vcount=0;

ccount=0;

str="My name is Shakshi Yadav";

str=str.lower();

for i in range(0,len(str)):

if str[i]in ("a","e","i","o","u"):

vcount = vcount + 1;

elif (str[i]>="a" and str[i]<="z"):

ccount = ccount + 1;

print(" the total number of stings");

print(vcount);

print(ccount);

2……..def get\_matrix\_input(prompt):

print(prompt)

rows = int(input("Enter the number of rows: "))

cols = int(input("Enter the number of columns: "))

matrix = []

print("Enter the matrix elements row by row:")

for i in range(rows):

row = list(map(float, input().split()))

if len(row) != cols:

raise ValueError(f"Error: Expected {cols} columns, but got {len(row)}.")

matrix.append(row)

return np.array(matrix)

def matrix\_multiplication(matrix1, matrix2):

rows1, cols1 = matrix1.shape

rows2, cols2 = matrix2.shape

if cols1 != rows2:

print("Error: Matrices are not compatible for multiplication.")

return

result = np.dot(matrix1, matrix2)

print("Result of multiplication:")

print(result)

try:

matrix1 = get\_matrix\_input("Enter details for the first matrix:")

matrix2 = get\_matrix\_input("Enter details for the second matrix:")

matrix\_multiplication(matrix1, matrix2)

except ValueError as e:

print(e)

3…….def get\_list\_from\_input(prompt):

while True:

try:

user\_input = input(prompt)

integer\_list = list(map(int, user\_input.split()))

return integer\_list

except ValueError:

print("Invalid input. Please enter integers separated by spaces.")

def count\_common\_elements(list1, list2):

set1 = set(list1)

set2 = set(list2)

common\_elements = set1.intersection(set2)

return len(common\_elements)

list1 = get\_list\_from\_input("Enter the elements of the first list (space-separated integers): ")

list2 = get\_list\_from\_input("Enter the elements of the second list (space-separated integers): ")

common\_count = count\_common\_elements(list1, list2)

print(f"Number of common elements: {common\_count}")

4….def transpose\_matrix(matrix):

rows = len(matrix)

cols = len(matrix[0])

transpose = [[0 for \_ in range(rows)] for \_ in range(cols)]

for i in range(rows):

for j in range(cols):

transpose[j][i] = matrix[i][j]

return transpose

rows = int(input("Enter the number of rows: "))

cols = int(input("Enter the number of columns: "))

matrix = []

print("Enter the matrix elements:")

for i in range(rows):

row = []

for j in range(cols):

element = int(input(f"Enter element [{i}][{j}]: "))

row.append(element)

matrix.append(row)

transpose = transpose\_matrix(matrix)

print("Original Matrix:")

for row in matrix:

print(row)

print("\nTranspose Matrix:")

for row in transpose:

print(row)