Week 10

1. Write a simple shell script to display "Hello, World!" on the terminal.

echo "Hello, World!"

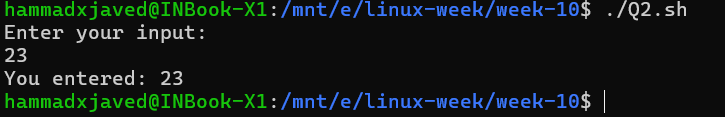


2. Write a shell script to accept user input and display it.

echo "Enter your input:"

read user\_input

echo "You entered: $user\_input"



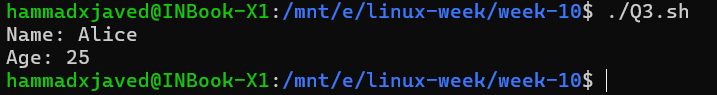
3. Write a shell script to demonstrate the use of variables.

name="Alice"

age=25

echo "Name: $name"

echo "Age: $age"



4. Write a shell script to perform basic arithmetic operations.

echo "Enter the first number:"

read num1

echo "Enter the second number:"

read num2

sum=$((num1 + num2))

diff=$((num1 - num2))

prod=$((num1 \* num2))

quot=$((num1 / num2))

mod=$((num1 % num2))

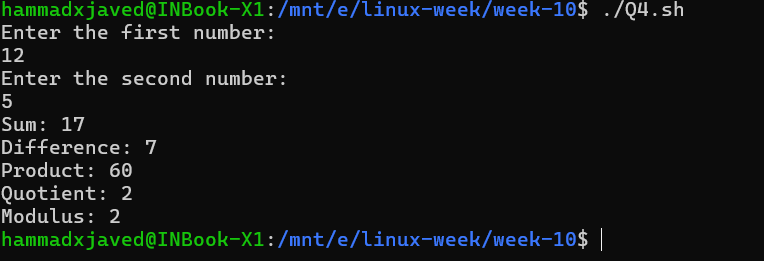
echo "Sum: $sum"

echo "Difference: $diff"

echo "Product: $prod"

echo "Quotient: $quot"

echo "Modulus: $mod"



5. Write a program in python to find word/s having maximum number of instances in a

given file and replace all its occurrences with “Aligarh”.

def replace\_max\_word(file\_path):

    with open(file\_path, 'r') as file:

        content = file.read().lower()

    word\_count = {}

    words = content.split()

    for word in words:

        word\_count[word] = word\_count.get(word, 0) + 1

    max\_word = max(word\_count, key=word\_count.get)

    print(f"Most frequent word: {max\_word} (occurrences: {word\_count[max\_word]})")

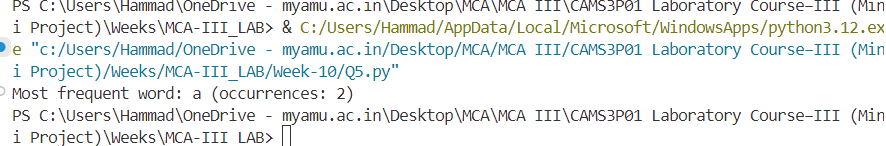
    updated\_content = content.replace(max\_word+' ', 'Aligarh ')

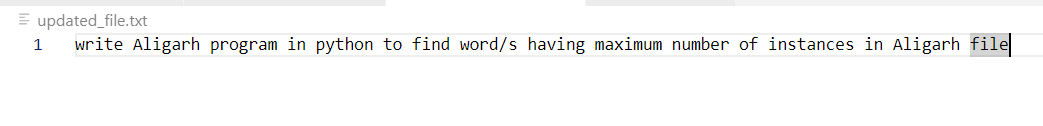
    updated\_content = content.replace(' '+max\_word, ' Aligarh')

    with open('updated\_file.txt', 'w') as file:

        file.write(updated\_content)

replace\_max\_word('example.txt')





6. Consider two files that contain information about Employees and Departments in the following parameters: Employee (Name, EId, Salary, DID), Department (DID, DName, DLocation). Write a Python program to merge the content of both the file in following format.: Emp\_Dep(Ename, Eid, Esalary, EDID, DName,Dlocation) (Note: Merging should follow the condition-DID of Employee file should be equal to Department ID of department file)

import pandas as pd

employee\_df = pd.read\_csv('Week-10\employees.csv')

department\_df = pd.read\_csv('Week-10\departments.csv')

merged\_df = pd.merge(employee\_df, department\_df, on='DID', how='inner')

merged\_df = merged\_df.rename(columns={

    'Name': 'Ename',

    'EId': 'Eid',

    'Salary': 'Esalary',

    'DID': 'EDID',

    'DName': 'DName',

    'DLocation': 'DLocation'

})

print(merged\_df)

merged\_df.to\_csv('Emp\_Dep.csv', index=False)

