command line arguments. If user chooses an item that is not in the list, he must be prompted to make proper choice and the loop must restart (or continue).

#!/bin/bash while true; do echo "Menu:"

echo "1. Quotient" echo "2. Remainder"

echo "3. Exit" read choice case $choice in 1)

echo "Enter dividend: " read dividend echo "Enter divisor: " read divisor

echo "Quotient: $((dividend / divisor))" ;;

2) echo "Enter dividend: " read dividend echo "Enter divisor: " read divisor

echo "Remainder: $((dividend % divisor))" ;;

3) echo "Exiting..." exit ;; \*)

echo "Invalid choice. Please choose a valid option." ;;

esac done

**OUTPUT:**

Menu:

1. Quotient

2. Remainder

3. Exit

3

Exiting..

**EXERCISE 01**

./irza.sh 5 3

5 is greater than or equal to 3.

**EXERCISE 02**

./irza.sh "Hello"

The string is not empty.

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**EXERCISE 03**

./irza.sh testfile.txt

The file homework.txt exists and is readable**. EXERCISE 04**

./irza.sh 15

15 is either less than 10 or greater than 20.

**EXERCISE 05**

./irza.sh Monday

It's the start of the week.

**EXERCISE 06**

./irza.sh 7

Multiplication table for 7:

7 x 1 = 7

7 x 2 = 14

7 x 3 = 21

7 x 4 = 28

7 x 5 = 35

7 x 6 = 42

7 x 7 = 49

7 x 8 = 56

7 x 9 = 63

7 x 10 = 70

**EXERCISE 07**

./irza.sh

Guess the number (1-10): 4

Try again!

Guess the number (1-10): 8

Try again!

Guess the number (1-10): 6

Congratulations! You guessed it right.

**EXERCISE 08**

./irza.sh -i irza.txt -o cut.txt

File conversion complete. Check cut.txt for the results.

**EXERCISE 09**

./irza.sh

1) Apple

2) Banana

3) Orange

4) Grapes

5) Exit

Choose a fruit: 2

You selected Banana. A great choice for a snack.

**EXERCISE 10**

./irza.sh

Simple Calculator

Sum: 8

Difference: 6

Product: 24