## NAME: CHRIS-ODEH TOBECHUKWU OREOLUWA

## MATRIC NUMBER: 222470

## TITLE: AN ALGORITHM FOR PYTHON PROGRAM FOR GLOBAL TERRORISM PROBLEM

ALGORITHM

#Import required libraries

Import numpy as np

Import pandas as pd

Import matplotlib.pyplot as plt

This are libraries in python that help with data manipulations

#reading the file

The data from the txt file is read using pd.read\_csv(“terrorist.txt”,sep=”\t”, header = None, names = [“SN”,”Feature”,”Sum”, “SimilarityID”]).fillna(0) which is then assigned to a variable data.

The “\t” represents a tab space and it was used to separate the data been read.

The fillna is used to assign values to data with NaN values.

Print data

#this code splits the feature column of the data and then converts to integer

# Split and convert “Feature” column to integer

# Convert “Feature” column to string type

Set Data.Feature to convert\_to\_string(data.Feature)

# Split “Feature” column by comma and store the resulting list in “Feature1” column

Set Data.Feature1 to split\_by\_comma(data.Feature)

# Convert “Feature1” column to a dataframe

Set Values to dataframe(data.Feature1)

# Fill null values with 0

Set Values as fill\_null\_values(values, 0)

# Add prefix ‘Feature\_’ to each column in the dataframe

Set Values to add\_prefix(values, ‘Feature\_’)

# Convert values in dataframe to integer type

Set Values to convert\_to\_integer(values)

# Calculate sum of values in “Feature” column and add to “Sum” column

# Calculate sum of values in each row of “values” dataframe and store in “sum\_tab” column

Set Values[“sum\_tab”] to row\_sums(values)

# Store “sum\_tab” column in “sum\_feature” variable

Set Sum\_feature to values[“sum\_tab”]

# Add “sum\_feature” to “Sum” column in “data” dataframe

Set Data[“Sum”] to sum\_feature

# Print “data” dataframe

Print(data)

# Group data by “Feature” and “Sum” columns

Set Duplicate to group\_by(data, [‘Feature’, ‘Sum’])

# Create pivot table to record number of times a “Feature” and “Sum” are equal

# Create pivot table using ‘data’ dataframe, with ‘Feature’ and ‘Sum’ as the index and ‘size’ as the aggregation function

Set Pivot\_table to create\_pivot\_table(data, index=[‘Feature’, ‘Sum’], aggfunc=’size’)

# Convert pivot table to dataframe

Set Dataframe to convert\_to\_dataframe(pivot\_table)

# Reset index of dataframe

Set Dataframe to reset\_index(dataframe)

# Insert new column ‘SN’ at the beginning of the dataframe, with sequential values starting from 0

Set Dataframe to insert\_column(dataframe, 0, ‘SN’, value=range(0, len(dataframe)))

# Rename column 0 as ‘Ocurrence’

Dataframe = rename\_column(dataframe, 0, ‘Ocurrence’)

# Plot bar chart of “Ocurrence” column

Plot bar chart of values in “Ocurrence” column of repeat1

Set x-axis label to “SN”

Set y-axis label to “Ocurrence”

Set chart title to “Number of feature Occurrences”