Instituto Tecnologico de Monterrey

Maestría en Inteligencia Artificial Aplicada

Curso: Pruebas de Software y aseguramiento de la Calidad

Clave: TC4017.10

Profesor Títular: Dr. Gerardo Padilla Zárate

Profesora Asistente: Mtra. Viridiana Rodríguez González

Estudiante: Francisco Javier Ramírez Arias

Matrícula: A01316379

##Actividad: Actividad 4.2

##Ejercicios de Programación #1

##Descripción: Cálculo de estadísticas.

```python
## Esta linea nos permite guardar el codigo en
## un archivo físico que nombraremos computeStatistics

%%writefile computeStatistics.py

## Nos indica elinterprete que va a utilizar para
## Ejecutar el archivo, en este caso python3

#!/usr/bin/env python3

import sys     # Accesos a variables y funciones del interprete y del
sistema
import math    # Acceso a funciones matemáticas, indispensables para
estadísticas
import time    # Medición de tiempo de ejecución
```

```python
##Función que abre un archivo, lo recorre línea por línea, convierte
cada palabra
##en un número decimal. Si encuentra algo diferente a un número, lo
ignora y avisa
##al usuario en lugar deterner el programa.

##Carga y valida datos numericos desde un archivo de texto
def read_numbers_from_file(file_path):
    numbers = []

    try:
        with open(file_path, "r", encoding="utf-8") as file:
            for line_number, line in enumerate(file, start=1):
                value = line.strip()
                if not value:
                    continue
                try:
                    numbers.append(float(value))
                except ValueError:
                    print(
                        f"Warning: Invalid data on line {line_number}
-> '{value}'"
                    )
    except FileNotFoundError:
        print(f"Error: File '{file_path}' not found.")
        sys.exit(1)

    return numbers

#Función para el cálculo del promedio
def compute_mean(numbers):
    total = 0.0                    #Inicializa la variable total
    for number in numbers:         #Recorrido de la lista
        total += number           #Suma el valor actual al total
acumulado
    return total / len(numbers)    #Regresa el promedio

#Función para el cálculo de la mediana
def compute_median(numbers):
    sorted_numbers = sorted(numbers)  #Ordena los elemenos de forma
ascendente
    count = len(sorted_numbers)       #Número de elementos en la lista
    mid = count // 2                  #Cálcula el punto medio

#Si el total de elementos es impar la mediana el número de en medio.
#Si es total de elementos es par, se toman dos valores centrales y se
promedia.
    if count % 2 == 0:
        return (sorted_numbers[mid - 1] + sorted_numbers[mid]) / 2
    return sorted_numbers[mid]   #Regresa el valor de la mediana
```

```python
#Cálculo de la moda
def compute_mode(numbers):
    #Diccionario para contar la frecuencia de cada número
    frequency = {}
    for number in numbers:
        if number in frequency:
            frequency[number] += 1
        else:
            frequency[number] = 1
    #Inicializacion de variables
    max_frequency = 0
    mode_value = None
    #Identifica el número con la frecuencia más alta
    for number, count in frequency.items():
        if count > max_frequency:
            max_frequency = count
            mode_value = number

    return mode_value     #Regresa el valor de la moda

#Cálculo de la varianza
def compute_variance(numbers, mean):
    total = 0.0                                 #Inicializa la variable
total
    for number in numbers:                      #Sumatoria de la diferencias
de cuadrado
        total += (number - mean) ** 2
    return total / len(numbers)             #División entre el número
total de elementos
                                            #Regresa la varianza
#Cálculo de la desviacion estandar
def compute_standard_deviation(variance):
    #Cálculo de la desviación estandar a partir de la raiz cuadrada de
la varianza
    return math.sqrt(variance)              #Regresa la desviación
estandar

#Escritura de los resultados en archivo *.txt
def write_results(results):
    #Se utiliza ´w´para sobreescribir el archivo y utf-8 para
compatibilidad
    with open("StatisticsResults.txt", "w", encoding="utf-8") as file:
        for key, value in results.items():
            file.write(f"{key}: {value}\n")     #Escribe cada
estadística y salto de línea

#Entrada principal del programa, el cual se encarga de manejar la
lógica o secuencia de
#ejecución del programa
```

```python
def main():

    start_time = time.perf_counter()  # Inicio de medición de tiempo

    # Manejo de argumentos del sistema
    if len(sys.argv) == 2:
        file_path = sys.argv[1]
    # Fallback para ejecución interactiva en Google Colab
    elif len(sys.argv) == 1:
        print("No input file provided as command-line argument. Using
default file 'TC1.txt'.")
        file_path = "TC2.txt" # Using an existing file from the
kernel's file system
    else:
        print("Usage: python computeStatistics.py <input_file>")
        sys.exit(1)
    # Lectura de los datos del archivo
    numbers = read_numbers_from_file(file_path)
    # Validación del contenido de los datos
    if not numbers:
        print("Error: No valid numeric data found or file was empty.")
        sys.exit(1)
    # LLamado de funciones, para obtener las estadísticas de los
datos.
    mean = compute_mean(numbers)                   # Cálculo de
promedio
    median = compute_median(numbers)               # Cálculo de
mediana
    mode = compute_mode(numbers)                   # Cálculo de moda
    variance = compute_variance(numbers, mean)     # Cálculo de
varianza
    std_dev = compute_standard_deviation(variance) # Cálculo de
desviación estandar


    end_time = time.perf_counter()          # Fin de medición
    elapsed_time = end_time - start_time    # Tiempo total

    # Las estadisticas las colocamos en un diccionario, para su
respectiva impresión
    results = {
        "Count": len(numbers),
        "Mean": mean,
        "Median": median,
        "Mode": mode,
        "Variance": variance,
        "Standard Deviation": std_dev,
        "Execution Time (seconds)": elapsed_time,
    }
    # Impresión de los resultados en consola
```

```
    for key, value in results.items():
        print(f"{key}: {value}")
    # Escritura de los datos en archivo
    write_results(results)


# Asegura que el script solo se ejecuta si se llama directamente
# y no se importa como módulo en otro archivo.
if __name__ == "__main__":
    main()
```
```
Overwriting computeStatistics.py
```

Estadísticas del archivo TC1.txt

```
!python computeStatistics.py TC1.txt

Warning: Invalid data on line 400 -> '405s'
Count: 399
Mean: 241.91228070175438
Median: 239.0
Mode: 393.0
Variance: 21086.30558853275
Standard Deviation: 145.21124470416453
Execution Time (seconds): 0.0003251499997531937
```

Estadísticas del archivo TC2.txt

```
!python computeStatistics.py TC2.txt

Count: 1977
Mean: 250.7840161861406
Median: 247.0
Mode: 230.0
Variance: 20785.369132479238
Standard Deviation: 144.17131868884059
Execution Time (seconds): 0.001116120000006049
```

Estadísticas del archivo TC3.txt

```
!python computeStatistics.py TC3.txt

Count: 12624
Mean: 249.77621989860583
Median: 249.0
Mode: 94.0
Variance: 21117.27747316329
Standard Deviation: 145.31784980917962
Execution Time (seconds): 0.010451209000166273
```

Estadísticas del archivo TC4.txt

```
!python computeStatistics.py TC4.txt

Count: 12624
Mean: 149.00267347908746
Median: 147.75
Mode: 123.75
Variance: 17007.920843018837
Standard Deviation: 130.41441961308894
Execution Time (seconds): 0.006751970000095753
```

Estadísticas del archivo TC5.txt

```
!python computeStatistics.py TC5.txt

Warning: Invalid data on line 5 -> 'ABA'
Warning: Invalid data on line 155 -> '23,45'
Warning: Invalid data on line 232 -> '11;54'
Warning: Invalid data on line 239 -> 'll'
Count: 307
Mean: 241.49511400651465
Median: 241.0
Mode: 393.0
Variance: 21160.021963097748
Standard Deviation: 145.46484786056646
Execution Time (seconds): 0.0003784900000278465
```

Estadísticas del archivo TC6.txt

```
!python computeStatistics.py TC6.txt

Count: 3000
Mean: 1.8790659927977473e+20
Median: 1.88008049965543e+20
Mode: 1.27620004531949e+20
Variance: 1.1530904699530647e+40
Standard Deviation: 1.0738205017381e+20
Execution Time (seconds): 0.0018766200000754907
```

Estadísticas del archivo TC7.txt

```
!python computeStatistics.py TC7.txt

Warning: Invalid data on line 183 -> 'ABBA'
Warning: Invalid data on line 229 -> 'ERROR'
Count: 12767
Mean: 2.474673954997149e+20
Median: 2.4664097307429e+20
Mode: 1.57638329490099e+20
```

```
Variance: 2.0910793147136484e+40
Standard Deviation: 1.4460564700984703e+20
Execution Time (seconds): 0.007965049999711482
```

Instalación de Pylint

```
pip install pylint

Requirement already satisfied: pylint in
/usr/local/lib/python3.12/dist-packages (4.0.4)
Requirement already satisfied: astroid<=4.1.dev0,>=4.0.2 in
/usr/local/lib/python3.12/dist-packages (from pylint) (4.0.3)
Requirement already satisfied: dill>=0.3.6 in
/usr/local/lib/python3.12/dist-packages (from pylint) (0.3.8)
Requirement already satisfied: isort!=5.13,<8,>=5 in
/usr/local/lib/python3.12/dist-packages (from pylint) (7.0.0)
Requirement already satisfied: mccabe<0.8,>=0.6 in
/usr/local/lib/python3.12/dist-packages (from pylint) (0.7.0)
Requirement already satisfied: platformdirs>=2.2 in
/usr/local/lib/python3.12/dist-packages (from pylint) (4.5.1)
Requirement already satisfied: tomlkit>=0.10.1 in
/usr/local/lib/python3.12/dist-packages (from pylint) (0.13.3)
```

#Análisis del Código

```
!pylint computeStatistics.py

************* Module computeStatistics
computeStatistics.py:98:0: C0303: Trailing whitespace (trailing-
whitespace)
computeStatistics.py:124:0: C0303: Trailing whitespace (trailing-
whitespace)
computeStatistics.py:1:0: C0114: Missing module docstring (missing-
module-docstring)
computeStatistics.py:1:0: C0103: Module name "computeStatistics"
doesn't conform to snake_case naming style (invalid-name)
computeStatistics.py:16:0: C0116: Missing function or method docstring
(missing-function-docstring)
computeStatistics.py:38:0: C0116: Missing function or method docstring
(missing-function-docstring)
computeStatistics.py:45:0: C0116: Missing function or method docstring
(missing-function-docstring)
computeStatistics.py:57:0: C0116: Missing function or method docstring
(missing-function-docstring)
computeStatistics.py:77:0: C0116: Missing function or method docstring
(missing-function-docstring)
computeStatistics.py:84:0: C0116: Missing function or method docstring
(missing-function-docstring)
```

```
computeStatistics.py:89:0: C0116: Missing function or method docstring
(missing-function-docstring)
computeStatistics.py:97:0: C0116: Missing function or method docstring
(missing-function-docstring)

------------------------------------------------------------------
Your code has been rated at 8.52/10 (previous run: 8.52/10, +0.00)
```

#Código Mejorado

```python
## Esta linea nos permite guardar el codigo en
## un archivo físico que nombraremos computeStatistics

%%writefile computeStatistics.py

## Nos indica elinterprete que va a utilizar para
## Ejecutar el archivo, en este caso python3

#!/usr/bin/env python3

"""
Programa para el cálculo de estadísticas desde archivos de texto.

Este script procesa datos numéricos para obtener estadísticas como la
media,
mediana, moda, varianza y desviación estándar, cumpliendo con los
estándares
de limpieza y documentación de PEP 8. Los datos son obtenidos de
archivos *.txt.
"""

import sys    # Accesos a variables y funciones del interprete y del
sistema
import math   # Acceso a funciones matemáticas, indispensables para
estadísticas
import time   # Medición de tiempo de ejecución

##Función que abre un archivo, lo recorre línea por línea, convierte
cada palabra
##en un número decimal. Si encuentra algo diferente a un número, lo
ignora y avisa
##al usuario en lugar deterner el programa.

##Carga y valida datos numericos desde un archivo de texto
def read_numbers_from_file(file_path):
    """
    Carga y valida datos numéricos desde un archivo de texto.
    """
    numbers = []
```

```python
    try:
        with open(file_path, "r", encoding="utf-8") as file:
            for line_number, line in enumerate(file, start=1):
                value = line.strip()
                if not value:
                    continue
                try:
                    numbers.append(float(value))
                except ValueError:
                    print(
                        f"Warning: Invalid data on line {line_number}
-> '{value}'"
                    )
    except FileNotFoundError:
        print(f"Error: File '{file_path}' not found.")
        sys.exit(1)

    return numbers

#Definición de la función para el cálculo del promedio
def compute_mean(numbers):
    """
    Calcula el promedio de una lista de valores númericos.
    """
    total = 0.0                     #Inicializa la variable total
    for number in numbers:          #Recorrido de la lista
        total += number            #Suma el valor actual al total
acumulado
    return total / len(numbers)    #Regresa el promedio

#Función para el cálculo de la mediana
def compute_median(numbers):
    """
    Calcula la mediana de una lista de valores númericos.
    """
    sorted_numbers = sorted(numbers)  #Ordena los elemenos de forma
ascendente
    count = len(sorted_numbers)       #Número de elementos en la lista
    mid = count // 2                  #Cálcula el punto medio

#Si el total de elementos es impar la mediana el número de en medio.
#Si es total de elementos es par, se toman dos valores centrales y se
promedia.
    if count % 2 == 0:
        return (sorted_numbers[mid - 1] + sorted_numbers[mid]) / 2
    return sorted_numbers[mid]    #Regresa el valor de la mediana

#Cálculo de la moda
def compute_mode(numbers):
```

```python
    """
    Calcula la moda de una lista de valores númericos.
    """
    #Diccionario para contar la frecuencia de cada número
    frequency = {}
    for number in numbers:
        if number in frequency:
            frequency[number] += 1
        else:
            frequency[number] = 1
    #Inicializacion de variables
    max_frequency = 0
    mode_value = None
    #Identifica el número con la frecuencia más alta
    for number, count in frequency.items():
        if count > max_frequency:
            max_frequency = count
            mode_value = number

    return mode_value     #Regresa el valor de la moda

#Cálculo de la varianza
def compute_variance(numbers, mean):
    """
    Calcula la varianza de una lista de valores númericos.
    """
    total = 0.0                              #Inicializa la variable
total
    for number in numbers:                   #Sumatoria de la diferencias
de cuadrado
        total += (number - mean) ** 2
    return total / len(numbers)          #División entre el número
total de elementos
                                             #Regresa la varianza
#Cálculo de la desviacion estandar
def compute_standard_deviation(variance):
    """
    Calcula la desviación estandar de una lista de valores númericos.
    """
    #Cálculo de la desviación estandar a partir de la raiz cuadrada de
la varianza
    return math.sqrt(variance)           #Regresa la desviación
estandar

#Escritura de los resultados en archivo *.txt
def write_results(results):
    """
    Escribe los resultados en un archivo de texto.
    """
    #Se utiliza ´w´para sobreescribir el archivo y utf-8 para
```

```python
compatibilidad
    with open("StatisticsResults.txt", "w", encoding="utf-8") as file:
        for key, value in results.items():
            file.write(f"{key}: {value}\n")     #Escribe cada
estadística y salto de línea

#Entrada principal del programa, el cual se encarga de manejar la
lógica o secuencia de
#ejecución del programa
def main():
    """
    Función principal del programa.
    """
    start_time = time.perf_counter()  # Inicio de medición de tiempo

    # Manejo de argumentos del sistema
    if len(sys.argv) != 2:
        print("Usage: python computeStatistics.py <input_file>")
        sys.exit(1)

    file_path = sys.argv[1]
    numbers = read_numbers_from_file(file_path)

    # Validación del contenido de los datos
    if not numbers:
        print("Error: No valid numeric data found or file was empty.")
        sys.exit(1)

    # LLamado de funciones, para obtener las estadísticas de los
datos.
    mean = compute_mean(numbers)                    # Cálculo de
promedio
    median = compute_median(numbers)                # Cálculo de
mediana
    mode = compute_mode(numbers)                    # Cálculo de moda
    variance = compute_variance(numbers, mean)      # Cálculo de
varianza
    std_dev = compute_standard_deviation(variance)  # Cálculo de
desviación estandar

    end_time = time.perf_counter()          # Fin de medición
    elapsed_time = end_time - start_time    # Tiempo total

    # Las estadisticas las colocamos en un diccionario, para su
respectiva impresión
    results = {
        "Count": len(numbers),
        "Mean": mean,
        "Median": median,
        "Mode": mode,
```

```python
        "Variance": variance,
        "Standard Deviation": std_dev,
        "Execution Time (seconds)": elapsed_time,
    }
    # Impresión de los resultados en consola
    for key, value in results.items():
        print(f"{key}: {value}")
    # Escritura de los datos en archivo
    write_results(results)


# Asegura que el script solo se ejecuta si se llama directamente
# y no se importa como módulo en otro archivo.
if __name__ == "__main__":
    main()
```

```
Overwriting computeStatistics.py

!python computeStatistics.py TC7.txt

Warning: Invalid data on line 183 -> 'ABBA'
Warning: Invalid data on line 229 -> 'ERROR'
Count: 12767
Mean: 2.474673954997149e+20
Median: 2.4664097307429e+20
Mode: 1.57638329490099e+20
Variance: 2.0910793147136484e+40
Standard Deviation: 1.4460564700984703e+20
Execution Time (seconds): 0.007784289000028366
```

#Análisis del codigo mejorado

```
!pylint computeStatistics.py

************* Module computeStatistics
computeStatistics.py:1:0: C0103: Module name "computeStatistics"
doesn't conform to snake_case naming style (invalid-name)


-----------------------------------------------------------------
Your code has been rated at 9.87/10 (previous run: 9.87/10, +0.00)
```

#Conclusiones

El desarrollo del programa de estadísticas descriptivas a partir de archivos de texto nos permitio manejar y recordar conceptos fundamentales de programación, análisis de datos y calidad de software. Con la implementación de algoritmos básicos se cálculo la media, mediana, moda, varianza, y desviación estándar sin depender de librerías estadísticas externas, esto no permite comprender los fundamentos matemáticos, así como los algoritmos que se encuentran involucrados.

El programa maneja erroores que permiten identficar y reportar datos invalidos sin interrumpir la ejecución, garantizando la continuidad del procesamiento. De igual manera el programa tiene la capacidad de procesar archivos con cientos o miles de registros, con lo que podemos mencionar de cierta forma que la solución es escalable y adecuada para diferentes tamaños de datos.

El poder contar con la medición del tiempo de ejecución y la norma PEP8, ahcen que nos encontremos un poco más apegados a un enfoque profesional en el desarrollo de software. Contamos con prácticas de código legible, mantenible, y evaluable bajo ciertpos criterios de calidad, en base a la librería **pylint**.

este ejemplo, presenta un problema aparentemente simple que puede abordarse con buenas prácticas de ingeniería de software, permitiendonos desarrollar competencias para el desarrollo de algoritmos o aplicaciones con mayor grado de complejidad, con un enfoque tanto en análisis de datos e inteligencia artificial.

Los requisitos que se mencionan en el ejercicio son los siguientes:

1. El programa será invocado desde la línea de comandos. El programa recibirá un archivo como parámetro. El archivo contendrá una lista de elementos (presumiblemente números). **Se cumple con el requisito**
2. El programa calculará todas las estadísticas descriptivas a partir de un archivo de números. Los resultados se mostrarán en pantallas y en un archivo llamado StatisticsResults.txt. Todos los cálculos deben realizarse utilizando los algoritmos básicos, no funciones, ni bibliotecas. Las estadisticas descriptivas son: media, mediana, moda, desviación estandar y varianza. **Se cumple con el requisito**
3. El programa incluira un mecanismo para gestionar datos no válidos en el archivo. Los errores se mostrarán en consola y la ejecución continuará. **Se cumple con el requisito**
4. El nombre del programa será computeStatistics.py. **Se cumple con el requisito**
5. El formato mínimo para invocar el programa será el suguiente: python computeStatistics.py fileWithdata.txt. **Se cumple con el requsito**
6. El programa gestionará archivos con un número de elementos que puede variar desde cientos hasta miles. **Se cumple con el requsito**
7. El programa debe incluir al final de la ejecución el tiempo transcurrido para la ejecución y el cálculo de los datos. Este número se incluira en el archivo de resultados y en la pantalla. **Se cumple con el requisito**
8. Cumplir con la norma PEP8. **Se cumple con el requisito**

Nota, correct pylint en el código sin mejoras nos envia el siguiente mensaje **"Module name "computeStatistics" doesn't conform to snake_case naming style (invalid-name)"**, al correr el código mejorado, el mensaje se mantiene, sin embargo decidimos dejar el nombre del programa como se menciona en el requisito número 4.

Los tiempos de ejecucion de los diferentes archivos los mostramos a continuación:

- TC1.txt ----->> 0.0003251 segundos
- TC2.txt ----->> 0.0011161 segundos
- TC3.txt ----->> 0.0104512 segundos
- TC4.txt ----->> 0.0067519 segundos

- TC5.txt ----->> 0.0003784 segundos
- TC6.txt ----->> 0.0018766 segundos
- TC7.txt ----->> 0.0079650 segundos

La calificación el primer código fue de 8.55/10, mientras que el código mejorado presenta una calificación de 9.87/10. La mejorá para está ocasión fue de 1.32 puntos, consideramos que es buena.

Instituto Tecnologico de Monterrey

Maestría en Inteligencia Artificial Aplicada

Curso: Pruebas de Software y aseguramiento de la Calidad

Clave: TC4017.10

Profesor Títular: Dr. Gerardo Padilla Zárate

Profesora Asistente: Mtra. Viridiana Rodríguez González

Estudiante: Francisco Javier Ramírez Arias

Matrícula: A01316379

##Actividad: Actividad 4.2

##Ejercicios de Programación #2

##Descripción: Convertidor de números decimales a binario y hexadecimal.

```python
## Esta linea nos permite guardar el codigo en
## un archivo físico que nombraremos computeStatistics

%%writefile convertNumbers.py

## Nos indica elinterprete que va a utilizar para
## Ejecutar el archivo, en este caso python3

#!/usr/bin/env python3

"""
convertNumbers.py

Conversión de números decimales de un archivo de texto a binario y
hexadecimal.
El programa es ejecutado de la línea de comando e imprime los
```

```python
resultados en la
pantalla y a un archivo nombrado ConvertionResults.txt.
"""

import sys
import time

## Definición de función
def read_numbers_from_file(file_path):
    """
    Lee los números del archivo de texto.
    """
    numbers = []

    try:
        with open(file_path, "r", encoding="utf-8") as file:
            for line_number, line in enumerate(file, start=1):
                value = line.strip()
                if not value:
                    continue
                try:
                    numbers.append(int(value))
                except ValueError:
                    print(
                        f"Warning: Invalid data on line {line_number}:
'{value}'"
                    )
    except FileNotFoundError:
        print(f"Error: File '{file_path}' not found.")
        sys.exit(1)

    return numbers    ## Regresa los números

## Definición de función
def decimal_to_binary(number):
    """
    Convierte un entero decimal a binario utilizando el complemento a
2
    a través de puros algoritmos y funciones básicas.
    """

    # Caso especial: cero
    if number == 0:
        return "0"

    # Determinar si es negativo
    is_negative = number < 0
    number = abs(number)

    # 1. Conversión decimal → binario (valor absoluto)
```

```python
    binary_digits = []
    temp = number

    while temp > 0:
        remainder = temp % 2
        binary_digits.append(str(remainder))
        temp //= 2

    binary_digits.reverse()
    binary_value = "".join(binary_digits)

    # Si es positivo, regresamos el binario directo
    if not is_negative:
        return binary_value

    # 2. Complemento a 2 para números negativos

    # Asegurar un bit extra para el signo
    bits = len(binary_value) + 1
    binary_value = binary_value.zfill(bits)

    # Invertir bits (complemento a 1)
    inverted = []
    for bit in binary_value:
        if bit == '0':
            inverted.append('1')
        else:
            inverted.append('0')

    # Sumar 1 (complemento a 2)
    carry = 1
    for i in range(len(inverted) - 1, -1, -1):
        if inverted[i] == '1' and carry == 1:
            inverted[i] = '0'
            carry = 1
        elif inverted[i] == '0' and carry == 1:
            inverted[i] = '1'
            carry = 0

    return "".join(inverted)

## Definición de función
def decimal_to_binary_and_hexadecimal(number):
    """
    Conversión de decimal a:
    - binarios (utiliza complemento a 2, si es negativo)
    - hexadecimal (de la representación binaria, )

    Regresa: (decimal, binario, hexadecimal)
    """
```

```python
hex_symbols = "0123456789ABCDEF"

# Caso especial
if number == 0:
    return 0, "0", "0"

# Conversión de decimal a binario
is_negative = number < 0
abs_number = abs(number)

# Conversión decimal → binario (valor absoluto)
binary_digits = []
temp = abs_number

while temp > 0:
    binary_digits.append(str(temp % 2))
    temp //= 2

binary_digits.reverse()
binary_value = "".join(binary_digits)

# Si es negativo, aplicar complemento a 2
if is_negative:
    # Agregar bit de signo
    bits = len(binary_value) + 1
    binary_value = binary_value.zfill(bits)

    # Complemento a 1
    inverted = []
    for bit in binary_value:
        inverted.append('1' if bit == '0' else '0')

    # Sumar 1 (complemento a 2)
    carry = 1
    for i in range(len(inverted) - 1, -1, -1):
        if inverted[i] == '1' and carry == 1:
            inverted[i] = '0'
        elif inverted[i] == '0' and carry == 1:
            inverted[i] = '1'
            carry = 0

    binary_value = "".join(inverted)

# Ajuste correcto de los bits
sign_bit = '1' if is_negative else '0'
while len(binary_value) % 4 != 0:
    binary_value = sign_bit + binary_value

# Conversión binario → hexadecimal
```

```python
    hex_digits = []

    for i in range(0, len(binary_value), 4):
        nibble = binary_value[i:i+4]
        value = 0
        for bit in nibble:
            value = value * 2 + int(bit)
        hex_digits.append(hex_symbols[value])

    hex_value = "".join(hex_digits)

    return number, binary_value, hex_value

## Definición de función
def write_results(output_lines_to_write):
    """
    Escribe los resultados en el archivo ConvertionResults.txt.
    """
    with open("ConvertionResults.txt", "w", encoding="utf-8") as file:
        for line in output_lines_to_write:
            file.write(line + "\n")

## Programa principal
def main():
    """
    Punto de entrada del programa.
    """
    start_time = time.perf_counter() # Inicialización del temporizador

    if len(sys.argv) != 2:
        print("Usage: python convertNumbers.py <input_file>")
        sys.exit(1)

    file_path = sys.argv[1]
    numbers = read_numbers_from_file(file_path)

    if not numbers:
        print("Error: No valid numeric data found.")
        sys.exit(1)

    output_lines = []
    output_lines.append("Decimal | Binary | Hexadecimal")
    output_lines.append("-" * 40)

    for number in numbers:
        dec, binary_value, hex_value = \
decimal_to_binary_and_hexadecimal(number)
        line = f"{dec} | {binary_value} | {hex_value}"
        output_lines.append(line)
        print(line)
```

```
    end_time = time.perf_counter()          # Finalización de
temporizador
    elapsed_time = end_time - start_time    # Tiempo de ejecución

    time_line = f"Execution Time (seconds): {elapsed_time}"
    output_lines.append("-" * 40)
    output_lines.append(time_line)

    print(time_line)
    write_results(output_lines)


if __name__ == "__main__":
    main()

Writing convertNumbers.py
```

Conversión de los datos del archivo TC1.txt

```
!python convertNumbers.py TC1.txt

6980368 | 01101010100000110001000 | 6A8310
5517055 | 01010100001011101111111 | 542EFF
1336159 | 00010100011000110101111 | 14635F
6750185 | 01100110111111111101001 | 66FFE9
1771937 | 00011011000010011010001 | 1B09A1
360952 | 0101100000111111000 | 581F8
5672561 | 01010110100011001110001 | 568E71
916583 | 11011111110001100111 | DFC67
2700138 | 00101001001100110110101 | 29336A
9645053 | 10010011001010111111101 | 932BFD
1181110 | 00010010000001011011011 | 1205B6
1492185 | 00010110110001001101100 | 16C4D9
4018595 | 00111101010100011010011 | 3D51A3
7654888 | 01110100110011011110100 | 74CDE8
7062453 | 01101011110000111011010 | 6BC3B5
2478010 | 00100101110011110111010 | 25CFBA
6134768 | 01011101100110111111000 | 5D9BF0
8420417 | 10000000111110001000001 | 807C41
2917489 | 00101100100001000110001 | 2C8471
3340773 | 00110010111100111100101 | 32F9E5
1115956 | 00010001000001100110100 | 110734
9172192 | 10001011111010011100000 | 8BF4E0
6271996 | 01011111011001111111100 | 5FB3FC
8686939 | 10000100100011010101101 | 848D5B
50986 | 1100011100101010 | C72A
9376410 | 10001111000100101001010 | 8F129A
```

```
5962327 |  0101101011111101001010111 |  5AFA57
7686891 |  0111010101001010111101011 |  754AEB
6615183 |  0110010011110000100011111 |  64F08F
1864844 |  0001110001110100100011100 |  1C748C
3329962 |  0011001011001111101011010 |  32CFAA
3942794 |  0011110000101001100010100 |  3C298A
2614836 |  0010011111100110001101000 |  27E634
7406772 |  0111000100000100101101000 |  7104B4
2384190 |  0010010001100001001111100 |  24613E
398347 |  01100001010000001011 |  6140B
8698503 |  1000010010111010100001110 |  84BA87
9551696 |  1001000110111111010100000 |  91BF50
1019556 |  1111100011101010010000 |  F8EA4
1677430 |  0001100110011000011101100 |  199876
3479629 |  0011010100011000010011010 |  35184D
9309008 |  1000111000001011010100000 |  8E0B50
5266170 |  0101000001011010111110100 |  505AFA
4094340 |  0011111001111001100001000 |  3E7984
1754055 |  0001101011000011110001110 |  1AC3C7
5861132 |  0101100101101111000011000 |  596F0C
4471329 |  0100010000111010001000010 |  443A21
8826052 |  1000011010101100110001000 |  86ACC4
7469325 |  0111000111111001000011010 |  71F90D
1973172 |  0001111000011011101101000 |  1E1BB4
53145 |  1100111110011001 |  CF99
3897508 |  0011101101111000101001000 |  3B78A4
7773386 |  0111011010011100110010100 |  769CCA
6089829 |  0101110011101100011001010 |  5CEC65
4223424 |  0100000001110001110000000 |  4071C0
9761752 |  1001010011110011110110000 |  94F3D8
7930799 |  0111100100000011101011110 |  7903AF
3597495 |  0011011011100100101101110 |  36E4B7
9302948 |  1000110111110011101001000 |  8DF3A4
2288712 |  0010001011101100010010000 |  22EC48
197187 |  0011000000100100001100 |  30243
5266939 |  0101000001011101111110110 |  505DFB
221545 |  0011011000010110100100 |  36169
7957027 |  0111100101101010001000110 |  796A23
3195361 |  0011000011000001111000010 |  30C1E1
7106269 |  0110110001101110110111010 |  6C6EDD
9633312 |  1001001011111110001000000 |  92FE20
9713704 |  1001010000111000001010000 |  943828
91925 |  00010110011100010101 |  16715
4418686 |  0100001101101100011111100 |  436C7E
9682250 |  1001001110111101010010100 |  93BD4A
2583824 |  0010011011011010001000010 |  276D10
4979126 |  0100101111111001101101100 |  4BF9B6
6280954 |  0101111111010110111110100 |  5FD6FA
1228610 |  0001001010111111010000100 |  12BF42
```

```
705518  | 10101100001111101110 | AC3EE
1017653 | 11111000011100110101 | F8735
500098  | 01111010000110000010 | 7A182
7210727 | 011011100000011011100111 | 6E06E7
4250898 | 010000001101110100010010 | 40DD12
4055028 | 001111011101111111110100 | 3DDFF4
2754240 | 001010100000011011000000 | 2A06C0
452999  | 01101110100110000111 | 6E987
6831458 | 011010000011110101100010 | 683D62
207636  | 00110010101100010100 | 32B14
7280635 | 011011110001011111111011 | 6F17FB
3308937 | 001100100111110110001001 | 327D89
4303570 | 010000011010101011010010 | 41AAD2
8375055 | 011111111100101100001111 | 7FCB0F
1457960 | 000101100011111100101000 | 163F28
5197625 | 010011110100111100111001 | 4F4F39
3144371 | 001011111111101010110011 | 2FFAB3
6674138 | 011001011101011011011010 | 65D6DA
2692106 | 001010010001010000001010 | 29140A
2276769 | 001000101011110110100001 | 22BDA1
1940971 | 000111011001110111101011 | 1D9DEB
3288264 | 001100100010110011001000 | 322CC8
4819803 | 010010011000101101011011 | 498B5B
9431005 | 100011111110011111011101 | 8FE7DD
3992019 | 001111001110100111010011 | 3CE9D3
8184782 | 011111001110001111001110 | 7CE3CE
2847975 | 001010110111010011100111 | 2B74E7
7891025 | 011110000110100001010001 | 786851
900082  | 11011011101111110010 | DBBF2
1831532 | 000110111111001001101100 | 1BF26C
8428253 | 100000001001101011011101 | 809ADD
2905752 | 001011000101011010011000 | 2C5698
9763121 | 100101001111100100110001 | 94F931
257890  | 00111101111101100010 | 3EF62
4699761 | 010001110110110011100001 | 47B671
359541  | 01010111110001110101 | 57C75
3446150 | 001101001001010110000110 | 349586
4246818 | 010000001100110100100010 | 40CD22
1848840 | 000111000011011000001000 | 1C3608
938480  | 11100101000111110000 | E51F0
227465  | 00110111100010001001 | 37889
3923488 | 001110111101111000100000 | 3BDE20
8915697 | 100010000000101011110001 | 880AF1
4309094 | 010000011100000001100110 | 41C066
3891251 | 001110110110000000110011 | 3B6033
8627956 | 100001110100110111110100 | 83A6F4
5884613 | 010110011100101011000101 | 59CAC5
1659318 | 000110010101000110110110 | 1951B6
1834855 | 000110111111111101100111 | 1BFF67
```

```
3386751 |  0011001110101101011111111 |  33AD7F
3000166 |  001011011100011101100110 |  2DC766
9135626 |  100010110110011000001010 |  8B660A
4869260 |  010010100100110010001100 |  4A4C8C
76550 |  000100101011000000110 |  12B06
432271 |  01101001100010001111 |  6988F
251028 |  00111101010010010100 |  3D494
7016218 |  011010110000111100011010 |  6B0F1A
6896099 |  011010010011100111100011 |  6939E3
8386350 |  011111111111011100101110 |  7FF72E
8637147 |  100000111100101011011011 |  83CADB
936705 |  111001001011000000001 |  E4B01
6602175 |  011001001011110110111111 |  64BDBF
1429181 |  000101011100111010111101 |  15CEBD
8395138 |  100000000001100110000010 |  801982
6132809 |  010111011001010001001001 |  5D9449
5936917 |  010110101001011100010101 |  5A9715
2878578 |  001010111110110001110010 |  2BEC72
158885 |  001001101100101001101 |  26CA5
2441957 |  001001010100001011100101 |  2542E5
5914794 |  010110100100000010101010 |  5A40AA
3999272 |  001111010000011000101000 |  3D0628
3142897 |  001011111111010011110001 |  2FF4F1
8151159 |  011111100011000000111011 |  7C6077
5147564 |  010011010001011101011100 |  4E8BAC
4595374 |  010001100001111010101110 |  461EAE
4234951 |  010000001001111011000111 |  409EC7
7880605 |  011110000011111110011101 |  783F9D
7009921 |  011010101111011010000001 |  6AF681
695580 |  101010011101000111100 |  A9D1C
7370443 |  011100000111011011001011 |  7076CB
7921729 |  011110001110000001000001 |  78E041
8419625 |  100000000111100100101001 |  807929
7024080 |  011010110010110111010000 |  6B2DD0
3905988 |  001110111001100111000100 |  3B99C4
1767599 |  000110101111000010101111 |  1AF8AF
935136 |  111001000100111100000 |  E44E0
635788 |  100110110011100011100 |  9B38C
8807719 |  100001100110010100100111 |  866527
317375 |  01001101011110111111 |  4D7BF
9975410 |  100110000011011001110010 |  983672
2727968 |  001010011010000000100000 |  29A020
7444399 |  011100011001011110101111 |  7197AF
4065675 |  001111100000100110001011 |  3E098B
9925720 |  100101110111010001011000 |  977458
2293633 |  001000101111111110000001 |  22FF81
7734826 |  011101100000011000101010 |  76062A
1065463 |  000100000100000111110111 |  1041F7
1105617 |  000100001101111011010001 |  10DED1
```

```
5325800 | 01010001010000111101000 | 5143E8
3822527 | 00111010010100111011111 | 3A53BF
5503858 | 01010011111101101110010 | 53FB72
9214055 | 10001100100110000110011  | 8C9867
6521769 | 01100011000001110101001 | 6383A9
7923796 | 01111000111010000101100 | 78E854
5250236 | 01010000001110010111100 | 501CBC
1083154 | 00010000100001110010010 | 108712
472141 | 0111001101000100110 | 7344D
9597454 | 10010010011001000001110 | 92720E
1581679 | 00011000010001001101111 | 18226F
656751 | 10100000010101101111 | A056F
345464 | 01010100010101111000 | 54578
4281218 | 01000001010100111000010 | 415382
6558883 | 01100100000101001010011 | 6414A3
3852986 | 00111010110010101011010 | 3ACABA
6263187 | 01011111001000110010011 | 5F9193
5828308 | 01011000111011101101100 | 58EED4
8058535 | 01111010111101101010011 | 7AF6A7
9035191 | 10001001110111011011011 | 89DDB7
7922103 | 01111000111000011011011 | 78E1B7
9366003 | 10001110111010011111011 | 8EE9F3
4555717 | 01000101100000111100101 | 4583C5
3526753 | 00110101110100000110001 | 35D061
3176815 | 00110000011110010110111 | 30796F
858440 | 11010001100101001000 | D1948
2250854 | 00100010010110001100110 | 225866
Execution Time (seconds): 0.00507847299999753
```

Conversión de los datos del archivo TC2.txt

```
!python convertNumbers.py TC2.txt

7116776 | 01101100100101111101000 | 6C97E8
1666340 | 00011001011011010100100 | 196D24
8886983 | 10000111100110101100011 | 879AC7
839365 | 11001100111011000101 | CCEC5
924280 | 11100001101001111000 | E1A78
1026310 | 11111010100100000110 | FA906
1615293 | 00011000101001011011101 | 18A5BD
1063875 | 00010000001110111000011 | 103BC3
679035 | 10100101100011111011 | A5C7B
5201970 | 01001111011000000110010 | 4F6032
593979 | 10010001000000111011 | 9103B
801371 | 11000011101001011011 | C3A5B
3796878 | 00111001111011111000110  | 39EF8E
7489201 | 01110010010001101011001  | 7246B1
9740020 | 10010100100111101111010100 | 949EF4
```

```
9128737 | 10001011010010110010001 | 8B4B21
5473463 | 01010011100001001011011 | 5384B7
8701957 | 10000100110010000000101 | 84C805
8238050 | 01111101101100111100010 | 7DB3E2
8679038 | 10000100011011001111110 | 846E7E
385912  | 0101111000110111000   | 5E378
5867340 | 01011001100001110100110 | 59874C
4894542 | 01001010101011110100111 | 4AAF4E
8999451 | 10001001010100100001101 | 89521B
4392535 | 01000011000001100101011 | 430657
2078131 | 00011111101101011011001 | 1FB5B3
3070124 | 00101110110110001010110 | 2ED8AC
7451998 | 01110001101101010101111 | 71B55E
5635510 | 01010101111111011011011 | 55FDB6
1233932 | 00010010110101000000110 | 12D40C
6089867 | 01011100111011001000101 | 5CEC8B
1792316 | 00011011010110010011110 | 1B593C
6298637 | 01100000000111000000110 | 601C0D
2408038 | 00100100101111100110011 | 24BE66
8510100 | 10000001110110101001010 | 81DA94
991581  | 1111001000010101110   | F215D
6455739 | 01100010100000011011101 | 6281BB
7829175 | 01110111011101101011011 | 7776B7
6328931 | 01100000100100100110001 | 609263
9982305 | 10011000010100010110000 | 985161
2292022 | 00100010111110010011011 | 22F936
1070496 | 00010000010101011010000 | 1055A0
8518360 | 10000001111110101101100 | 81FAD8
6378470 | 01100001010100111100011 | 6153E6
7756258 | 01110110010110011110001 | 7659E2
7111767 | 01101100100001000101011 | 6C8457
2685897 | 00101000111110111100100 | 28FBC9
617946  | 10010110110111011010  | 96DDA
246280  | 00111100010000010000  | 3C208
6075442 | 01011100101101000011001 | 5CB432
991323  | 1111001000000101101   | F205B
6754202 | 01100111000011111001101 | 670F9A
3103178 | 00101111010110011100101 | 2F59CA
3228842 | 00110001010001001010101 | 3144AA
6786623 | 01100111100011100011111 | 678E3F
5329085 | 01010001010100001011101 | 5150BD
2334647 | 00100011100111111011011 | 239FB7
7253396 | 01101110101011011001010 | 6EAD94
6516953 | 01100011011100001101100 | 6370D9
5972725 | 01011011001000101111010 | 5B22F5
5828037 | 01011000111011011100010 | 58EDC5
6642265 | 01100101010110100101100 | 655A59
2559699 | 00100111000011101101001 | 270ED3
6597631 | 01100100101010111111111 | 64ABFF
```

```
5826202 | 010110001110011010011010 | 58E69A
4642335 | 010001101101011000011111 | 46D61F
1862900 | 000111000110110011110100 | 1C6CF4
6039635 | 010111000010100001010011 | 5C2853
3358744 | 001100110100000000011000 | 334018
4965249 | 010010111100001110000001 | 4BC381
6621475 | 011001010000100100100011 | 650923
3336153 | 001100101110011111011001 | 32E7D9
1044743 | 111111110001000000111 | FF107
6201477 | 010111101010000010000101 | 5EA085
6297100 | 011000000001011000001100 | 60160C
885678 | 1101100000111010110 | D83AE
8546891 | 100000100110101001001011 | 826A4B
6683923 | 011001011111110100010011 | 65FD13
7064472 | 011010111100101110011000 | 6BCB98
3430021 | 001101000101011010000101 | 345685
9764122 | 100101001111110100011010 | 94FD1A
9958605 | 100101111111010011001101 | 97F4CD
1006022 | 11110101100111000110 | F59C6
5276496 | 010100001000001101010000 | 508350
8876232 | 100001110111000011001000 | 8770C8
3364648 | 001100110101011100101000 | 335728
3539979 | 001101100000010000001011 | 36040B
3003857 | 001011011101010111010001 | 2DD5D1
4481634 | 010001000110001001100010 | 446262
9035781 | 100010011110000000000101 | 89E005
3767021 | 001110010111101011101101 | 397AED
4993901 | 010011000011001101101101 | 4C336D
8698377 | 100001001011101000001001 | 84BA09
4626501 | 010001101001100001000101 | 469845
1755352 | 000110101100100011011000 | 1AC8D8
2755340 | 001010100000101100001100 | 2A0B0C
5150616 | 010011101001011110011000 | 4E9798
9345169 | 100011101001100010010001 | 8E9891
848948 | 1100111101000011010 0 | CF434
2708748 | 001010010101010100001100 | 29550C
8372451 | 011111111100000011100011 | 7FC0E3
3523015 | 001101011100000111000111 | 35C1C7
2624283 | 001010000000101100011011 | 280B1B
8795348 | 100001100011010011010100 | 8634D4
2318100 | 001000110101111100010100 | 235F14
4750861 | 010010000111111000001101 | 487E0D
3770597 | 001110011000100011100101 | 3988E5
1053352 | 000100000001001010101000 | 1012A8
833307 | 11001011011100011011 | CB71B
4632526 | 010001101010111111001110 | 46AFCE
2212917 | 001000011100010000110101 | 21C435
5053189 | 010011010001101100000101 | 4D1B05
412218 | 01100100101000111010 | 64A3A
```

```
4901564 | 010010101100101010111100 | 4ACABC
5094606 | 010011011011110011001110 | 4DBCCE
8070285 | 011110110010010010001101 | 7B248D
6847905 | 011010000111110110100001 | 687DA1
4311824 | 010000011100101100010000 | 41CB10
3009421 | 001011011110101110001101 | 2DEB8D
1629105 | 000110001101101110110001 | 18DBB1
8431899 | 100000001010100100011011 | 80A91B
7582456 | 011100111011001011111000 | 73B2F8
7332147 | 011011111110000100110011 | 6FE133
314183 | 01001100101101000111 | 4CB47
7632568 | 011101000111011010111000 | 7476B8
8161327 | 011111001000100000101111 | 7C882F
6961087 | 011010100011011110111111 | 6A37BF
6898282 | 011010010100001001101010 | 69426A
9749303 | 100101001100001100110111 | 94C337
4427419 | 010000111000111010011011 | 438E9B
4368829 | 010000101010100110111101 | 42A9BD
6439318 | 011000100100000110010110 | 624196
6473603 | 011000101100011110000011 | 62C783
6446249 | 011000100101110010101001 | 625CA9
9818836 | 100101011101001011010100 | 95D2D4
9438069 | 100100000000001101110101 | 900375
2809499 | 001010101101111010011011 | 2ADE9B
3460304 | 001101001100110011010000 | 34CCD0
8430904 | 100000001010010100111000 | 80A538
9774785 | 100101010010011011000001 | 9526C1
9560603 | 100100011110001000011011 | 91E21B
3440732 | 001101001000000001011100 | 34805C
7053263 | 011010111001111111001111 | 6B9FCF
287398 | 01000110001010100110 | 462A6
4043644 | 001111011011001101111100 | 3DB37C
2943820 | 001011001110101101001100 | 2CEB4C
9030962 | 100010011100110100110010 | 89CD32
7537540 | 011100110000001110000100 | 730384
7203657 | 011011011110101101001001 | 6DEB49
5639400 | 010101100000110011101000 | 560CE8
9448142 | 100100000010101011001110 | 902ACE
9954392 | 100101111110010001011000 | 97E458
2856859 | 001010111001011110011011 | 2B979B
1332118 | 000101000101001110010110 | 145396
6984725 | 011010101001010000010101 | 6A9415
1925762 | 000111010110001010000010 | 1D6282
2138171 | 001000001010000000111011 | 20A03B
347447 | 01010100110100110111 | 54D37
8839390 | 100001101110000011011110 | 86E0DE
3951652 | 001111000100110000100100 | 3C4C24
3755102 | 001110010100110001011110 | 394C5E
6867687 | 011010001100101011100111 | 68CAE7
```

```
4383175 | 01000010111000011100111 | 42E1C7
7125508 | 01101100101110100000100 | 6CBA04
7799732 | 01110111000000111011010 | 7703B4
8784156 | 10000110000010010001100 | 86091C
1372809 | 00010100111100101000100 | 14F289
1327984 | 00010100010000110110000 | 144370
9205087 | 10001100011101010101111 | 8C755F
6524241 | 01100011000110101010001 | 638D51
9316072 | 10001110001001101110100 | 8E26E8
127744 | 00011111001100000000 | 1F300
8388820 | 10000000000000011010100 | 8000D4
6883557 | 01101001000010001110010 | 6908E5
2291239 | 00100010111011000100111 | 22F627
3101270 | 00101111010100100101010110 | 2F5256
1382825 | 00010101000110011010100 | 1519A9
9873376 | 10010110101001111100000 | 96A7E0
6873500 | 01101000111000011001110 | 68E19C
8185634 | 01111100111001110010010 | 7CE722
2464786 | 00100101100111000010010 | 259C12
8387154 | 01111111111101001010010 | 7FFA52
5581444 | 01010101001010101010000100 | 552A84
8097911 | 01111011100100001110111 | 7B9077
8882527 | 10000111100010010101111 | 87895F
8941444 | 10001000011011111000100 | 886F84
4942703 | 01001011011010110110111 | 4B6B6F
101144 | 00011000101100011000 | 18B18
7471180 | 01110010000000001001100 | 72004C
1932131 | 00011101011110110110011 | 1D7B63
8052752 | 01111010110000000010000 | 7AE010
6359493 | 01100001000010011100101 | 6109C5
1967646 | 00011110000001100001110 | 1E061E
6575052 | 01100100010100111001100 | 6453CC
2323342 | 00100011011100111000110 | 23738E
6735760 | 01100110110001110010000 | 66C790
8895858 | 10000111101111010111010 | 87BD72
4238091 | 01000000101010110000101 | 40AB0B
7093069 | 01101100001110110100110 | 6C3B4D
39 | 00100111 | 27
Execution Time (seconds): 0.005159722000001921
```

Conversión de los datos del archivo TC3.txt

```
!python convertNumbers.py TC3.txt

-39 | 11011001 | D9
-36 | 11011100 | DC
8 | 1000 | 8
34 | 00100010 | 22
```

```
17 | 00010001 | 11
49 | 00110001 | 31
5 | 0101 | 5
39 | 00100111 | 27
0 | 0 | 0
33 | 00100001 | 21
12 | 1100 | C
-6 | 1010 | A
27 | 00011011 | 1B
-4 | 1100 | C
-38 | 11011010 | DA
26 | 00011010 | 1A
49 | 00110001 | 31
29 | 00011101 | 1D
42 | 00101010 | 2A
-16 | 11110000 | F0
-28 | 11100100 | E4
34 | 00100010 | 22
20 | 00010100 | 14
0 | 0 | 0
25 | 00011001 | 19
45 | 00101101 | 2D
3 | 0011 | 3
-46 | 11010010 | D2
-46 | 11010010 | D2
29 | 00011101 | 1D
33 | 00100001 | 21
29 | 00011101 | 1D
26 | 00011010 | 1A
-5 | 1011 | B
-36 | 11011100 | DC
12 | 1100 | C
45 | 00101101 | 2D
-50 | 11001110 | CE
0 | 0 | 0
-6 | 1010 | A
-39 | 11011001 | D9
35 | 00100011 | 23
26 | 00011010 | 1A
-35 | 11011101 | DD
-42 | 11010110 | D6
14 | 1110 | E
-3 | 1101 | D
22 | 00010110 | 16
-47 | 11010001 | D1
12 | 1100 | C
-17 | 11101111 | EF
-31 | 11100001 | E1
-25 | 11100111 | E7
```

```
-35 | 11011101 | DD
-18 | 11101110 | EE
14 | 1110 | E
37 | 00100101 | 25
-8 | 11111000 | F8
-41 | 11010111 | D7
-50 | 11001110 | CE
-9 | 11110111 | F7
2 | 0010 | 2
12 | 1100 | C
-39 | 11011001 | D9
-17 | 11101111 | EF
0 | 0 | 0
27 | 00011011 | 1B
28 | 00011100 | 1C
45 | 00101101 | 2D
-44 | 11010100 | D4
28 | 00011100 | 1C
35 | 00100011 | 23
-33 | 11011111 | DF
43 | 00101011 | 2B
-4 | 1100 | C
23 | 00010111 | 17
-49 | 11001111 | CF
49 | 00110001 | 31
-7 | 1001 | 9
-38 | 11011010 | DA
-45 | 11010011 | D3
5 | 0101 | 5
-21 | 11101011 | EB
26 | 00011010 | 1A
-2 | 1110 | E
-24 | 11101000 | E8
6 | 0110 | 6
-45 | 11010011 | D3
-4 | 1100 | C
15 | 1111 | F
0 | 0 | 0
-17 | 11101111 | EF
-35 | 11011101 | DD
43 | 00101011 | 2B
45 | 00101101 | 2D
-35 | 11011101 | DD
-8 | 11111000 | F8
28 | 00011100 | 1C
47 | 00101111 | 2F
34 | 00100010 | 22
-24 | 11101000 | E8
-42 | 11010110 | D6
```

```
-13 | 11110011 | F3
14 | 1110 | E
-45 | 11010011 | D3
-35 | 11011101 | DD
27 | 00011011 | 1B
-12 | 11110100 | F4
-19 | 11101101 | ED
-20 | 11101100 | EC
-14 | 11110010 | F2
20 | 00010100 | 14
30 | 00011110 | 1E
12 | 1100 | C
-36 | 11011100 | DC
-47 | 11010001 | D1
-27 | 11100101 | E5
-3 | 1101 | D
6 | 0110 | 6
36 | 00100100 | 24
9 | 1001 | 9
-16 | 11110000 | F0
36 | 00100100 | 24
-27 | 11100101 | E5
7 | 0111 | 7
-6 | 1010 | A
-5 | 1011 | B
5 | 0101 | 5
47 | 00101111 | 2F
23 | 00010111 | 17
-48 | 11010000 | D0
-24 | 11101000 | E8
40 | 00101000 | 28
-4 | 1100 | C
-18 | 11101110 | EE
-19 | 11101101 | ED
14 | 1110 | E
15 | 1111 | F
1 | 0001 | 1
24 | 00011000 | 18
-9 | 11110111 | F7
-50 | 11001110 | CE
18 | 00010010 | 12
15 | 1111 | F
30 | 00011110 | 1E
44 | 00101100 | 2C
9 | 1001 | 9
19 | 00010011 | 13
33 | 00100001 | 21
41 | 00101001 | 29
-24 | 11101000 | E8
```

```
43 | 00101011 | 2B
48 | 00110000 | 30
-23 | 11101001 | E9
7 | 0111 | 7
28 | 00011100 | 1C
8 | 1000 | 8
-2 | 1110 | E
37 | 00100101 | 25
42 | 00101010 | 2A
-17 | 11101111 | EF
-6 | 1010 | A
36 | 00100100 | 24
22 | 00010110 | 16
27 | 00011011 | 1B
31 | 00011111 | 1F
-47 | 11010001 | D1
-43 | 11010101 | D5
0 | 0 | 0
27 | 00011011 | 1B
30 | 00011110 | 1E
12 | 1100 | C
-15 | 11110001 | F1
-19 | 11101101 | ED
-42 | 11010110 | D6
-37 | 11011011 | DB
31 | 00011111 | 1F
-10 | 11110110 | F6
18 | 00010010 | 12
33 | 00100001 | 21
-15 | 11110001 | F1
17 | 00010001 | 11
25 | 00011001 | 19
-25 | 11100111 | E7
-5 | 1011 | B
33 | 00100001 | 21
-13 | 11110011 | F3
33 | 00100001 | 21
-10 | 11110110 | F6
47 | 00101111 | 2F
47 | 00101111 | 2F
-13 | 11110011 | F3
-32 | 11100000 | E0
1 | 0001 | 1
1 | 0001 | 1
-25 | 11100111 | E7
-33 | 11011111 | DF
16 | 00010000 | 10
17 | 00010001 | 11
```

```
4 | 0100 | 4
Execution Time (seconds): 0.0022856079999939993
```

Conversión de los datos del archivo TC4.txt

```
!python convertNumbers.py TC4.txt

Warning: Invalid data on line 8: 'ABC'
Warning: Invalid data on line 21: 'ERR'
Warning: Invalid data on line 41: 'VAL'
-39 | 11011001 | D9
-36 | 11011100 | DC
8 | 1000 | 8
34 | 00100010 | 22
17 | 00010001 | 11
49 | 00110001 | 31
5 | 0101 | 5
0 | 0 | 0
33 | 00100001 | 21
12 | 1100 | C
-6 | 1010 | A
27 | 00011011 | 1B
-4 | 1100 | C
-38 | 11011010 | DA
26 | 00011010 | 1A
49 | 00110001 | 31
29 | 00011101 | 1D
42 | 00101010 | 2A
-16 | 11110000 | F0
34 | 00100010 | 22
20 | 00010100 | 14
0 | 0 | 0
25 | 00011001 | 19
45 | 00101101 | 2D
3 | 0011 | 3
-46 | 11010010 | D2
-46 | 11010010 | D2
29 | 00011101 | 1D
33 | 00100001 | 21
29 | 00011101 | 1D
26 | 00011010 | 1A
-5 | 1011 | B
-36 | 11011100 | DC
12 | 1100 | C
45 | 00101101 | 2D
-50 | 11001110 | CE
0 | 0 | 0
```

```
-6 | 1010 | A
Execution Time (seconds): 0.0008601460000079442
```

Instalación de Pylint

```
pip install pylint

Collecting pylint
  Downloading pylint-4.0.4-py3-none-any.whl.metadata (12 kB)
Collecting astroid<=4.1.dev0,>=4.0.2 (from pylint)
  Downloading astroid-4.0.3-py3-none-any.whl.metadata (4.4 kB)
Requirement already satisfied: dill>=0.3.6 in
/usr/local/lib/python3.12/dist-packages (from pylint) (0.3.8)
Collecting isort!=5.13,<8,>=5 (from pylint)
  Downloading isort-7.0.0-py3-none-any.whl.metadata (11 kB)
Collecting mccabe<0.8,>=0.6 (from pylint)
  Downloading mccabe-0.7.0-py2.py3-none-any.whl.metadata (5.0 kB)
Requirement already satisfied: platformdirs>=2.2 in
/usr/local/lib/python3.12/dist-packages (from pylint) (4.5.1)
Requirement already satisfied: tomlkit>=0.10.1 in
/usr/local/lib/python3.12/dist-packages (from pylint) (0.13.3)
Downloading pylint-4.0.4-py3-none-any.whl (536 kB)
━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 536.4/536.4 kB 26.1 MB/s eta
0:00:00
━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 276.4/276.4 kB 16.9 MB/s eta
0:00:00
━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 94.7/94.7 kB 7.3 MB/s eta
0:00:00
ccabe-0.7.0-py2.py3-none-any.whl (7.3 kB)
Installing collected packages: mccabe, isort, astroid, pylint
Successfully installed astroid-4.0.3 isort-7.0.0 mccabe-0.7.0 pylint-
4.0.4
```

#Análisis del Código

```
!pylint convertNumbers.py

************* Module convertNumbers
convertNumbers.py:1:0: C0103: Module name "convertNumbers" doesn't
conform to snake_case naming style (invalid-name)
convertNumbers.py:103:0: R0914: Too many local variables (17/15) (too-
many-locals)


------------------------------------
Your code has been rated at 9.83/10
```

#**Código Mejorado**

```python
## Esta linea nos permite guardar el codigo en
## un archivo físico que nombraremos convertNumbers

%%writefile convertNumbers.py

## Indica al interprete que va a utilizar para
## ejecutar el archivo, en este caso python3

#!/usr/bin/env python3

"""
convertNumbers.py

Conversión de números decimales de un archivo de texto a binario y
hexadecimal.
El programa es ejecutado de la línea de comando e imprime los
resultados en la
pantalla y a un archivo nombrado ConvertionResults.txt.
"""


import sys
import time

## Definición de función
def read_numbers_from_file(file_path):
    """
    Lee los números del archivo de texto.
    """
    numbers = []

    try:
        with open(file_path, "r", encoding="utf-8") as file:
            for line_number, line in enumerate(file, start=1):
                value = line.strip()
                if not value:
                    continue
                try:
                    numbers.append(int(value))
                except ValueError:
                    print(
                        f"Warning: Invalid data on line {line_number}:
'{value}'"
                    )
    except FileNotFoundError:
        print(f"Error: File '{file_path}' not found.")
        sys.exit(1)

    return numbers

## Definición de función
```

```python
def decimal_to_binary(number):
    """
    Convierte un entero decimal a binario utilizando el complemento a
2
    a través de puros algoritmos y funciones básicas.
    """

    # Caso especial: cero
    if number == 0:
        return "0"

    # PASO #1
    # Determina el signo del número
    is_negative = number < 0
    # Se trabaja con el valor absoluto para
    # realizar la conversión binaria
    number = abs(number)

    # PASO #2
    # Conversión decimal → binario (valor absoluto)
    # Por medio de división repetida entre 2
    binary_digits = []
    temp = number

    while temp > 0:
        remainder = temp % 2                    # Bit menos significativo
        binary_digits.append(str(remainder))
        temp //= 2                              # División entre 2

    # Inversión de la lista para tener el orden binario correcto
    binary_digits.reverse()
    binary_value = "".join(binary_digits)

    # PASO #3
    # Si es positivo, regresamos el binario directo
    if not is_negative:
        return binary_value

    # PASO #4
    # Complemento a 2 para números negativos
    # Se agrega un bit extra para manejo del signo
    bits = len(binary_value) + 1
    binary_value = binary_value.zfill(bits)

    # PASO #4(A)
    # Se calcula el complemento uno, esta operación
    # consiste en invertir cada bit:
    #   '0' se vuelve '1'
    #   '1' se vuelve '0'
    inverted = []
```

```python
    for bit in binary_value:
        # Si el bit actual es '0' se invierte a '1'
        if bit == '0':
            inverted.append('1')
        # Si el bit actual es '1' se inviete a '0'
        else:
            inverted.append('0')

    # PASO #4(B)
    # Se suma 1 para obtener el complemento a 2
    # Esta suma comienza con el bit menos significativo (derecha)
    # y se propaga el acarreo a la izquierda cuando se necesite.
    # Se inicializa el acarreo con 1, debido a que sumamos 1.
    carry = 1
    # Recorremos la lista de bits de derecha a izquierda
    for i in range(len(inverted) - 1, -1, -1):

        # Caso 1:
        # Si rl bit actual es '1' y hay acarreo,
        # el resultado es '0' y el acarreo se mantiene '1'
        if inverted[i] == '1' and carry == 1:
            inverted[i] = '0'
            carry = 1

        # Caso 2:
        # Si el bit actual es '0' y hay acarreo,
        # el resultado es '1' y el acarreo no se presenta
        elif inverted[i] == '0' and carry == 1:
            inverted[i] = '1'
            carry = 0

    # PASO #5
    # se une la lista dentro de la cadena binaria final
    # Lista de caracteres se convierte a caracteres binario
    # representando el complemento a 2.
    return "".join(inverted)

## Definición de función
def decimal_to_binary_and_hexadecimal(number):
    """
    Conversión de decimal a:
    - binarios (utiliza complemento a 2, si es negativo)
    - hexadecimal (de la representación binaria, )

    Regresa: (decimal, binario, hexadecimal)
    """

    hex_symbols = "0123456789ABCDEF"

    # Caso especial
```

```python
    if number == 0:
        return 0, "0", "0"

    # Se obtiene el complemento a 2, para obtener el valor decimal en
binario
    binary_value = decimal_to_binary(number)

    # Ajuste de bits para hexadecimal
    # Determina el bit de signo.
    # El bit inicial de `binary_value` será el bit de signo
    # (0 para positivo, 1 para negativo).
    # Necesitamos extender este bit de signo para que la
    # longitud sea un múltiplo de 4.
    sign_bit = binary_value[0] if binary_value else '0'

    while len(binary_value) % 4 != 0:
        binary_value = sign_bit + binary_value

    # Binario a hexadecimal
    hex_digits = []

    for i in range(0, len(binary_value), 4):
        nibble = binary_value[i:i+4]
        value = 0
        for bit in nibble:
            value = value * 2 + int(bit)
        hex_digits.append(hex_symbols[value])

    hex_value = "".join(hex_digits)

    return number, binary_value, hex_value

## Definición de función
def write_results(output_lines_to_write):
    """
    Write the given lines to ConvertionResults.txt.
    """
    with open("ConvertionResults.txt", "w", encoding="utf-8") as file:
        for line in output_lines_to_write:
            file.write(line + "\n")

## Definición de función programa principall
def main():
    """
    Punto inicial del programa
    """
    start_time = time.perf_counter()    #Inicialización de timer

    if len(sys.argv) != 2:
        print("Usage: python convertNumbers.py <input_file>")
        sys.exit(1)
```

```python
    file_path = sys.argv[1]
    numbers = read_numbers_from_file(file_path)

    if not numbers:
        print("Error: No valid numeric data found.")
        sys.exit(1)

    output_lines = []
    output_lines.append("Decimal | Binary | Hexadecimal")
    output_lines.append("-" * 40)

    for number in numbers:
        dec, binary_value, hex_value =
decimal_to_binary_and_hexadecimal(number)
        line = f"{dec} | {binary_value} | {hex_value}"
        output_lines.append(line)
        print(line)                           #Impresión de los
resultados

    end_time = time.perf_counter()            #Finalizacion del timer
    elapsed_time = end_time - start_time      #Cálculo de tiempo de
ejecución

    time_line = f"Execution Time (seconds): {elapsed_time}"
    output_lines.append("-" * 40)
    output_lines.append(time_line)

    print(time_line)
    write_results(output_lines)               #Escritura de los
resultados a archivo


if __name__ == "__main__":
    main()

Overwriting convertNumbers.py
```

#Conversión de los datos de los archivos TC2.txt y TC3.txt

```
!python convertNumbers.py TC2.txt

7116776 | 11101100100101111101000 | EC97E8
1666340 | 111110010110110100100100 | F96D24
8886983 | 100001111001101011000111 | 879AC7
839365 | 11001100111011000101 | CCEC5
924280 | 11100001101001111000 | E1A78
1026310 | 11111010100100000110 | FA906
1615293 | 111110001010010110111101 | F8A5BD
1063875 | 111100000011101111000011 | F03BC3
```

```
679035  |  10100101110001111011  |  A5C7B
5201970 |  110011110110000000110010  |  CF6032
593979  |  10010001000000111011  |  9103B
801371  |  1100001101001011011  |  C3A5B
3796878 |  111110011110111110001110  |  F9EF8E
7489201 |  111100100100011010110001  |  F246B1
9740020 |  100101001001111011110100  |  949EF4
9128737 |  100010110100101100100001  |  8B4B21
5473463 |  110100111000010010110111  |  D384B7
8701957 |  100001001100100000000101  |  84C805
8238050 |  111111011011001111100010  |  FDB3E2
8679038 |  100001000110111001111110  |  846E7E
385912  |  1101111000110111111000  |  DE378
5867340 |  110110011000011101001100  |  D9874C
4894542 |  110010101010111101001110  |  CAAF4E
8999451 |  100010010101001000011011  |  89521B
4392535 |  110000110000011001010111  |  C30657
2078131 |  111111111011010110110011  |  FFB5B3
3070124 |  111011101101100010101100  |  EED8AC
7451998 |  111100011011010101011110  |  F1B55E
5635510 |  110101011111110110110110  |  D5FDB6
1233932 |  111100101101010000001100  |  F2D40C
6089867 |  110111001110110010001011  |  DCEC8B
1792316 |  111110110101100100111100  |  FB593C
6298637 |  111000000001110000001101  |  E01C0D
2408038 |  111001001011111001100110  |  E4BE66
8510100 |  100000011101101010010100  |  81DA94
991581  |  11110010000101011101  |  F215D
6455739 |  111000101000000110111011  |  E281BB
7829175 |  111101111011101101010111  |  F776B7
6328931 |  111000001001001001100011  |  E09263
9982305 |  100110001010001011000001  |  985161
2292022 |  111000101111100100110110  |  E2F936
1070496 |  111100000101010110100000  |  F055A0
8518360 |  100000011111101011011000  |  81FAD8
6378470 |  111000010101001111100110  |  E153E6
7756258 |  111101100101100111100010  |  F659E2
7111767 |  111011001000010001010111  |  EC8457
2685897 |  111010001111101111001001  |  E8FBC9
617946  |  10010110110111011010  |  96DDA
246280  |  11111100001000001000  |  FC208
6075442 |  110111001011010000110010  |  DCB432
991323  |  11110010000001011011  |  F205B
6754202 |  111001110000111110011010  |  E70F9A
3103178 |  111011110101100111001010  |  EF59CA
3228842 |  111100010100010010101010  |  F144AA
6786623 |  111001110001110001111111  |  E78E3F
5329085 |  110100010101000010111101  |  D150BD
2334647 |  111000111001111110110111  |  E39FB7
```

```
7253396 | 11101110101011011011010100 | EEAD94
6516953 | 11100011011100001011011001 | E370D9
5972725 | 11011011001000101111010101 | DB22F5
5828037 | 11011000111011011100010  | D8EDC5
6642265 | 11100101010110100101100  | E55A59
2559699 | 11100111000011101101001  | E70ED3
6597631 | 11100100101010111111111  | E4ABFF
5826202 | 11011000111001101001101  | D8E69A
4642335 | 11000110110101100001111  | C6D61F
1862900 | 11111100011011001111010  | FC6CF4
6039635 | 11011100001010000101001  | DC2853
3358744 | 11110011010000000011000  | F34018
4965249 | 11001011110000111000000  | CBC381
6621475 | 11100101000010010010001  | E50923
3336153 | 11110010110011111011001  | F2E7D9
1044743 | 111111110001000001111 |  FF107
6201477 | 11011110101000001000010  | DEA085
6297100 | 11100000000101100000110  | E0160C
885678 |  11011000001110101110  |  D83AE
8546891 | 10000010011010100100101  | 826A4B
6683923 | 11100101111111010001001  | E5FD13
7064472 | 11101011110010111001100  | EBCB98
3430021 | 11110100010101101000010  | F45685
9764122 | 10010100111111010001101  | 94FD1A
9958605 | 10010111111101001100110  | 97F4CD
1006022 | 1111010110011100011 |  F59C6
5276496 | 11010000100000110101000  | D08350
8876232 | 10000111011100001100100  | 8770C8
3364648 | 11110011010101110010100  | F35728
3539979 | 11110110000001000000101  | F6040B
3003857 | 11101101110101011101000  | EDD5D1
4481634 | 11000100011000100110001  | C46262
9035781 | 10001001111000000000010  | 89E005
3767021 | 11111001011110101110110  | F97AED
4993901 | 11001100001100110110110  | CC336D
8698377 | 10000100101110100000100  | 84BA09
4626501 | 11000110100110000100010  | C69845
1755352 | 11111010110010001101100  | FAC8D8
2755340 | 11101010000101100001100  | EA0B0C
5150616 | 11001110100101111001100  | CE9798
9345169 | 10001110100110001001000  | 8E9891
848948 |  11001111010000110100  |  CF434
2708748 | 11101001010101010000110  | E9550C
8372451 | 11111111110000001110001  | FFC0E3
3523015 | 11110101110000011100011  | F5C1C7
2624283 | 11101000000101100011011  | E80B1B
8795348 | 10000110001101001101010  | 8634D4
2318100 | 11100011010111110001010  | E35F14
4750861 | 11001000011111100000110  | C87E0D
```

```
3770597 |  11111001100010001110010101 |  F988E5
1053352 |  11110000000100101010101000 |  F012A8
833307  |  11001011011100011011 |  CB71B
4632526 |  11000110101011111001110 |  C6AFCE
2212917 |  11100001110010000110101 |  E1C435
5053189 |  11001101000110110000101 |  CD1B05
412218  |  11100100101000111010 |  E4A3A
4901564 |  11001010110010101011100 |  CACABC
5094606 |  11001101101111001100110 |  CDBCCE
8070285 |  11111011001001001000110 |  FB248D
6847905 |  11101000011111011010000 |  E87DA1
4311824 |  11000001110010110001000 |  C1CB10
3009421 |  11101101111010111000110 |  EDEB8D
1629105 |  11111000110110111011000 |  F8DBB1
8431899 |  10000000101010010001101 |  80A91B
7582456 |  11110011011001011111000 |  F3B2F8
7332147 |  11101111111000010011001 |  EFE133
314183  |  11001100101101000111 |  CCB47
7632568 |  11110100011101101011100 |  F476B8
8161327 |  11111100100010000010111 |  FC882F
6961087 |  11101010001101111011111 |  EA37BF
6898282 |  11101001010000100110101 |  E9426A
9749303 |  10010100110000110011011 |  94C337
4427419 |  11000011100011101001101 |  C38E9B
4368829 |  11000010101010011011110 |  C2A9BD
6439318 |  11100010010000011001011 |  E24196
6473603 |  11100010110001111000001 |  E2C783
6446249 |  11100010010111001010100 |  E25CA9
9818836 |  10010101110100101101010 |  95D2D4
9438069 |  10010000000001101110101 |  900375
2809499 |  11101010110111101001101 |  EADE9B
3460304 |  11110100110011001101000 |  F4CCD0
8430904 |  10000000101001010011100 |  80A538
9774785 |  10010101001001101100000 |  9526C1
9560603 |  10010001111000100001101 |  91E21B
3440732 |  11110100100000000101110 |  F4805C
7053263 |  11101011100111111100111 |  EB9FCF
287398  |  11000110001010100110 |  C62A6
4043644 |  11111101101100110111110 |  FDB37C
2943820 |  11101100111010110100110 |  ECEB4C
9030962 |  10001001110011010011001 |  89CD32
7537540 |  11110011000000111000010 |  F30384
7203657 |  11101101111010110100100 |  EDEB49
5639400 |  11010110000011001110100 |  D60CE8
9448142 |  10010000001010101100111 |  902ACE
9954392 |  10010111111001000101100 |  97E458
2856859 |  11101011100101111001101 |  EB979B
1332118 |  11110100010100111001011 |  F45396
6984725 |  11101010100101000001010 |  EA9415
```

```
1925762 | 111111010110001010000010 | FD6282
2138171 | 111000001010000000111011 | E0A03B
347447  | 11010100110100110111 | D4D37
8839390 | 100001101110000011011110 | 86E0DE
3951652 | 111111000100110000100100 | FC4C24
3755102 | 111110010100110001011110 | F94C5E
6867687 | 111010001100101011100111 | E8CAE7
4383175 | 110000101110000111000111 | C2E1C7
7125508 | 111011001011101000000100 | ECBA04
7799732 | 111101110000001110110100 | F703B4
8784156 | 100001100000100100011100 | 86091C
1372809 | 111101001111001010001001 | F4F289
1327984 | 111101000100001101110000 | F44370
9205087 | 100011000111010101011111 | 8C755F
6524241 | 111000111000110101010001 | E38D51
9316072 | 100011100010011011101000 | 8E26E8
127744  | 11111111001100000000 | FF300
8388820 | 100000000000000011010100 | 8000D4
6883557 | 111010010000100011100101 | E908E5
2291239 | 111000101111011000100111 | E2F627
3101270 | 111011110101001001010110 | EF5256
1382825 | 111101010001100110101001 | F519A9
9873376 | 100101101010011111100000 | 96A7E0
6873500 | 111010001110000110011100 | E8E19C
8185634 | 111111001110011100100010 | FCE722
2464786 | 111001011001110000010010 | E59C12
8387154 | 111111111111101001010010 | FFFA52
5581444 | 110101010010101010000100 | D52A84
8097911 | 111110111001000001110111 | FB9077
8882527 | 100001111000100101011111 | 87895F
8941444 | 100010000110111110000100 | 886F84
4942703 | 110010110110101101101111 | CB6B6F
101144  | 11111000101100011000 | F8B18
7471180 | 111100100000000001001100 | F2004C
1932131 | 111111010111101101100011 | FD7B63
8052752 | 111110101110000000010000 | FAE010
6359493 | 111000010000100111000101 | E109C5
1967646 | 111111100000011000011110 | FE061E
6575052 | 111001000101001111001100 | E453CC
2323342 | 111000110111001110001110 | E3738E
6735760 | 111001101100011110010000 | E6C790
8895858 | 100001111011110101110010 | 87BD72
4238091 | 110000001010101100001011 | C0AB0B
7093069 | 111011000011101101001101 | EC3B4D
39 | 11100111 | E7
Execution Time (seconds): 0.005171652000001359

!python convertNumbers.py TC3.txt
```

```
-39 | 11011001 | D9
-36 | 11011100 | DC
8 | 1000 | 8
34 | 11100010 | E2
17 | 11110001 | F1
49 | 11110001 | F1
5 | 1101 | D
39 | 11100111 | E7
0 | 0 | 0
33 | 11100001 | E1
12 | 1100 | C
-6 | 1010 | A
27 | 11111011 | FB
-4 | 1100 | C
-38 | 11011010 | DA
26 | 11111010 | FA
49 | 11110001 | F1
29 | 11111101 | FD
42 | 11101010 | EA
-16 | 11110000 | F0
-28 | 11100100 | E4
34 | 11100010 | E2
20 | 11110100 | F4
0 | 0 | 0
25 | 11111001 | F9
45 | 11101101 | ED
3 | 1111 | F
-46 | 11010010 | D2
-46 | 11010010 | D2
29 | 11111101 | FD
33 | 11100001 | E1
29 | 11111101 | FD
26 | 11111010 | FA
-5 | 1011 | B
-36 | 11011100 | DC
12 | 1100 | C
45 | 11101101 | ED
-50 | 11001110 | CE
0 | 0 | 0
-6 | 1010 | A
-39 | 11011001 | D9
35 | 11100011 | E3
26 | 11111010 | FA
-35 | 11011101 | DD
-42 | 11010110 | D6
14 | 1110 | E
-3 | 1101 | D
22 | 11110110 | F6
-47 | 11010001 | D1
12 | 1100 | C
```

```
-17 |  11101111 |  EF
-31 |  11100001 |  E1
-25 |  11100111 |  E7
-35 |  11011101 |  DD
-18 |  11101110 |  EE
14 |  1110 |  E
37 |  11100101 |  E5
-8 |  11111000 |  F8
-41 |  11010111 |  D7
-50 |  11001110 |  CE
-9 |  11110111 |  F7
2 |  1110 |  E
12 |  1100 |  C
-39 |  11011001 |  D9
-17 |  11101111 |  EF
0 |  0 |  0
27 |  11111011 |  FB
28 |  11111100 |  FC
45 |  11101101 |  ED
-44 |  11010100 |  D4
28 |  11111100 |  FC
35 |  11100011 |  E3
-33 |  11011111 |  DF
43 |  11101011 |  EB
-4 |  1100 |  C
23 |  11110111 |  F7
-49 |  11001111 |  CF
49 |  11110001 |  F1
-7 |  1001 |  9
-38 |  11011010 |  DA
-45 |  11010011 |  D3
5 |  1101 |  D
-21 |  11101011 |  EB
26 |  11111010 |  FA
-2 |  1110 |  E
-24 |  11101000 |  E8
6 |  1110 |  E
-45 |  11010011 |  D3
-4 |  1100 |  C
15 |  1111 |  F
0 |  0 |  0
-17 |  11101111 |  EF
-35 |  11011101 |  DD
43 |  11101011 |  EB
45 |  11101101 |  ED
-35 |  11011101 |  DD
-8 |  11111000 |  F8
28 |  11111100 |  FC
47 |  11101111 |  EF
34 |  11100010 |  E2
```

```
-24 | 11101000 | E8
-42 | 11010110 | D6
-13 | 11110011 | F3
14 | 1110 | E
-45 | 11010011 | D3
-35 | 11011101 | DD
27 | 11111011 | FB
-12 | 11110100 | F4
-19 | 11101101 | ED
-20 | 11101100 | EC
-14 | 11110010 | F2
20 | 11110100 | F4
30 | 11111110 | FE
12 | 1100 | C
-36 | 11011100 | DC
-47 | 11010001 | D1
-27 | 11100101 | E5
-3 | 1101 | D
6 | 1110 | E
36 | 11100100 | E4
9 | 1001 | 9
-16 | 11110000 | F0
36 | 11100100 | E4
-27 | 11100101 | E5
7 | 1111 | F
-6 | 1010 | A
-5 | 1011 | B
5 | 1101 | D
47 | 11101111 | EF
23 | 11110111 | F7
-48 | 11010000 | D0
-24 | 11101000 | E8
40 | 11101000 | E8
-4 | 1100 | C
-18 | 11101110 | EE
-19 | 11101101 | ED
14 | 1110 | E
15 | 1111 | F
1 | 1111 | F
24 | 11111000 | F8
-9 | 11110111 | F7
-50 | 11001110 | CE
18 | 11110010 | F2
15 | 1111 | F
30 | 11111110 | FE
44 | 11101100 | EC
9 | 1001 | 9
19 | 11110011 | F3
33 | 11100001 | E1
41 | 11101001 | E9
```

```
-24 | 11101000 | E8
43 | 11101011 | EB
48 | 11110000 | F0
-23 | 11101001 | E9
7 | 1111 | F
28 | 11111100 | FC
8 | 1000 | 8
-2 | 1110 | E
37 | 11100101 | E5
42 | 11101010 | EA
-17 | 11101111 | EF
-6 | 1010 | A
36 | 11100100 | E4
22 | 11110110 | F6
27 | 11111011 | FB
31 | 11111111 | FF
-47 | 11010001 | D1
-43 | 11010101 | D5
0 | 0 | 0
27 | 11111011 | FB
30 | 11111110 | FE
12 | 1100 | C
-15 | 11110001 | F1
-19 | 11101101 | ED
-42 | 11010110 | D6
-37 | 11011011 | DB
31 | 11111111 | FF
-10 | 11110110 | F6
18 | 11110010 | F2
33 | 11100001 | E1
-15 | 11110001 | F1
17 | 11110001 | F1
25 | 11111001 | F9
-25 | 11100111 | E7
-5 | 1011 | B
33 | 11100001 | E1
-13 | 11110011 | F3
33 | 11100001 | E1
-10 | 11110110 | F6
47 | 11101111 | EF
47 | 11101111 | EF
-13 | 11110011 | F3
-32 | 11100000 | E0
1 | 1111 | F
1 | 1111 | F
-25 | 11100111 | E7
-33 | 11011111 | DF
16 | 11110000 | F0
17 | 11110001 | F1
```

```
4 | 1100 | C
Execution Time (seconds): 0.003457742000023245
```

#Análisis del codigo mejorado

```
!pylint convertNumbers.py

************* Module convertNumbers
convertNumbers.py:1:0: C0103: Module name "convertNumbers" doesn't
conform to snake_case naming style (invalid-name)

-----------------------------------------------------------------
Your code has been rated at 9.90/10 (previous run: 9.90/10, +0.00)
```

#Conclusiones

El código desarrollado para la conversión de números decimales a sus respectivas representaciones en codigo binario y hexadecimal es todo un reto sobre todo por el manejo del complemento a 2, que nos permite la representación de números con signo.

Para la implementación solamente se utilizaron algoritmos básicos como; divisiones sucesivas, inversión de bits y suma con acarreo, el código evita funciones de alto nnivel como lo mencionan lo requisitos, lo que nos permite comprender y evidencias las diferentes operaciones que se involucran en el proceso de conversión.

El manejo de los números negativos que se encuentran en los archivos de datos se llevo a cabo mediante el complemento a 1 y el complemento a 2, tratando de garanizar la coherencia de los códigos binarios y hexadecimal. La extensión del bit de signo permite asegurar el valor numérico que representa.

Desde el punto de vista del diseño de software, el código muestra una estructura en módulos, nos enfocamos en que sea legible y documentado, con el objetivo de tratar de cumplir con la norma PEP8, con el objetivo de facilitar su mantenimiento, evaluación y reutilización.

El flujo en el proceso de conversión de decimal a binario y a hexadecimal refleja los procesos internos.

Los requisitos que se mencionan en el ejercicio son los siguientes:

1. El programa será invocado desde la línea de comandos. El programa recibirá un archivo como parámetro. El archivo contendrá una lista de elementos (presumiblemente números). **Se cumple con el requisito**
2. El programa convertirá los números a binario y hexadecimal. Los resultados se mostrarán en pantalla y en un archivo llamado ConvertionResults. **Se cumple con el requisito**
3. El programa incluira un mecanismo para gestionar datos no válidos en el archivo. Los errores se mostrarán en consola y la ejecución continuará. **Se cumple con el requisito**
4. El nombre del programa será convertNumbers.py. **Se cumple con el requisito**

5. El formato mínimo para invocar el programa será el suguiente python convertNumbers.py fileWithdata.txt. **Se cumple con el requsito**
6. El programa gestionará archivos con un número de elementos que puede variar desde cientos hasta miles. **Se cumple con el requisito**
7. El programa debe incluir al final de la ejecución el tiempo transcurrido para la ejecución y el cálculo de los datos. **Se cumple con el requisito**
8. Cumplir con la norma PEP8. **Se cumple con el requisito**

Nota, correct pylint en el código sin mejoras nos envia el siguiente mensaje **"Module name "convertNumbers" doesn't conform to snake_case naming style (invalid-name)"**, al correr el código mejorado, el mensaje se mantiene, sin embargo decidimos dejar el nombre del programa como se menciona en el requisito número 4.

Los tiempos de ejecucion de los diferentes archivos los mostramos a continuación:

- TC1.txt ----->> 0.005078 segundos
- TC2.txt ----->> 0.005159 segundos
- TC3.txt ----->> 0.002285 segundos
- TC4.txt ----->> 0.000850 segundos

La calificación el primer código fue de 9.83/10, mientras que el código mejorado presenta una calificación de 9.90/10. La mejorá para está ocasión fue mínima pero se dejaron de utilizar variables locales.

Instituto Tecnologico de Monterrey

Maestría en Inteligencia Artificial Aplicada

Curso: Pruebas de Software y aseguramiento de la Calidad

Clave: TC4017.10

Profesor Títular: Dr. Gerardo Padilla Zárate

Profesora Asistente: Mtra. Viridiana Rodríguez González

Estudiante: Francisco Javier Ramírez Arias

Matrícula: A01316379

##Actividad: Actividad 4.2

##Ejercicios de Programación #3

##Descripción: Contador de palabras.

```python
%%writefile wordCount.py

#!/usr/bin/env python3

import sys
import time


def read_words_from_file(file_path):

    words = []

    try:
        with open(file_path, "r", encoding="utf-8") as file:
            for line_number, line in enumerate(file, start=1):
                line = line.strip()
```

```python
            if not line:
                continue

            # Manual split by spaces (basic algorithm)
            current_word = ""
            for char in line:
                if char != " ":
                    current_word += char
                else:
                    if current_word:
                        words.append(current_word)
                        current_word = ""
            if current_word:
                words.append(current_word)

    except FileNotFoundError:
        print(f"Error: File '{file_path}' not found.")
        sys.exit(1)

    return words

def count_word_frequencies(words):

    frequencies = {}

    for word in words:
        if word in frequencies:
            frequencies[word] += 1
        else:
            frequencies[word] = 1

    return frequencies


def write_results(results):

    with open("WordCountResults.txt", "w", encoding="utf-8") as file:
        for line in results:
            file.write(line + "\n")


def main():

    start_time = time.perf_counter()

    if len(sys.argv) != 2:
        print("Usage: python wordCount.py fileWithData.txt")
        sys.exit(1)

    file_path = sys.argv[1]
```

```python
    words = read_words_from_file(file_path)

    if not words:
        print("Warning: No valid words found in the file.")
        sys.exit(1)

    frequencies = count_word_frequencies(words)

    output_lines = []
    output_lines.append("Word | Frequency")
    output_lines.append("-" * 30)

    for word, count in frequencies.items():
        line = f"{word} | {count}"
        print(line)
        output_lines.append(line)

    end_time = time.perf_counter()
    elapsed_time = end_time - start_time

    output_lines.append("-" * 30)
    time_line = f"Execution Time (seconds): {elapsed_time}"
    output_lines.append(time_line)

    print(time_line)
    write_results(output_lines)


if __name__ == "__main__":
    main()
```
```
Overwriting wordCount.py
```

Conteo de palabras del archivo: TC1.txt

```
!python wordCount.py TC1.txt
```
```
mother | 1
tions | 1
pin | 1
sure | 1
regulatory | 1
shower | 1
uni | 1
dial | 1
photography | 1
buying | 1
firms | 1
nba | 1
```

```
father | 1
championship | 1
vagina | 1
fonts | 1
sparc | 1
explorer | 1
rl | 1
shadow | 1
danish | 1
seed | 1
hiking | 1
instrumentation | 1
introduces | 1
kinda | 1
nor | 1
newer | 1
peter | 1
contamination | 1
matters | 1
bedding | 1
achievement | 1
password | 1
conservative | 2
webcast | 1
locks | 1
cove | 1
taxes | 1
could | 1
pct | 1
adequate | 1
nightmare | 1
marathon | 1
permission | 1
cartridge | 1
clear | 1
drum | 1
trained | 1
p | 1
manufacturer | 1
leisure | 1
media | 1
journey | 1
anal | 1
teaches | 1
customized | 1
oakland | 1
louis | 1
tab | 1
consistent | 1
```

```
enhanced | 1
liable | 1
ebony | 1
wan | 1
pubmed | 1
math | 1
tea | 1
craps | 1
gothic | 1
permissions | 1
recorded | 1
cgi | 1
confirm | 1
hyundai | 1
exhaust | 1
malpractice | 1
pens | 1
potentially | 1
glenn | 1
scoring | 1
andrews | 1
assessed | 1
adventures | 1
meals | 1
mortality | 1
club | 1
mon | 1
comm | 1
blues | 1
collect | 1
lies | 1
seats | 1
worse | 1
guestbook | 1
influences | 1
kodak | 1
significance | 1
coastal | 1
Execution Time (seconds): 0.0009147190003204742
```

Conteo de palabras del archivo: TC2.txt

```
!python wordCount.py TC2.txt

conduct | 1
kuwait | 1
literacy | 1
table | 1
parent | 1
```

```
olympic | 1
ht | 1
algebra | 1
lease | 4
brass | 4
revenues | 4
targeted | 4
inflation | 4
chain | 4
holders | 4
amongst | 4
monaco | 4
filme | 4
doc | 4
kingston | 4
wood | 3
pre | 3
ss | 1
norm | 1
females | 1
sq | 1
builders | 1
newly | 1
history | 1
stores | 1
textiles | 1
exams | 1
midi | 1
correct | 1
conferencing | 1
touch | 1
comic | 1
container | 1
preparation | 1
teen | 1
males | 1
correlation | 1
fioricet | 1
networks | 1
deck | 1
dean | 1
advantages | 1
out | 1
hub | 1
italy | 1
objects | 1
resort | 1
priced | 1
southampton | 1
```

```
munich | 1
sorry | 1
delays | 1
man | 1
croatia | 1
vice | 1
opens | 1
blowjob | 1
galleries | 1
weight | 1
jeff | 1
boots | 1
clan | 1
compatibility | 1
purposes | 1
prof | 1
come | 1
jose | 1
turkish | 1
classes | 1
vessels | 1
answering | 1
sweden | 1
hampshire | 1
j | 1
responsibilities | 1
magazines | 1
rio | 1
amounts | 1
instantly | 1
fill | 1
str | 1
naturals | 1
automation | 1
apache | 1
rule | 1
goals | 1
outlook | 1
afternoon | 1
odd | 1
genome | 1
protest | 1
catalog | 1
creates | 1
bases | 1
prominent | 1
consisting | 1
minneapolis | 1
night | 1
```

```
tiger | 1
unity | 1
disposal | 1
cannon | 1
ou | 1
hall | 1
atomic | 1
chosen | 1
violence | 1
sectors | 1
ignored | 1
cheese | 1
frozen | 1
corp | 1
undo | 1
tba | 1
way | 1
filter | 1
win | 1
attending | 1
returned | 1
anchor | 1
sides | 1
defence | 1
biz | 1
form | 1
feeding | 1
rentals | 1
practical | 1
steve | 1
serious | 1
mens | 1
faculty | 1
initiative | 1
variety | 1
ion | 1
interface | 1
remained | 1
icons | 1
excessive | 1
jon | 1
Execution Time (seconds): 0.0011759420003727428
```

Conteo de palabras del archivo: TC3.txt

```
!python wordCount.py TC3.txt

neighbors | 1
manual | 1
```

```
political | 1
mozambique | 1
old | 1
holding | 1
fc | 1
ford | 1
comparable | 1
industries | 1
antiques | 1
waste | 1
voice | 1
blond | 1
z | 1
flood | 2
enables | 1
feels | 1
validity | 1
midnight | 1
matters | 1
mortgage | 1
daughters | 1
diana | 1
notice | 3
postal | 1
reproduced | 1
mpegs | 1
persistent | 1
butts | 1
ban | 1
underground | 1
hypothesis | 1
pace | 1
ip | 1
two | 1
gourmet | 1
firms | 1
chips | 1
twelve | 1
somalia | 1
drama | 1
leaving | 1
continues | 1
poll | 1
led | 1
pottery | 2
dominican | 1
freebsd | 1
schools | 1
bunch | 1
```

```
organisms | 1
emotions | 1
governments | 1
tires | 1
calendars | 1
charity | 2
usa | 1
masturbating | 1
complexity | 1
spoke | 1
nicholas | 1
virginia | 1
mv | 1
chronic | 1
biography | 1
indigenous | 1
something | 1
pursuit | 1
suggestion | 2
breeds | 1
sorry | 1
however | 1
biol | 1
acquisition | 1
least | 1
decades | 1
wooden | 1
nonprofit | 1
medical | 1
et | 1
wonder | 1
normally | 1
pairs | 2
williams | 1
residence | 1
pale | 1
vibrators | 1
democratic | 1
affects | 1
celebration | 1
patterns | 1
medicaid | 1
look | 1
covered | 1
josh | 1
keen | 1
an | 1
want | 1
possible | 1
```

```
morocco | 1
tp | 1
electro | 1
transmit | 1
connections | 1
scripting | 1
consulting | 1
works | 1
aw | 1
impression | 1
ky | 1
prove | 1
spreading | 1
shannon | 1
cfr | 1
buddy | 1
blues | 2
rely | 1
earth | 1
pipe | 2
bible | 1
furthermore | 1
desirable | 1
allergy | 1
packard | 1
lovers | 1
haiti | 1
brutal | 1
sewing | 1
vs | 1
undergraduate | 1
must | 1
hardcover | 1
advances | 1
tomato | 1
cashiers | 1
britain | 1
thumb | 2
magic | 1
leeds | 1
poly | 1
cricket | 1
thickness | 1
ambient | 1
enormous | 1
deny | 1
song | 1
simpsons | 1
class | 1
```

```
ii | 1
restructuring | 1
gardens | 1
russian | 1
introduced | 1
strange | 1
spain | 1
cum | 1
philips | 1
capital | 1
manufacture | 1
shade | 1
aids | 1
endorsement | 1
pediatric | 1
facilitate | 1
dealing | 1
motivated | 1
nationally | 1
dress | 1
apple | 1
coordinates | 1
remaining | 1
you | 1
lie | 1
initiative | 1
walking | 1
reveals | 2
dimension | 1
texture | 1
rare | 1
serum | 1
dr | 1
subsequent | 1
california | 1
fresh | 1
scanners | 1
ri | 1
pixel | 1
swap | 1
nova | 1
marks | 1
dallas | 1
chaos | 1
pci | 1
holy | 1
republic | 1
vagina | 1
ha | 1
```

```
illustration | 1
modified | 1
democrat | 1
till | 1
susan | 1
formula | 1
benchmark | 1
markers | 1
excellence | 1
specifies | 1
dominant | 1
nights | 1
ssl | 1
beds | 1
teenage | 1
graham | 1
hazard | 1
soap | 1
register | 1
cream | 1
stays | 1
hand | 1
resort | 1
ht | 1
mrs | 1
mozilla | 1
financing | 1
continued | 1
basin | 1
myth | 1
dependent | 1
marker | 1
diamond | 1
press | 1
realtors | 1
monitored | 1
que | 1
zdnet | 1
for | 1
prev | 1
tracked | 1
locally | 1
formats | 1
slot | 1
cancel | 1
continually | 1
ecology | 1
spending | 1
hour | 1
```

```
considerations | 1
copy | 2
aruba | 1
tear | 1
analyzed | 1
ms | 1
jelsoft | 1
responsibility | 1
proved | 1
tablet | 1
memo | 1
elephant | 1
detroit | 1
dozen | 1
hairy | 1
defines | 1
strengthen | 1
catalogs | 1
muslim | 1
husband | 1
developments | 1
train | 1
hurt | 2
ml | 1
colin | 1
species | 1
steel | 1
modification | 1
easier | 1
sky | 1
purpose | 1
honest | 1
phil | 1
energy | 1
republicans | 1
bigger | 1
springs | 1
confidential | 1
internal | 1
wrote | 1
debut | 1
edmonton | 1
uses | 1
pitch | 1
consolidated | 1
sub | 1
genetics | 1
spoken | 1
microsoft | 1
```

```
crucial | 1
quest | 1
monitor | 1
women | 1
rating | 1
sox | 1
tuesday | 1
may | 1
loc | 1
waiver | 1
icon | 1
fy | 1
cyber | 1
process | 1
soviet | 1
investors | 1
forgotten | 1
explains | 1
reno | 1
likes | 1
honey | 1
investing | 1
intro | 1
copying | 1
skilled | 1
illinois | 1
muze | 1
archive | 1
clock | 1
explorer | 1
simultaneously | 1
j | 1
overnight | 1
herein | 1
jet | 1
bring | 1
bangbus | 1
others | 1
pos | 1
ya | 1
guides | 1
discharge | 1
consultation | 1
built | 1
sophisticated | 1
kent | 1
prayers | 1
christopher | 1
wma | 1
```

```
gardening | 1
closes | 1
tackle | 1
oxide | 1
significance | 1
forgot | 1
widely | 1
martin | 1
penn | 1
den | 1
webshots | 1
fluid | 1
mounts | 1
mae | 1
islamic | 1
convenience | 1
contain | 1
fd | 1
wave | 1
jar | 1
permission | 1
calculated | 1
deemed | 1
bodies | 1
belt | 1
recreational | 1
elite | 1
churches | 1
forms | 1
unless | 1
rpm | 1
bedrooms | 1
stamp | 1
conservation | 1
muslims | 1
supplement | 1
challenges | 1
causing | 1
owned | 1
providence | 1
heated | 1
evil | 1
opportunity | 1
hardly | 1
sitemap | 1
talk | 1
pink | 1
merit | 1
order | 1
```

```
declaration | 1
mighty | 1
mistress | 1
restoration | 1
pissing | 1
patents | 1
correctly | 1
deployment | 1
milk | 1
assembled | 1
detailed | 1
reggae | 1
previously | 1
television | 1
lions | 1
myself | 1
otherwise | 1
archived | 1
doc | 1
removal | 1
guidance | 1
soon | 1
cornwall | 1
environmental | 1
contracting | 1
cameron | 1
finger | 1
unlikely | 1
kuwait | 1
complicated | 1
philip | 1
helena | 1
broker | 1
bestiality | 1
developers | 1
org | 1
argued | 1
prime | 1
geography | 1
dns | 1
aside | 1
growing | 1
metropolitan | 1
interactions | 1
beverly | 1
purse | 1
cycling | 1
pirates | 1
recipients | 1
```

```
kingdom | 1
wal | 1
reply | 1
examples | 1
strengthening | 1
providing | 1
victory | 1
commented | 1
used | 1
debian | 1
salaries | 1
buildings | 1
utils | 1
pmc | 1
manually | 1
purchases | 1
insert | 1
improving | 1
devil | 1
dodge | 1
cables | 1
std | 1
create | 1
nipples | 1
jane | 1
holmes | 1
tea | 1
butler | 1
motels | 1
newfoundland | 1
cutting | 1
clocks | 1
infrared | 1
cowboy | 1
hormone | 1
windsor | 1
census | 1
uc | 1
declined | 1
index | 1
equipped | 1
src | 1
gradually | 1
placing | 1
Execution Time (seconds): 0.003458820000560081
```

Conteo de palabras del archivo: TC4.txt

```
!python wordCount.py TC4.txt
```

```
disciplinary | 1
continues | 1
literally | 2
ringtone | 2
parameter | 1
shift | 1
enhancement | 1
man | 1
za | 2
starring | 1
cashiers | 1
maria | 1
began | 1
incredible | 1
stations | 1
depends | 1
staff | 1
booty | 1
energy | 1
grid | 1
beach | 1
tools | 1
reached | 2
ethics | 1
mod | 1
preference | 1
compounds | 1
fragrances | 1
macintosh | 1
microsoft | 1
month | 1
beginner | 1
verse | 1
draws | 1
notification | 1
rolled | 1
canal | 1
held | 1
renewal | 1
erp | 1
oval | 1
own | 1
crazy | 2
cameras | 1
none | 1
javascript | 2
popular | 1
corp | 1
pdf | 1
phpbb | 1
```

```
drivers | 1
postal | 1
curtis | 1
annual | 2
newsletters | 1
isolation | 1
shown | 2
barrel | 1
languages | 1
pictures | 1
favorite | 1
dishes | 1
telecharger | 1
gi | 1
smooth | 1
supplier | 2
patients | 1
dsc | 1
literacy | 1
token | 1
samoa | 1
physical | 2
dvds | 1
beans | 1
moss | 1
check | 1
appreciate | 1
opponents | 1
song | 1
distinct | 1
baskets | 1
beads | 1
meta | 1
amazon | 1
mexican | 1
merchants | 1
checklist | 1
deborah | 1
adjustable | 1
etc | 1
nu | 1
im | 1
company | 1
with | 1
pubs | 1
worker | 1
engineering | 1
based | 1
data | 2
sake | 1
```

```
cycles | 1
consoles | 1
cholesterol | 1
oecd | 1
stays | 1
just | 1
pose | 1
fought | 2
delaware | 1
ieee | 1
ge | 1
prefers | 1
dramatically | 2
folder | 1
bio | 1
logging | 1
maiden | 2
contains | 2
demographic | 1
dts | 1
dependence | 1
simple | 1
brooklyn | 1
admin | 1
gd | 1
warning | 1
diffs | 1
discovered | 1
adolescent | 1
regression | 1
dinner | 1
albuquerque | 1
showed | 1
variance | 1
vacancies | 1
metallica | 1
liable | 1
spending | 1
residential | 1
hosts | 1
scanned | 1
studies | 1
cuisine | 1
reviewing | 1
commands | 1
gtk | 1
roger | 1
killed | 1
contrary | 1
queensland | 1
```

```
deferred | 1
dd | 1
syndicate | 1
hindu | 1
cabinet | 1
stretch | 1
julian | 1
partly | 1
est | 1
panels | 2
banking | 1
racial | 2
represented | 1
defendant | 1
subject | 1
hint | 1
often | 1
ii | 1
soonest | 1
potential | 1
lil | 1
hybrid | 1
theoretical | 1
contributing | 1
gateway | 1
biggest | 1
az | 1
feelings | 1
existence | 1
shelter | 1
lows | 1
continuously | 1
pilot | 1
recovered | 1
vsnet | 1
myspace | 1
foreign | 1
started | 3
newspaper | 1
core | 1
respiratory | 1
replacing | 1
ear | 1
charts | 2
frequently | 1
reproduction | 1
stress | 1
legacy | 1
spent | 1
spice | 1
```

```
christian | 1
safer | 1
sword | 1
of | 1
ata | 1
yu | 1
math | 1
navy | 2
learned | 1
brochure | 1
suggested | 1
tired | 2
prove | 1
audit | 1
specifics | 1
stayed | 1
side | 1
sought | 1
decorative | 1
edition | 1
runner | 1
seal | 1
translate | 1
tennessee | 1
below | 1
burn | 1
bk | 1
helen | 1
farm | 2
nyc | 1
predict | 1
proud | 1
vault | 1
jeremy | 1
newsletter | 1
leadership | 1
legislative | 1
analyst | 1
tower | 1
investments | 1
goat | 1
oven | 1
preparation | 1
wound | 1
plenty | 1
bizrate | 1
pm | 1
approve | 1
arthritis | 1
detroit | 2
```

```
subsidiaries | 1
coupled | 1
expansion | 1
ben | 1
humanities | 1
teaching | 1
understanding | 1
alternatives | 1
handed | 1
millennium | 1
plays | 2
honors | 1
fs | 1
fifth | 1
something | 1
clients | 2
cuts | 1
dec | 1
shemale | 1
distributions | 1
snake | 1
folding | 1
worry | 1
dispute | 1
bridal | 1
boundary | 1
presentation | 1
sexcam | 1
offer | 1
pace | 1
far | 1
danger | 1
dawn | 1
attention | 1
hospitals | 1
destroy | 1
qualifications | 1
sk | 1
salvador | 1
cloudy | 1
reload | 1
start | 1
mountain | 1
chase | 1
periodically | 1
combination | 1
once | 1
clearance | 1
nightmare | 1
via | 1
```

```
mozambique | 1
depend | 1
dave | 1
lakes | 1
break | 1
contacts | 1
couples | 1
today | 1
jeff | 1
passwords | 1
dresses | 1
tokyo | 1
castle | 2
fridge | 1
freelance | 1
region | 1
lake | 1
obituaries | 1
gl | 1
bloom | 1
sciences | 1
speed | 1
ef | 1
illness | 1
kernel | 1
onion | 2
critics | 1
considerable | 1
lawsuit | 1
instances | 1
pocket | 1
payable | 1
entering | 1
io | 1
successfully | 1
ending | 1
klein | 1
architects | 1
prostate | 1
designers | 1
output | 1
infections | 1
book | 2
partnership | 1
eating | 1
employee | 1
import | 1
discover | 1
nice | 1
tragedy | 1
```

```
computational | 1
diamonds | 2
spotlight | 1
benchmark | 2
shut | 1
harbour | 1
procurement | 1
glow | 1
iii | 1
earn | 1
warranties | 1
portugal | 1
forgot | 1
hispanic | 1
korea | 1
silly | 1
picking | 1
detection | 1
great | 1
asian | 1
kinds | 1
producing | 1
gifts | 1
simulations | 1
vol | 1
salt | 2
install | 1
tue | 1
partial | 1
yourself | 1
electrical | 1
informal | 1
deny | 1
sparc | 2
drinks | 1
tall | 1
ocean | 1
icons | 1
subjects | 1
arabia | 1
plaintiff | 1
packet | 1
conduct | 1
assessed | 1
diamond | 1
real | 1
blade | 1
source | 1
proteins | 1
mag | 1
```

```
locking | 1
ga | 1
watches | 1
casa | 1
baby | 1
engaged | 1
dam | 1
productivity | 1
car | 1
forms | 1
nokia | 1
companies | 1
france | 1
married | 1
jeep | 1
burner | 1
sexy | 1
work | 1
dip | 1
vhs | 1
thunder | 1
declaration | 1
define | 1
scenarios | 1
saint | 1
yellow | 1
satellite | 1
epic | 1
win | 1
wild | 1
organ | 1
incorporated | 1
observed | 1
morocco | 2
fields | 1
broadcast | 1
css | 1
knives | 1
responsible | 1
thriller | 1
effective | 1
transform | 1
mh | 1
belkin | 1
stories | 1
penalties | 1
focus | 1
governor | 1
metallic | 2
cluster | 1
```

```
threatening | 1
insulin | 1
ar | 1
hampton | 2
springs | 1
nvidia | 2
tribe | 1
humidity | 2
scuba | 1
reduced | 1
ran | 1
hole | 1
copying | 1
harper | 1
bacterial | 1
closely | 1
disposal | 1
miss | 1
sending | 1
hamburg | 1
tin | 1
protocol | 1
tb | 1
char | 1
roof | 1
latvia | 1
credits | 1
harold | 1
puts | 1
chemicals | 1
buck | 1
discuss | 1
renaissance | 2
downloadable | 1
beautiful | 1
wearing | 1
would | 1
colon | 1
itself | 1
coastal | 2
latin | 1
inf | 1
marble | 1
mercury | 1
previous | 1
ate | 1
repeated | 1
calvin | 1
specified | 1
z | 1
```

```
brake | 1
ddr | 2
increases | 1
fort | 1
diseases | 2
assigned | 1
sitting | 1
preparing | 1
opened | 1
swap | 1
dev | 1
gamespot | 1
little | 1
conversion | 1
vintage | 1
greece | 1
lab | 1
federal | 1
coordinate | 1
travelling | 1
lookup | 1
recall | 1
physiology | 1
robust | 1
pointing | 1
charity | 1
books | 1
weak | 1
oman | 1
somebody | 1
np | 1
entertainment | 1
the | 1
treatment | 1
drunk | 1
tell | 1
mary | 1
hungarian | 1
levitra | 1
dallas | 1
cancel | 1
u | 1
guard | 1
circles | 1
impressed | 1
gloves | 1
dildo | 1
committees | 1
registrar | 1
promises | 1
```

```
tender | 1
texas | 1
bolt | 1
substances | 1
producers | 1
organised | 1
protest | 1
unified | 1
mesh | 1
currency | 1
owen | 1
explosion | 1
enclosure | 1
vital | 1
confidential | 2
usps | 1
similar | 1
flickr | 1
regional | 1
division | 1
vernon | 1
website | 1
glenn | 1
omega | 1
since | 2
eds | 1
poor | 2
rr | 1
sf | 1
finds | 1
reactions | 1
villages | 1
supporting | 1
seniors | 1
penalty | 1
filed | 1
yet | 1
linking | 1
es | 1
longest | 1
church | 1
limousines | 1
puppy | 1
processes | 1
consideration | 1
bike | 1
shipping | 1
blues | 1
prophet | 1
```

```
develops | 1
cartridges | 1
deliver | 1
iron | 1
chelsea | 1
southwest | 1
milf | 1
expect | 1
bryan | 1
camel | 1
cheap | 1
ftp | 1
variable | 1
weapons | 1
lots | 1
diversity | 1
classic | 1
calibration | 1
yukon | 1
jm | 1
wagon | 1
reply | 1
ion | 1
morgan | 1
tear | 1
australian | 1
everywhere | 1
labor | 1
nano | 1
switch | 1
connector | 1
equivalent | 1
saints | 1
christopher | 1
lincoln | 1
consist | 2
finally | 1
rugs | 1
however | 1
hu | 1
bend | 1
seat | 1
sarah | 1
bedrooms | 1
monroe | 1
zen | 1
uh | 1
marker | 1
macromedia | 1
```

```
elsewhere | 1
rapid | 1
berry | 1
dental | 1
cars | 1
peaceful | 1
wang | 1
consumption | 1
ill | 1
espn | 1
emergency | 1
bon | 1
winston | 1
streets | 1
biz | 1
timeline | 1
telecom | 1
circuits | 1
cv | 1
retailers | 1
words | 1
represents | 1
beside | 1
cet | 1
opera | 1
nc | 1
bt | 1
estimates | 1
christ | 1
challenges | 1
linear | 1
invitations | 1
oklahoma | 1
leasing | 1
beverage | 1
decent | 1
continually | 1
focusing | 1
poland | 1
partnerships | 1
overnight | 1
earning | 2
barrier | 1
rush | 1
hourly | 1
biographies | 1
question | 1
buses | 1
leave | 1
```

```
collar | 1
mongolia | 1
outreach | 1
spec | 1
colleges | 1
talked | 1
unfortunately | 1
grande | 1
modification | 2
shoppercom | 1
noise | 1
motivated | 1
operates | 1
gibraltar | 1
focused | 1
cst | 1
ourselves | 1
taking | 1
medicines | 1
tits | 1
exists | 1
stay | 1
shirt | 1
bingo | 1
killing | 1
prerequisite | 1
namely | 1
weekly | 1
exactly | 1
bryant | 1
duties | 1
wav | 1
var | 1
occur | 1
explain | 1
grad | 1
observe | 1
textile | 1
ruby | 1
nz | 1
operation | 1
concentrate | 1
performances | 1
begin | 1
trip | 1
hurricane | 1
have | 1
relief | 1
theaters | 1
```

```
hawaii | 1
sandwich | 1
grown | 1
upon | 1
fucking | 2
quarter | 1
thirty | 1
doctors | 1
tones | 1
luke | 1
dish | 1
ur | 1
flying | 1
stuff | 1
resumes | 1
students | 1
pb | 1
paxil | 1
browsers | 1
indicating | 1
duncan | 1
lucy | 1
turn | 1
inns | 1
openings | 1
ultram | 1
panel | 1
tested | 1
ribbon | 1
usb | 1
walked | 1
beaches | 1
war | 1
calculated | 1
prev | 1
zimbabwe | 2
bra | 1
patent | 1
shore | 1
skills | 1
wv | 1
sue | 1
hosting | 1
seasonal | 1
caps | 1
vermont | 1
paper | 1
update | 1
nikon | 1
```

```
tea | 1
uruguay | 1
virus | 1
solo | 1
berlin | 1
males | 1
washington | 1
bible | 1
wallpaper | 1
y | 1
queen | 1
trigger | 1
nearly | 1
negotiations | 1
summer | 1
escort | 1
mt | 1
pin | 1
practitioner | 1
charger | 1
tenant | 1
monetary | 1
networking | 1
risk | 1
trap | 1
proposals | 1
coordinates | 1
lenders | 1
dos | 1
dried | 1
cork | 1
settings | 1
daughter | 1
reserve | 1
tactics | 1
deals | 1
mad | 1
boobs | 1
ex | 1
pharmacy | 1
reproductive | 1
chrome | 1
encryption | 1
leu | 1
recommend | 1
collections | 1
tire | 1
invention | 1
pipes | 1
```

champions | 1
blend | 1
cb | 1
retrieved | 1
vulnerability | 1
kansas | 1
photographic | 1
pioneer | 1
tiffany | 2
pmc | 1
scheduling | 1
dividend | 1
shark | 1
variations | 1
booking | 1
promoting | 1
virtual | 1
slowly | 1
strips | 1
inn | 1
much | 1
fraud | 1
daniel | 1
drive | 1
equipped | 1
somehow | 1
calgary | 1
photograph | 1
strike | 1
toll | 1
native | 1
or | 1
toe | 1
programme | 1
stage | 1
tiger | 1
effects | 1
items | 1
corporate | 1
improvement | 1
stan | 1
durable | 1
controller | 1
stewart | 1
sr | 1
sculpture | 1
murder | 1
wedding | 1
gathered | 1

```
pas | 1
placing | 1
defense | 1
strict | 1
bowling | 1
imperial | 1
unlock | 1
resolved | 1
lately | 1
protocols | 1
direction | 1
voyuer | 1
regard | 1
foods | 1
ft | 1
dating | 1
building | 1
estonia | 1
performs | 1
equilibrium | 1
sen | 1
tahoe | 1
disclose | 1
slip | 1
midlands | 1
shemales | 1
walking | 1
racks | 1
innocent | 1
campaigns | 1
christina | 1
bulletin | 1
synthesis | 1
so | 1
commerce | 1
offensive | 1
updating | 1
interaction | 1
received | 1
ma | 1
hdtv | 1
rates | 1
powerful | 1
was | 1
computing | 1
cells | 1
contained | 1
replaced | 1
calling | 1
```

```
mailman | 1
extent | 1
corpus | 1
sv | 1
wishlist | 1
expired | 1
circular | 1
Execution Time (seconds): 0.006669706000138831
```

Conteo de palabras del archivo: TC5.txt

```
!python wordCount.py TC5.txt
```

```
loaded | 2
wilderness | 5
specify | 2
cole | 1
telecom | 1
earliest | 2
uniprotkb | 1
retailer | 3
acquired | 1
reasoning | 2
breathing | 1
ozone | 3
hz | 1
consequences | 1
volume | 2
isaac | 2
milwaukee | 1
agenda | 1
roulette | 2
ordinance | 1
challenging | 1
regions | 2
faq | 1
sunset | 2
advantage | 1
masturbating | 1
biographies | 1
wednesday | 1
picks | 2
silk | 1
gossip | 2
tournaments | 1
entrepreneurs | 2
adjust | 1
designation | 2
injury | 3
```

```
flash | 1
baptist | 1
looksmart | 1
mason | 1
reservation | 2
trustee | 1
affairs | 1
prints | 1
enclosure | 1
routes | 1
metro | 1
gps | 4
walnut | 1
bunny | 1
bubble | 1
moscow | 3
biggest | 1
forecasts | 1
bunch | 1
myspace | 2
cancellation | 1
gambling | 1
amsterdam | 1
md | 1
introduction | 2
feel | 1
nigeria | 1
appearing | 1
system | 2
applied | 1
supplements | 2
contractor | 1
developer | 1
station | 3
du | 1
pete | 2
ie | 1
expectations | 1
places | 1
canal | 1
compute | 1
americans | 1
stating | 1
patrick | 2
assignments | 2
lucy | 1
unions | 3
authors | 1
public | 1
```

```
consist | 1
wave | 1
headline | 1
oct | 2
anytime | 1
modem | 2
sharon | 3
master | 1
keeping | 4
racial | 1
balance | 1
wire | 1
testament | 1
photos | 2
assurance | 1
casa | 1
vertical | 1
specialist | 3
loads | 1
considerable | 1
counsel | 1
deer | 1
hilton | 3
programmers | 2
possibilities | 2
ugly | 2
presentation | 2
studies | 1
block | 1
recent | 1
favorites | 1
soonest | 2
right | 1
comp | 1
navy | 2
cookbook | 1
excellence | 3
lover | 2
quest | 1
wilson | 3
most | 1
asin | 1
potter | 1
motors | 1
disputes | 1
kurt | 3
bool | 2
pulling | 1
bonus | 1
```

```
samoa | 2
maker | 2
hacker | 1
allowed | 1
soldier | 1
plastics | 1
upset | 2
dock | 1
elegant | 1
fame | 1
intense | 1
hoped | 2
keith | 2
recognised | 2
over | 1
focusing | 1
landscape | 2
desperate | 1
attraction | 1
wp | 1
mariah | 1
warnings | 1
ia | 1
je | 2
evaluating | 1
screensaver | 2
served | 1
calgary | 2
sponsor | 2
aim | 1
thoroughly | 1
richmond | 1
federal | 2
which | 1
nutten | 1
gate | 2
river | 3
dangerous | 1
reseller | 3
argue | 1
busty | 1
theatre | 2
travelling | 4
predicted | 1
discovery | 1
broker | 1
sku | 1
turkish | 2
managed | 5
```

```
witnesses | 2
gaming | 2
tribune | 1
threats | 4
albums | 1
converted | 1
hospitality | 1
troy | 1
separately | 2
hoping | 2
therapist | 1
souls | 3
panic | 1
cigarette | 1
detailed | 2
neighborhood | 1
lone | 1
strict | 1
improved | 2
exemption | 1
afterwards | 1
writes | 1
patricia | 1
fwd | 2
revolutionary | 3
rehabilitation | 1
trusted | 1
subject | 1
di | 1
mitsubishi | 2
sponsors | 1
tackle | 1
ti | 1
visibility | 2
student | 2
universal | 3
described | 2
offset | 2
verzeichnis | 1
shut | 2
screens | 2
classification | 1
previews | 1
retail | 1
continental | 1
slight | 1
matched | 3
saw | 2
ref | 2
```

```
attach | 1
laundry | 3
warren | 2
rooms | 1
coleman | 2
meant | 3
de | 1
anybody | 1
female | 1
myself | 1
fortune | 1
lane | 3
exec | 1
lender | 1
triangle | 1
speaker | 1
inches | 2
insider | 1
reserved | 1
darwin | 1
mixture | 3
rights | 1
negotiation | 2
tee | 1
andy | 1
occasion | 2
yn | 1
confused | 1
differential | 1
doug | 1
anywhere | 1
like | 1
immediately | 1
arise | 1
schools | 5
nicaragua | 1
cover | 1
occurrence | 2
ar | 2
horse | 1
climb | 2
directories | 1
given | 2
burner | 1
original | 3
idol | 2
proceedings | 1
uganda | 2
ted | 1
```

competing | 1
game | 3
passion | 4
exclusively | 2
pda | 2
spirit | 2
translations | 2
council | 1
turns | 1
dead | 1
spell | 2
cost | 1
veterans | 1
themes | 2
singh | 1
gel | 1
upskirts | 2
conferences | 1
horn | 2
yo | 2
attendance | 1
normally | 1
helpful | 2
raymond | 1
tablets | 3
astrology | 1
closest | 1
steering | 2
carlos | 1
lights | 2
hours | 1
tasks | 1
resulting | 2
scroll | 2
touched | 1
cet | 1
pdas | 1
generous | 1
historic | 1
belle | 1
indigenous | 1
hh | 1
katie | 1
those | 1
focuses | 1
offshore | 1
neighbor | 1
loans | 1
cursor | 1

```
cr | 2
outsourcing | 2
anthropology | 1
mistakes | 1
introduce | 1
slot | 1
bouquet | 1
horizon | 2
replication | 1
bags | 1
del | 1
blvd | 1
reel | 2
sister | 1
invasion | 1
depending | 1
beings | 1
defend | 2
fresh | 1
push | 2
flight | 2
recommend | 2
iso | 1
scanners | 1
jonathan | 2
tourist | 1
entries | 3
pull | 1
thing | 2
filed | 3
router | 3
karen | 2
blind | 2
concentrations | 1
listings | 3
earnings | 1
v | 3
thickness | 1
measure | 1
midnight | 2
integrate | 1
victor | 1
bless | 2
pointing | 3
manufacturing | 3
sector | 2
arkansas | 1
regardless | 2
mounted | 1
```

blues | 1
ways | 1
blanket | 1
intel | 1
boxing | 2
locally | 3
broken | 1
liabilities | 1
antique | 1
freight | 1
valued | 2
world | 2
bw | 2
display | 1
witch | 2
ye | 1
rid | 1
separated | 1
remainder | 2
hay | 1
wm | 2
ave | 1
emperor | 1
harrison | 2
happened | 1
hazard | 2
excerpt | 2
brian | 1
integer | 1
smoking | 2
eventually | 1
church | 1
citizens | 1
frequent | 1
sv | 1
opens | 4
choir | 1
informational | 1
cooked | 1
fascinating | 2
inkjet | 2
tell | 2
was | 1
began | 1
horizontal | 2
harmful | 1
satellite | 1
rapidly | 1
michael | 1

```
basically | 1
propose | 3
textbooks | 2
helping | 2
raises | 1
stan | 2
sorted | 2
well | 1
exceptions | 1
products | 4
desire | 1
finished | 1
sf | 2
employment | 1
glenn | 1
dome | 1
teens | 1
expansion | 1
packs | 2
camcorder | 1
text | 2
charging | 1
define | 1
represent | 1
twice | 1
eau | 3
evening | 1
rider | 1
minolta | 1
cam | 1
leader | 1
salon | 2
catalog | 1
orbit | 2
coordinate | 1
erotic | 1
examining | 1
cedar | 2
venues | 1
solar | 1
saver | 2
killer | 2
electrical | 1
metabolism | 1
trail | 1
halo | 2
rides | 2
technical | 2
calibration | 1
```

```
fighter | 2
sheep | 2
sustainability | 2
lafayette | 1
owned | 3
bernard | 1
emirates | 2
blend | 1
lazy | 1
webcams | 4
salem | 1
indexed | 2
sync | 3
treasurer | 2
terrorists | 1
eligible | 1
fold | 3
staffing | 2
degree | 1
commissioners | 1
buyer | 1
sometimes | 1
warcraft | 1
auckland | 1
married | 1
transexual | 2
larger | 1
mats | 2
tragedy | 2
sean | 1
earl | 2
residential | 1
jurisdiction | 1
fossil | 2
tumor | 1
obligations | 2
configuring | 1
relax | 1
presents | 2
walking | 2
play | 1
panties | 1
witness | 2
punishment | 1
bookmark | 1
flag | 2
drum | 1
disclosure | 1
key | 3
hats | 1
```

```
manitoba | 1
harmony | 1
reform | 1
chester | 1
reporter | 2
viral | 2
bob | 1
thailand | 2
cams | 2
reply | 2
reviews | 1
small | 1
registered | 2
penny | 1
phrase | 1
scan | 1
efforts | 1
closely | 2
donna | 1
send | 1
warrant | 1
demands | 1
train | 1
trinity | 1
flashing | 1
upskirt | 3
condo | 1
chrome | 2
fathers | 1
federation | 1
availability | 1
switch | 1
thick | 2
voting | 1
investigated | 1
gotta | 1
blood | 1
carb | 1
reproductive | 1
terrorist | 4
visiting | 1
oclc | 2
talent | 2
gently | 1
fishing | 1
boulevard | 1
pregnancy | 2
knowledgestorm | 1
published | 4
```

```
louise | 1
usda | 2
writer | 1
volunteers | 1
damages | 1
norfolk | 1
criterion | 1
trailer | 1
diff | 1
torture | 2
becomes | 1
participation | 1
submit | 2
thriller | 1
satisfaction | 1
brake | 1
continually | 1
schemes | 1
princeton | 2
chess | 1
muscle | 1
nudity | 1
dramatically | 1
packaging | 1
holmes | 1
topless | 2
boc | 1
topic | 1
chen | 1
cook | 1
geo | 2
inf | 3
barbados | 1
caps | 1
collectibles | 1
salvador | 1
pamela | 1
doe | 1
catalyst | 1
desirable | 2
marilyn | 1
respond | 2
ru | 2
facts | 1
pays | 3
feeding | 1
museum | 2
clearance | 1
investigator | 1
```

drove | 2
path | 1
vegas | 1
coupons | 1
happens | 2
let | 1
old | 1
leeds | 1
sport | 3
bluetooth | 1
petersburg | 4
genres | 1
resort | 1
line | 2
simulations | 1
getting | 2
fun | 1
portfolio | 2
eh | 1
performer | 1
bahamas | 1
fibre | 1
individual | 1
log | 2
cambodia | 1
nice | 2
modems | 1
justice | 2
starts | 2
maximize | 2
classroom | 1
directory | 1
italy | 3
timing | 1
domestic | 1
endless | 1
sells | 3
tariff | 3
bruce | 1
tutorials | 1
seller | 2
baskets | 1
bag | 1
manufactured | 4
knowledge | 2
framing | 1
newspapers | 2
influence | 1
charlotte | 1

```
specifically | 1
unusual | 3
shipped | 1
blink | 1
naples | 1
intellectual | 1
boobs | 2
voyeurweb | 1
thin | 1
sexuality | 1
language | 1
unique | 2
teddy | 1
barcelona | 1
clay | 1
painting | 2
latin | 1
webmaster | 3
sprint | 2
locks | 1
find | 1
dynamic | 1
located | 2
milfhunter | 2
cyber | 1
requiring | 2
nottingham | 1
termination | 1
bound | 1
stay | 1
ralph | 1
narrative | 1
outline | 2
principle | 1
luggage | 1
illinois | 1
kits | 1
seasonal | 1
informative | 1
oil | 2
imports | 1
privileges | 1
usr | 2
distant | 1
personal | 1
corrections | 1
entity | 1
hills | 1
proxy | 2
```

```
dog | 1
sega | 3
competitors | 1
variance | 2
coalition | 1
dictionary | 1
oasis | 1
servers | 2
parliamentary | 1
pig | 2
contained | 1
clearing | 1
resulted | 1
olympic | 1
trip | 1
fin | 1
mineral | 1
pan | 1
wizard | 1
wayne | 1
penn | 1
livecam | 1
mortgage | 2
stream | 2
software | 1
brochures | 1
treated | 2
patent | 2
jpg | 1
horrible | 1
skype | 2
thrown | 1
tent | 2
status | 1
houston | 2
coated | 2
nights | 1
copy | 1
kentucky | 2
spine | 1
contribute | 1
trading | 2
establishing | 2
combines | 1
lean | 1
terrace | 1
condition | 1
sierra | 1
manager | 1
```

```
holidays | 1
believes | 1
cox | 1
campus | 1
section | 1
web | 3
glory | 2
birthday | 1
eos | 1
wherever | 1
nursing | 2
ja | 1
pink | 2
technological | 2
despite | 2
think | 2
distributor | 1
dr | 1
ce | 1
homes | 1
stop | 2
suggestions | 4
sustainable | 1
cologne | 1
finishing | 2
gtk | 3
greater | 1
numeric | 2
keywords | 1
craps | 1
rec | 3
skirts | 2
mileage | 1
circle | 1
wiki | 1
hill | 2
practitioners | 1
essence | 2
thumb | 1
estimation | 1
walls | 1
collective | 1
shaft | 1
rn | 2
sacrifice | 2
pic | 2
nicholas | 2
polished | 1
publicly | 3
```

```
ipod | 1
experiences | 1
whore | 1
dies | 2
lawrence | 1
ooo | 1
wages | 1
iraqi | 1
genuine | 1
correspondence | 1
reno | 1
bringing | 1
euro | 3
weblog | 3
rp | 1
signature | 3
er | 2
digit | 1
episode | 1
rod | 1
putting | 2
pad | 2
close | 1
rio | 2
oriented | 1
belly | 1
curriculum | 1
timeline | 1
oval | 1
self | 3
futures | 1
triple | 2
processed | 1
lauren | 1
mother | 1
pf | 1
slut | 1
tampa | 3
firmware | 1
type | 1
pets | 5
substantially | 1
subdivision | 2
gold | 2
physiology | 2
broadcasting | 1
inns | 1
ruby | 1
consequence | 1
```

```
bits | 1
martial | 3
lows | 2
nationally | 2
manhattan | 1
instrumentation | 1
hometown | 1
hey | 1
zen | 1
noble | 1
edmonton | 2
multiple | 1
decrease | 1
http | 2
organic | 2
portland | 1
margaret | 4
safe | 1
latino | 1
remember | 3
uri | 1
lowest | 2
grown | 2
terrible | 1
um | 3
golf | 2
mandatory | 1
soon | 1
space | 2
hour | 1
spent | 1
tray | 1
mart | 1
tools | 1
explain | 4
milton | 1
sets | 2
episodes | 1
intl | 2
uncertainty | 1
spaces | 1
toxic | 1
jump | 3
crack | 1
nsw | 1
two | 3
erotica | 1
platform | 1
enb | 2
```

```
practice | 1
brave | 1
restructuring | 1
improvement | 2
efficient | 1
players | 1
pam | 2
ebook | 2
distance | 2
notes | 2
merchandise | 2
transmit | 1
trademarks | 2
reflect | 1
closure | 1
show | 1
prediction | 2
rugby | 1
peers | 1
knives | 1
briefs | 1
middle | 1
recreational | 1
proprietary | 1
cleaning | 1
mw | 1
debian | 1
veteran | 2
notebooks | 1
bottle | 1
recommends | 4
qty | 1
ftp | 1
wallpapers | 1
photographer | 1
flexible | 1
tr | 3
shortly | 1
failure | 1
clause | 1
hero | 2
kind | 2
yrs | 3
ukraine | 3
depression | 1
evolution | 1
erik | 1
characterization | 1
indians | 1
```

```
refine | 1
metadata | 1
cartoons | 1
emails | 1
ict | 2
pulse | 2
specifies | 1
packed | 2
hiring | 1
exploration | 1
installed | 2
composite | 1
customers | 1
gale | 1
expo | 1
rpm | 2
secretary | 3
ranking | 1
demographic | 1
linked | 2
elect | 2
riding | 2
yourself | 1
cloudy | 1
cb | 2
views | 2
multimedia | 1
quick | 2
latvia | 1
incidence | 1
prague | 2
harper | 1
fixes | 1
shopping | 2
european | 1
utilize | 1
events | 1
resistant | 1
diy | 1
breakfast | 1
priest | 1
revised | 1
dear | 1
locked | 1
marathon | 2
join | 3
tyler | 3
pricing | 2
predict | 1
```

```
revenge | 1
carter | 1
handmade | 2
elvis | 1
this | 2
duration | 1
wrote | 2
ericsson | 1
sustained | 1
holdem | 1
includes | 1
invoice | 2
tower | 1
lesbians | 1
jar | 2
grenada | 1
precious | 2
previous | 1
opening | 1
deaths | 1
irish | 1
late | 3
normal | 1
pitch | 2
worldcat | 4
surface | 1
face | 1
willing | 2
happy | 2
publish | 1
engineering | 2
powder | 1
develop | 1
producing | 2
execution | 1
duck | 1
figure | 1
watches | 2
departmental | 1
junction | 1
integrity | 1
gang | 1
task | 1
webster | 1
exception | 1
quantum | 1
pregnant | 3
semiconductor | 2
suspended | 1
girlfriend | 1
```

```
shots | 1
chapter | 1
embedded | 1
theaters | 2
usually | 1
portuguese | 1
changed | 1
stewart | 1
softball | 1
sound | 1
flower | 1
mixed | 1
extraordinary | 1
medicare | 2
construction | 1
harm | 2
vessels | 1
main | 2
corps | 1
doctors | 1
exploring | 2
found | 2
robot | 2
conservative | 1
leonard | 3
te | 3
strengths | 1
literary | 3
murder | 2
sitemap | 2
sufficient | 2
persian | 2
ratios | 1
cow | 1
pac | 1
ss | 1
issn | 2
identified | 1
rim | 2
inc | 1
govt | 1
corpus | 3
da | 1
coating | 1
hundreds | 1
dx | 1
indexes | 1
recommendations | 1
christian | 1
```

```
textile | 1
opponent | 1
length | 2
participant | 1
promised | 1
optimum | 1
mines | 3
egypt | 1
unlock | 2
lp | 1
chronicle | 1
portrait | 2
monster | 1
prozac | 2
usps | 1
pharmacology | 2
pirates | 1
motels | 1
guided | 3
florists | 1
laden | 1
ui | 3
hamilton | 1
pakistan | 1
impression | 1
superintendent | 1
cambridge | 1
inclusion | 3
urge | 1
recorded | 3
tony | 1
herald | 1
ten | 1
formats | 2
database | 2
desired | 1
green | 1
hentai | 2
palestinian | 1
proceeding | 2
roland | 1
cigarettes | 1
mens | 1
junk | 1
fragrance | 2
suit | 1
cv | 1
xhtml | 1
lou | 1
```

```
wrap | 4
mobility | 1
sonic | 2
headset | 2
rational | 1
engaged | 1
patrol | 2
employers | 4
fri | 1
knight | 2
void | 1
disks | 1
compliance | 1
rehab | 1
james | 1
med | 1
happening | 1
nightmare | 2
eagle | 2
jewellery | 1
diabetes | 2
museums | 1
eric | 1
liverpool | 1
sentence | 1
rhythm | 2
charter | 1
levitra | 1
exhibitions | 1
nokia | 3
carnival | 1
column | 1
validity | 3
payable | 2
meyer | 2
rolled | 1
seeks | 3
operating | 2
modes | 1
librarian | 2
decimal | 1
drinks | 3
munich | 3
runtime | 2
capitol | 1
hampton | 1
streams | 2
response | 1
provider | 2
```

```
clubs | 1
farm | 1
seems | 2
untitled | 1
mainly | 1
poll | 1
thu | 1
estimates | 1
chambers | 1
surrounded | 2
promise | 1
user | 3
flickr | 1
israel | 1
habits | 3
dicks | 1
laptops | 1
sam | 1
coat | 1
tree | 2
scotland | 2
jpeg | 1
livestock | 1
seattle | 2
gay | 1
prominent | 1
ordinary | 2
difference | 1
instant | 1
yr | 2
packing | 2
you | 1
std | 1
rich | 2
dresses | 1
newfoundland | 3
grants | 1
speakers | 2
wells | 1
sapphire | 2
ez | 1
site | 1
useful | 4
travelers | 1
snap | 2
richard | 1
nhs | 1
created | 1
shine | 3
```

```
supposed | 1
occupations | 3
hispanic | 1
hollow | 2
selecting | 1
dev | 1
trap | 3
swap | 1
message | 3
setup | 1
using | 1
enhancements | 1
mpeg | 1
photograph | 2
chose | 1
meals | 2
conclusions | 1
tattoo | 1
pci | 3
intent | 2
founded | 3
obviously | 1
from | 2
gather | 2
regime | 1
richardson | 2
cave | 1
fifth | 2
www | 3
radio | 1
sanyo | 1
surge | 1
there | 1
chaos | 1
ceremony | 1
sphere | 1
pictures | 2
jones | 1
valium | 2
size | 2
floral | 1
get | 1
factors | 1
fatal | 2
risks | 3
coordination | 1
picking | 2
reveal | 1
hook | 1
```

```
token | 2
ferry | 1
officially | 1
confirmed | 1
hydrocodone | 1
customise | 1
hair | 1
satisfied | 3
worcester | 1
occasional | 1
readings | 2
leon | 3
week | 1
exchange | 1
payday | 1
double | 2
collectors | 1
press | 2
crawford | 1
dude | 3
labs | 1
introductory | 1
firms | 2
trace | 1
continuous | 1
stated | 1
requires | 3
monroe | 2
logged | 2
sudan | 1
piece | 2
forgotten | 2
francisco | 1
rebates | 3
leslie | 1
flashers | 1
police | 2
nb | 4
route | 1
sign | 1
vid | 1
town | 1
molecules | 1
victory | 1
moon | 2
dm | 1
previously | 1
thee | 1
sink | 2
```

vibrator | 2
performing | 1
cms | 1
technique | 1
improve | 1
naval | 2
reliable | 1
refuse | 1
independence | 1
owner | 1
emily | 1
consolidation | 1
clinic | 1
runner | 1
longitude | 1
postings | 1
fist | 1
fees | 1
labour | 1
rg | 1
employer | 2
ultimately | 2
highway | 1
samsung | 2
worth | 1
shakespeare | 2
essential | 1
colonial | 1
meet | 1
plates | 1
widely | 2
hl | 3
expressions | 1
strip | 3
circles | 1
submission | 1
expanding | 2
neck | 1
compatibility | 1
threshold | 2
colored | 2
transcription | 2
seed | 2
plan | 1
xerox | 1
indices | 1
regularly | 1
cuisine | 1
newport | 1

```
orientation | 2
nearly | 2
legitimate | 2
keno | 2
senator | 1
summer | 3
savings | 1
though | 1
fifty | 1
remote | 2
rangers | 1
projected | 1
question | 1
ka | 1
sap | 1
concerning | 1
eugene | 1
trim | 1
civilization | 1
switches | 2
testing | 1
defendant | 1
fully | 2
pontiac | 1
whereas | 2
portraits | 2
dave | 1
last | 1
kids | 1
projector | 2
sbjct | 1
rica | 3
ships | 1
representatives | 3
explicit | 3
infected | 1
jm | 1
enter | 1
lbs | 2
peace | 1
please | 1
plc | 2
sail | 1
computed | 1
considering | 1
fancy | 2
grill | 1
definitions | 1
photographic | 1
```

```
permanent | 2
low | 1
sunrise | 2
legal | 2
towns | 2
clips | 1
singer | 1
colorado | 1
imagination | 1
respondent | 1
conceptual | 1
ni | 2
mongolia | 2
constant | 1
soc | 1
enlargement | 1
subjects | 3
diane | 1
forums | 2
shot | 1
legendary | 2
throwing | 3
showers | 2
depend | 1
resolved | 2
need | 1
keep | 3
dist | 2
repeat | 1
selective | 1
practical | 1
helicopter | 1
detective | 1
reward | 1
sep | 1
library | 1
speeds | 1
newest | 1
focus | 1
instrument | 1
photo | 2
towards | 2
resolution | 2
lined | 1
traveler | 2
portions | 1
contrast | 1
construct | 1
crap | 1
```

```
publication | 1
completed | 1
deluxe | 1
england | 2
switzerland | 2
killing | 1
navigate | 2
terminal | 2
knit | 2
roots | 1
fred | 2
index | 1
grocery | 2
scott | 1
tries | 1
continuously | 1
twenty | 2
com | 1
pole | 1
derby | 1
unlikely | 1
reliability | 1
signed | 1
hybrid | 1
frank | 2
kingston | 2
reproduce | 1
ecological | 2
treasures | 1
prophet | 1
source | 2
powerpoint | 2
criticism | 1
pgp | 2
populations | 1
harris | 3
yeah | 1
want | 2
zdnet | 2
ser | 1
include | 1
fixed | 1
distinction | 1
gazette | 2
order | 2
commented | 1
overview | 3
jeep | 1
farmers | 1
```

```
why | 3
mortgages | 1
reverse | 2
facial | 1
environmental | 1
prompt | 1
marks | 1
scene | 1
urban | 2
repairs | 1
wordpress | 2
ht | 1
emotions | 1
partially | 2
subscribe | 2
respected | 3
russell | 1
matter | 3
prix | 1
dp | 1
totally | 1
emphasis | 2
grace | 1
len | 2
font | 1
deborah | 1
required | 2
mandate | 2
kill | 1
directive | 1
help | 1
represented | 3
politicians | 1
dec | 1
total | 1
cope | 1
lie | 1
detroit | 1
layout | 2
poetry | 1
restricted | 1
suse | 1
supported | 1
serbia | 3
maintains | 1
jamie | 1
thumbnail | 1
van | 2
vocabulary | 1
norm | 1
```

```
drops | 2
warranties | 3
whilst | 1
dosage | 1
creation | 1
fiji | 1
dynamics | 1
denver | 1
editorials | 1
fit | 1
making | 1
pdt | 1
greece | 2
dirty | 1
radiation | 1
ny | 1
thousand | 1
leading | 1
discs | 1
mainstream | 1
hose | 1
paste | 1
fa | 1
sexo | 2
cooperative | 1
cubic | 1
strength | 1
june | 2
nurses | 2
tuesday | 1
means | 1
fly | 2
relaxation | 1
inflation | 1
harry | 1
multi | 1
negative | 1
former | 1
finder | 1
usage | 3
temperature | 1
taxi | 2
disney | 1
lauderdale | 1
sept | 1
opt | 2
dominican | 1
config | 1
say | 1
```

```
forget | 1
taiwan | 1
seem | 1
henderson | 1
trout | 1
sales | 2
vibrators | 1
molecular | 1
graph | 2
critics | 1
family | 1
suburban | 1
dozens | 2
ice | 1
testimonials | 2
ph | 2
watts | 1
rv | 1
deliver | 1
drunk | 1
musicians | 1
yea | 1
seas | 1
increasing | 2
news | 1
handled | 2
joyce | 1
til | 1
fight | 1
mike | 1
connecticut | 1
gary | 1
wed | 1
executive | 1
wang | 1
strategies | 1
soa | 1
prince | 2
shield | 1
databases | 1
pocket | 2
madrid | 1
purchase | 2
television | 1
noise | 1
escorts | 1
upload | 1
mixer | 2
wichita | 1
```

```
infant | 1
few | 1
postage | 1
guy | 1
prescription | 1
stopping | 2
propecia | 1
stephen | 1
intersection | 1
guitar | 1
sorry | 1
mentioned | 2
random | 1
leasing | 2
invention | 2
worthy | 1
named | 1
olive | 2
reset | 1
resident | 1
physicians | 1
secretariat | 1
sounds | 2
tub | 1
laura | 1
requirements | 1
davis | 1
price | 1
such | 1
result | 1
fantastic | 1
silicon | 1
indianapolis | 1
keyboards | 2
settings | 2
visit | 1
fix | 1
nuclear | 2
mazda | 1
rain | 2
lessons | 1
toolbox | 1
qualities | 4
favorite | 2
theories | 1
margin | 2
organized | 1
proof | 1
pct | 1
```

```
toshiba | 2
haiti | 1
transfers | 1
sources | 1
hop | 1
fort | 2
penetration | 2
farms | 1
convenience | 1
instructor | 1
jane | 2
der | 1
dakota | 1
contents | 1
hottest | 1
metropolitan | 1
livesex | 2
serves | 1
ties | 2
premier | 1
tribal | 2
settlement | 1
grip | 1
hope | 1
l | 1
partners | 1
quarters | 2
wow | 1
jury | 1
reaction | 1
soup | 2
whole | 2
shadow | 1
macro | 1
hold | 2
tables | 3
consultant | 1
mary | 1
limited | 1
not | 2
shed | 1
divorce | 1
resistance | 2
signs | 1
looking | 1
kick | 1
treasure | 2
lithuania | 1
vitamin | 2
```

```
moderate | 1
refurbished | 2
factory | 1
liz | 1
hands | 1
sewing | 1
nam | 1
duke | 1
countries | 1
stainless | 1
shaved | 1
ongoing | 1
findlaw | 1
twisted | 2
network | 2
finances | 1
members | 1
vitamins | 1
moral | 2
dem | 1
subcommittee | 1
wanting | 1
reason | 1
preference | 1
scotia | 1
tall | 2
gm | 1
pp | 2
nerve | 1
sur | 1
following | 1
hawk | 1
mali | 1
inventory | 2
dealt | 1
remove | 1
ne | 1
tech | 2
encounter | 1
valentine | 1
pound | 1
guardian | 1
priced | 3
event | 2
mounts | 2
staying | 2
next | 1
doctor | 1
sao | 1
```

```
drivers | 1
reunion | 1
grey | 1
ira | 1
debate | 1
hopefully | 1
tip | 2
outdoor | 1
retreat | 1
expired | 1
incoming | 1
yen | 1
parks | 2
fabrics | 1
mug | 1
eddie | 1
hall | 1
wound | 1
sexually | 2
renaissance | 2
islam | 1
product | 2
forty | 1
iraq | 3
spy | 1
rj | 1
generally | 1
preventing | 1
faster | 1
terms | 1
openings | 1
hollywood | 1
wu | 1
instance | 1
spec | 3
thinkpad | 2
ep | 2
sentences | 4
improving | 1
goals | 1
lens | 1
pressure | 1
imagine | 1
warriors | 1
invision | 2
heated | 1
queries | 1
desktops | 1
dns | 1
```

```
symposium | 3
involvement | 1
powell | 1
races | 1
toy | 3
said | 1
shipping | 1
elizabeth | 1
suite | 1
patents | 2
polls | 1
prerequisite | 1
readily | 1
cosmetic | 1
quantities | 1
elected | 1
sat | 1
markets | 1
free | 1
spirits | 3
rebecca | 1
migration | 3
tranny | 2
girls | 1
mtv | 1
mo | 1
operator | 1
mild | 1
searchcom | 1
workshop | 2
liberty | 1
quarterly | 1
likelihood | 1
lisa | 1
manuals | 1
dept | 1
organizations | 3
simon | 1
tabs | 2
gain | 1
principal | 1
lg | 3
roll | 1
signal | 1
ing | 1
tribute | 2
roster | 1
ln | 1
marvel | 1
```

```
victims | 2
forever | 1
install | 1
shooting | 2
est | 1
tested | 1
julia | 2
trio | 2
jets | 1
lovers | 2
downtown | 3
ext | 1
related | 1
trucks | 1
obesity | 1
institute | 2
displaying | 1
everywhere | 2
symphony | 1
nirvana | 1
postal | 1
principles | 1
formatting | 1
pet | 1
funded | 1
missile | 2
talented | 1
suppliers | 1
dans | 1
drill | 2
majority | 1
outputs | 1
gifts | 1
microphone | 2
evans | 2
organize | 1
vehicles | 1
plaza | 1
institutions | 2
loop | 2
letter | 1
disposal | 1
we | 1
draw | 1
hd | 1
operation | 1
examinations | 1
viewers | 1
incident | 2
```

pl | 1
winds | 1
oral | 2
fares | 1
lime | 1
evaluations | 2
royal | 1
violence | 1
stomach | 1
touring | 1
wagner | 1
latinas | 2
un | 1
protected | 1
hotmail | 2
southampton | 1
sie | 1
medicines | 2
then | 2
hawaiian | 1
intro | 1
gravity | 1
kg | 5
lm | 1
door | 1
recreation | 3
exclusion | 2
yemen | 1
retrieved | 1
robin | 2
gordon | 1
split | 2
motorcycle | 1
straight | 2
guitars | 2
grove | 1
tex | 1
tobago | 2
sofa | 1
thirty | 3
donate | 1
painful | 1
kay | 3
pages | 2
recipients | 1
marked | 1
ministry | 2
el | 2
fast | 1

```
gross | 1
luther | 1
efficiency | 2
petite | 1
inexpensive | 1
perfume | 1
tension | 2
resorts | 2
work | 1
updated | 1
rating | 2
screening | 2
teenage | 1
minimize | 2
worry | 1
xml | 2
possibly | 2
milk | 1
marking | 2
similarly | 1
sudden | 2
paid | 2
her | 1
editors | 1
deleted | 1
side | 2
fence | 1
finnish | 2
delicious | 1
pillow | 1
unavailable | 1
unfortunately | 2
elements | 1
mechanical | 1
showed | 1
pts | 1
sh | 1
def | 1
statistics | 3
eternal | 1
frontier | 1
seasons | 4
weblogs | 2
playlist | 2
pace | 1
studying | 1
details | 1
forward | 2
nt | 3
```

```
disposition | 1
fiction | 2
lounge | 2
loud | 4
lincoln | 1
father | 1
porsche | 2
spears | 2
expenses | 1
identify | 1
problem | 1
people | 1
tvs | 1
lives | 1
yield | 2
enabled | 1
pair | 2
permission | 2
economy | 1
kelly | 1
stickers | 1
moving | 2
doom | 1
invite | 1
shoppingcom | 2
transexuales | 2
heating | 2
sunglasses | 1
isbn | 1
provinces | 1
snowboard | 1
standing | 3
university | 1
pathology | 1
waterproof | 2
lamp | 1
infection | 1
parent | 1
through | 1
hat | 2
samples | 2
storm | 2
squad | 1
mod | 1
gourmet | 1
mission | 2
likely | 2
flu | 1
projects | 1
operate | 1
```

```
wallace | 1
have | 1
pubmed | 1
operates | 2
foundation | 1
forests | 1
vatican | 1
outcome | 1
house | 1
incentives | 1
monthly | 1
throws | 1
ons | 1
literacy | 1
physical | 2
prime | 2
outlet | 1
platforms | 1
tim | 1
mature | 3
routine | 1
pros | 1
hist | 1
reporting | 1
nikon | 1
son | 3
weapon | 2
hyundai | 1
subsequent | 1
maternity | 2
fisher | 1
reviewing | 2
rows | 2
produce | 1
six | 2
serum | 1
permalink | 1
instruments | 2
samba | 1
rx | 3
omissions | 1
looks | 1
grammar | 1
precise | 1
html | 1
roles | 1
soviet | 1
venezuela | 1
forecast | 1
```

```
management | 1
np | 1
ought | 2
technician | 1
recovered | 1
marcus | 1
vids | 1
toronto | 1
educational | 1
uzbekistan | 2
participating | 1
dollars | 1
manufacturers | 1
running | 1
sand | 2
offense | 1
shorts | 2
grade | 1
ontario | 1
iii | 1
sa | 1
encourages | 1
someone | 1
pixels | 2
thumbzilla | 1
stuff | 1
plugin | 1
providers | 2
faqs | 1
rage | 1
legislature | 1
legislation | 1
hazards | 2
streets | 1
disciplines | 1
ourselves | 1
modeling | 1
journalism | 1
fd | 1
doing | 1
rat | 1
furnished | 1
pope | 1
misc | 1
pot | 2
science | 1
history | 1
southwest | 2
rendered | 2
```

housewares | 1
protect | 1
edt | 1
parts | 1
networks | 1
goes | 1
lloyd | 1
gospel | 1
mexican | 1
instead | 1
rear | 1
moves | 1
structural | 2
finals | 1
grad | 1
pharmaceutical | 2
do | 1
nodes | 1
guaranteed | 1
stripes | 1
yarn | 3
kills | 2
suggest | 1
tablet | 3
moore | 1
ea | 2
earned | 1
encouraging | 1
plants | 3
rubber | 1
hierarchy | 1
ec | 1
safely | 1
pushed | 2
nj | 2
foundations | 1
planners | 2
india | 1
fy | 1
native | 1
ensure | 1
helena | 1
locale | 1
maria | 1
montana | 1
medication | 1
ol | 2
hydrogen | 1
dna | 1

```
tract | 1
extends | 1
skills | 1
josh | 1
logistics | 1
duties | 1
une | 2
troops | 1
instructions | 2
telescope | 1
pins | 1
ireland | 1
regression | 1
stud | 1
lance | 1
tale | 1
investigation | 1
song | 1
domains | 1
lower | 1
threesome | 1
economies | 1
pipe | 1
measured | 1
election | 1
jewelry | 2
hotels | 2
inclusive | 1
vegetables | 1
hopes | 2
rap | 1
infinite | 1
prefix | 1
rl | 1
rw | 1
thehun | 1
stevens | 1
protective | 1
sale | 1
equity | 1
judgment | 1
travel | 1
monetary | 2
recipes | 1
offering | 1
newark | 1
heart | 1
holds | 2
mall | 1
```

```
singing | 1
monitoring | 2
query | 1
submitted | 2
mention | 2
gregory | 1
including | 1
promotions | 1
outcomes | 1
ears | 1
industry | 1
expansys | 1
on | 1
rel | 1
longer | 1
inn | 1
reflection | 1
poker | 3
enterprise | 1
ra | 1
yamaha | 1
twinks | 1
sullivan | 1
planner | 1
emerald | 1
families | 1
quiet | 1
promptly | 1
much | 1
officer | 1
sites | 2
lf | 2
slow | 1
tomorrow | 1
panels | 1
texts | 1
flip | 1
filme | 1
graphics | 1
marion | 2
pharmaceuticals | 1
tap | 1
ri | 1
festival | 1
respectively | 2
gore | 1
surname | 1
extensive | 1
mathematics | 1
```

```
prefers | 1
rr | 1
merge | 2
nashville | 1
violation | 1
liquid | 1
medal | 1
shopzilla | 2
pizza | 1
franklin | 1
secondary | 1
halifax | 1
perform | 1
monte | 1
maximum | 1
password | 1
kerry | 1
inch | 1
rwanda | 2
tf | 2
ground | 3
helped | 1
hiking | 1
package | 1
kevin | 2
framed | 1
licenses | 1
vehicle | 1
turn | 2
fans | 1
isp | 1
jewish | 3
faces | 1
later | 1
sharing | 2
sm | 1
processing | 1
enable | 1
pediatric | 2
objective | 2
pas | 1
hearings | 1
quilt | 1
sorts | 1
na | 1
liability | 1
steven | 2
input | 1
guinea | 2
```

```
sticks | 1
rescue | 1
promote | 1
homepage | 1
linux | 1
targets | 1
shakira | 1
levels | 1
shop | 2
heather | 1
editions | 1
layers | 1
food | 1
peripheral | 1
sucks | 1
released | 3
mini | 1
fw | 1
ranks | 1
rural | 2
handjob | 1
unnecessary | 1
tag | 2
fur | 1
injured | 1
hockey | 1
novels | 1
trackback | 3
vinyl | 1
furthermore | 1
wr | 1
volkswagen | 1
signing | 2
initiative | 1
neither | 1
saturday | 1
list | 1
effective | 1
manchester | 1
halfcom | 2
polyphonic | 1
permissions | 2
rarely | 1
many | 2
rental | 1
sen | 3
teaches | 1
tokyo | 1
induction | 1
```

```
swift | 1
newbie | 2
joy | 1
garmin | 1
particles | 1
sql | 1
speak | 1
relation | 1
gage | 1
pop | 1
results | 3
usa | 2
oliver | 1
restrict | 3
exit | 1
hq | 1
gov | 1
supplied | 1
optics | 2
minutes | 1
retain | 2
oracle | 1
invalid | 1
intake | 1
rogers | 2
outreach | 1
objectives | 1
worked | 2
filing | 1
tickets | 1
miles | 1
wash | 1
teachers | 1
processors | 1
io | 1
trader | 2
niagara | 2
isa | 1
purpose | 2
replace | 3
tactics | 1
printable | 1
qatar | 1
rip | 1
surf | 2
investigations | 1
nevertheless | 1
pavilion | 2
essay | 1
```

```
periods | 1
force | 1
traveling | 2
powerseller | 1
forest | 1
thong | 1
liberal | 3
fonts | 1
privacy | 2
pub | 3
revolution | 3
sim | 2
expenditures | 1
painted | 2
identical | 2
oc | 1
predictions | 1
lite | 1
manner | 1
garlic | 2
fruits | 1
makeup | 3
recognized | 1
gbp | 2
high | 1
measurement | 1
resolutions | 1
substances | 1
lynn | 1
wrestling | 1
spreading | 2
proposition | 1
suzuki | 1
isle | 1
supports | 3
records | 2
toner | 4
module | 1
refinance | 2
outer | 2
holes | 1
miniature | 1
ever | 1
moments | 1
fitting | 1
receives | 3
entering | 1
lobby | 1
immediate | 1
```

```
vincent | 2
genealogy | 1
hosts | 1
severe | 1
online | 1
jeffrey | 1
mobiles | 1
nipple | 1
violations | 1
wallet | 1
sr | 1
styles | 1
res | 1
oak | 1
exceptional | 1
funky | 1
ins | 1
squirting | 1
newer | 2
own | 1
ring | 1
transportation | 1
finally | 1
likes | 1
open | 1
street | 1
involve | 1
oxide | 3
jack | 2
questions | 1
update | 1
finish | 1
shoppers | 2
exercises | 1
illustration | 1
genes | 1
spies | 1
nh | 1
wal | 2
harold | 1
opposite | 2
varied | 2
grid | 1
judges | 1
notifications | 1
meets | 1
pokemon | 1
excessive | 1
eur | 1
```

```
springfield | 1
suggested | 1
sublime | 1
hear | 1
ward | 2
passenger | 1
hotelscom | 2
symantec | 1
laughing | 1
transition | 2
uw | 1
percentage | 1
officers | 3
marie | 1
guild | 2
mins | 1
zealand | 1
toolkit | 1
yeast | 1
utils | 1
host | 1
todd | 2
girl | 2
fear | 1
ship | 1
exhibit | 1
qualify | 2
tires | 1
underground | 1
playing | 1
gentleman | 1
fetish | 1
server | 2
garage | 1
memphis | 1
intelligent | 1
institution | 2
lexus | 1
ncaa | 1
execute | 1
home | 1
toddler | 1
rolling | 1
george | 1
twist | 1
shelter | 1
millennium | 2
feedback | 1
famous | 1
muze | 2
```

```
steady | 2
favour | 1
respondents | 1
hygiene | 1
thanks | 2
spray | 3
sea | 1
fixtures | 1
per | 1
gray | 1
mx | 3
reject | 1
returned | 1
passing | 1
programmes | 1
qualified | 2
knights | 1
filters | 1
nepal | 1
transport | 1
worldwide | 1
goto | 1
kazakhstan | 1
leather | 1
summit | 1
visitors | 3
extent | 1
fork | 1
valuation | 1
losing | 1
telecharger | 1
lending | 1
opportunities | 1
lived | 1
pockets | 1
mailed | 1
fcc | 1
heavily | 2
inquire | 2
researcher | 1
tour | 2
wage | 1
shoe | 1
russian | 1
pale | 3
mounting | 2
mean | 1
russia | 1
sb | 2
```

```
humans | 1
ridge | 1
external | 1
optional | 1
lap | 1
parish | 2
ordering | 1
objects | 1
menu | 2
marriage | 2
remarkable | 2
mv | 1
remark | 2
square | 1
siemens | 3
far | 1
ty | 1
unknown | 1
trembl | 2
nomination | 1
glad | 1
frederick | 1
summary | 3
soldiers | 1
inspections | 1
oz | 1
productivity | 1
personnel | 3
helps | 1
sys | 1
newscom | 2
largest | 1
sl | 2
patient | 1
spending | 1
rico | 1
partnerships | 1
sd | 1
surrounding | 2
sex | 1
salmon | 1
substantial | 1
wx | 1
navigator | 2
lo | 2
msgid | 1
imposed | 1
he | 1
regional | 1
```

```
school | 1
hartford | 2
puts | 1
sheffield | 3
savannah | 2
supervisors | 1
negotiations | 1
magical | 1
screen | 1
sn | 1
mega | 1
sheet | 1
reserves | 1
point | 1
featured | 1
jackie | 2
theater | 1
ready | 1
transcripts | 1
ko | 1
lycos | 2
shown | 1
otherwise | 1
rank | 1
struggle | 2
stations | 1
neighbors | 1
trust | 1
rather | 1
surveillance | 1
intended | 2
markers | 1
techniques | 3
occupation | 1
reporters | 1
watershed | 1
present | 2
standings | 1
publicity | 1
vacation | 1
qualification | 2
vulnerable | 3
payment | 1
synthesis | 1
frequently | 2
howto | 1
unauthorized | 1
losses | 1
sparc | 2
```

```
hanging | 1
obtain | 1
yesterday | 2
these | 1
habitat | 1
workflow | 1
writings | 1
fundamental | 1
rfc | 1
therefore | 2
islands | 1
rest | 1
slovenia | 1
peeing | 1
highways | 1
susan | 1
their | 2
pipeline | 1
guatemala | 2
problems | 1
robinson | 1
tend | 1
prayers | 1
reflections | 1
survey | 1
tolerance | 1
hampshire | 1
shore | 2
insects | 1
pg | 1
removable | 1
polymer | 1
thereafter | 1
teach | 1
inline | 1
sigma | 1
responsible | 1
hide | 1
sodium | 1
paths | 1
timothy | 3
shares | 1
purchased | 1
spank | 1
ghz | 1
honors | 2
safety | 1
finger | 1
rape | 2
```

```
mattress | 1
wing | 1
turtle | 2
impact | 2
los | 1
variations | 1
marco | 1
night | 3
fiscal | 1
mustang | 1
wind | 1
protest | 1
proceed | 1
policy | 1
ticket | 2
mint | 1
terror | 1
trend | 1
printer | 1
generators | 1
hints | 1
jewel | 1
popular | 1
focused | 1
grab | 1
integrating | 1
obj | 1
gdp | 1
marketing | 1
wars | 1
religious | 1
live | 1
webpage | 1
honor | 1
sense | 2
rb | 1
november | 2
guest | 1
success | 1
valuable | 1
lookup | 1
jeans | 1
pe | 1
miami | 2
florida | 1
tail | 1
penguin | 1
slideshow | 1
only | 1
```

```
glossary | 1
perceived | 1
supplies | 1
netherlands | 3
ignore | 1
tamil | 1
jp | 2
peninsula | 1
nation | 1
pie | 2
keeps | 1
silence | 1
wisconsin | 1
mt | 1
hardcover | 1
slave | 2
gardening | 1
offensive | 1
third | 1
mayor | 1
pens | 1
tubes | 1
frankfurt | 1
roger | 1
totals | 2
lebanon | 1
no | 1
kenya | 1
oops | 1
raw | 1
sandra | 2
legends | 1
ks | 1
myers | 1
receivers | 1
malawi | 1
joint | 1
preferred | 1
style | 1
left | 1
handle | 1
off | 1
physics | 1
rose | 1
registration | 1
lists | 2
rays | 1
requests | 1
prior | 2
```

```
ibm | 1
method | 1
sealed | 1
tracked | 2
lambda | 1
sleeve | 1
violin | 1
housing | 1
ment | 1
potatoes | 1
traffic | 2
pill | 2
verizon | 1
personalized | 1
proper | 1
relates | 4
omaha | 1
up | 1
micro | 1
mph | 1
organizer | 1
surfaces | 1
senegal | 2
future | 1
primary | 1
mlb | 1
lolita | 2
remedy | 1
sensor | 1
holiday | 1
trial | 1
villas | 1
hayes | 1
madagascar | 1
reasonable | 3
hypothetical | 1
span | 1
weird | 1
holy | 1
several | 1
implementation | 1
launched | 1
prisoners | 1
government | 1
preceding | 1
reflected | 2
targeted | 1
saving | 1
parade | 2
```

```
narrow | 1
within | 2
struct | 1
share | 2
nicole | 1
howard | 1
german | 1
vi | 1
trackbacks | 1
tracker | 1
pasta | 1
half | 3
suspension | 1
hc | 1
refresh | 1
hung | 1
weather | 1
ratings | 1
passage | 1
physician | 1
nose | 1
surgeon | 1
global | 1
sell | 1
uni | 1
linking | 1
stuck | 1
nor | 1
output | 1
references | 1
michel | 1
nail | 1
shops | 1
spot | 1
inspiration | 2
presidential | 1
specs | 2
ribbon | 1
local | 1
restrictions | 1
way | 1
mice | 1
segment | 1
sexy | 1
greene | 1
puzzles | 1
nurse | 1
harassment | 1
listprice | 1
```

```
infections | 1
magnitude | 1
me | 1
guys | 1
pee | 1
marriott | 1
positive | 1
west | 1
spam | 1
nickel | 3
guru | 1
plastic | 1
lip | 1
won | 1
precision | 1
illustrated | 1
holder | 1
wikipedia | 1
n | 2
roller | 1
ima | 1
who | 1
juice | 1
masters | 3
proudly | 1
stupid | 1
import | 1
prepaid | 2
seeds | 1
hosting | 1
million | 1
teams | 1
searches | 1
reported | 2
spa | 2
mambo | 1
op | 1
methods | 1
sick | 1
hormone | 1
modifications | 1
operated | 1
transparent | 1
sing | 2
palm | 1
into | 2
threatening | 1
robert | 1
sisters | 1
```

```
sword | 1
southern | 1
litigation | 1
kit | 2
increase | 1
walk | 1
port | 1
hurt | 1
ours | 2
podcast | 1
largely | 1
occupied | 1
pleasant | 3
mauritius | 1
pack | 3
passes | 1
installation | 1
pod | 1
near | 1
yearly | 1
greg | 1
speech | 1
vii | 1
infectious | 1
lion | 1
visitor | 2
hot | 1
strong | 1
mn | 2
paying | 1
que | 2
perception | 1
performed | 1
ventures | 1
phpbb | 1
other | 2
movies | 2
merit | 1
tanks | 1
rc | 1
springer | 2
herbal | 1
philadelphia | 1
workers | 1
incorporated | 1
remarks | 1
preston | 1
screenshot | 1
parties | 2
```

```
spotlight | 1
silent | 1
roughly | 1
ordered | 2
u | 1
wooden | 1
shemales | 1
schedule | 1
j | 1
welcome | 1
indicates | 1
replacement | 2
TRUE | 1
law | 1
univ | 1
wonder | 1
whale | 1
sleeps | 1
harvey | 1
ls | 1
mix | 1
wet | 2
opinions | 1
worlds | 1
slim | 2
pose | 1
powered | 1
tie | 1
occurs | 1
handles | 1
net | 1
removing | 1
my | 1
very | 1
overseas | 1
joshua | 1
row | 1
instructional | 1
hammer | 1
marina | 1
mel | 1
root | 1
ownership | 1
ou | 1
lips | 1
secure | 1
religions | 1
pattern | 1
signals | 2
libraries | 1
```

```
literature | 1
income | 1
receive | 1
maps | 1
storage | 1
replacing | 1
refined | 1
recruitment | 1
meaning | 2
malaysia | 1
providence | 1
sophisticated | 1
nightlife | 1
involved | 1
mia | 2
twins | 2
luis | 2
via | 1
its | 1
washer | 1
transfer | 1
reached | 1
vendor | 1
min | 1
shade | 2
move | 1
max | 2
remained | 1
phd | 1
liechtenstein | 1
supplement | 1
ltd | 1
wan | 1
jordan | 2
statewide | 1
prison | 1
perfectly | 2
installations | 1
rail | 2
k | 2
interests | 1
varies | 1
trails | 1
medicaid | 2
hrs | 1
pressing | 1
zambia | 1
skip | 2
viewed | 1
```

```
interactions | 1
reserve | 1
videos | 1
smaller | 1
series | 1
vcr | 1
spin | 1
slide | 1
introduces | 2
save | 1
tutorial | 1
reveals | 1
naked | 1
poster | 1
postcard | 1
rachel | 1
licence | 1
movers | 1
idea | 1
lyric | 2
sic | 1
simplified | 1
scuba | 1
passed | 1
istanbul | 1
ion | 1
starter | 1
village | 1
romantic | 1
tp | 1
sensors | 1
latex | 1
rice | 1
personals | 1
make | 1
subaru | 1
unix | 1
positions | 1
william | 1
incorrect | 1
nov | 1
produced | 1
older | 1
step | 1
surfing | 1
por | 1
peripherals | 2
tales | 1
joining | 1
```

```
ink | 1
resources | 1
letting | 1
understanding | 1
jean | 1
parking | 1
nearest | 1
premises | 1
palestine | 1
strings | 1
occurred | 1
seek | 1
rings | 1
thesis | 1
peter | 2
uploaded | 2
ip | 1
neo | 1
wanted | 1
singapore | 1
ve | 2
report | 1
scanned | 1
observer | 1
tion | 1
july | 1
moss | 1
loose | 1
nude | 1
printing | 1
rt | 1
solo | 1
poland | 1
iron | 1
vacations | 3
kijiji | 1
wise | 1
philips | 1
indicating | 1
stack | 1
sunshine | 1
ieee | 1
internet | 1
reputation | 1
restaurants | 1
limousines | 1
nasa | 1
range | 1
kw | 1
```

```
safer | 1
race | 1
vote | 1
miller | 1
ron | 1
interact | 1
limit | 1
ps | 1
naturally | 1
lighting | 1
march | 1
lung | 1
yields | 1
railway | 1
pipes | 2
indonesian | 1
monica | 1
ripe | 1
tin | 2
man | 1
professional | 1
packard | 1
institutes | 1
psp | 1
priorities | 1
minister | 1
rising | 1
revealed | 1
techrepublic | 1
wider | 1
nutrition | 1
oe | 1
recorders | 1
meetup | 1
takes | 1
screenshots | 2
returns | 1
structured | 2
nature | 1
tuning | 1
snow | 1
sensitivity | 1
quantitative | 1
knee | 1
scout | 1
moses | 1
ottawa | 1
vienna | 1
powerful | 1
```

yang | 1
uv | 2
rna | 1
sharp | 1
representing | 1
weddings | 1
told | 1
proposal | 1
services | 1
lancaster | 1
rob | 1
taste | 1
palmer | 1
representation | 1
particle | 1
showcase | 1
ind | 1
reasons | 1
possess | 1
opposition | 1
mp | 1
winners | 1
load | 2
nfl | 1
requirement | 1
recognize | 1
nickname | 1
sequences | 1
resolve | 1
louis | 1
loops | 1
oklahoma | 1
specialists | 1
she | 1
temperatures | 1
memory | 1
washington | 1
pc | 1
wifi | 1
younger | 1
upcoming | 1
sailing | 1
ta | 1
volleyball | 1
norman | 1
nearby | 2
johnson | 1
reforms | 1
yukon | 1

```
memo | 1
pursuant | 1
spice | 1
record | 1
movements | 1
opposed | 1
retrieval | 1
nathan | 1
room | 1
parenting | 1
throughout | 1
surprising | 1
meanwhile | 1
johns | 1
suffering | 1
mad | 1
planning | 1
informal | 1
wait | 2
tapes | 2
locations | 1
telecommunications | 1
made | 1
situation | 2
miss | 2
o | 1
project | 1
ryan | 1
mario | 1
war | 1
volvo | 1
psychiatry | 1
valve | 1
tank | 2
pollution | 1
panasonic | 1
typically | 1
strange | 1
living | 1
peoples | 1
jumping | 1
joe | 1
tax | 1
pierce | 1
scenarios | 2
weekend | 1
specials | 2
ranging | 1
marble | 1
```

```
units | 1
province | 1
universe | 1
nextel | 1
webshots | 1
profiles | 1
savage | 1
routers | 1
wants | 1
x | 2
pussy | 1
plasma | 1
minds | 1
mill | 1
producers | 1
soma | 1
undertaken | 1
node | 1
shoulder | 1
start | 1
speeches | 2
mirrors | 1
velvet | 1
radius | 1
vietnamese | 1
nest | 1
so | 1
translation | 1
vast | 1
queens | 2
procedure | 1
past | 2
pantyhose | 1
ver | 1
sweet | 1
seven | 1
legend | 1
textiles | 1
vc | 1
spread | 2
substitute | 1
posted | 1
ruling | 1
stranger | 1
marketplace | 1
playboy | 1
pond | 1
virgin | 2
plains | 1
```

```
pix | 1
mar | 1
lakes | 1
legs | 2
rocks | 1
republican | 1
view | 2
vocal | 1
minor | 1
sk | 1
mc | 1
licensed | 1
screensavers | 1
salad | 1
preview | 1
salvation | 1
wma | 1
performances | 2
s | 1
nn | 1
separate | 1
pos | 1
subscriber | 1
sides | 1
prove | 1
mold | 1
ww | 1
seat | 1
malpractice | 1
meter | 1
shipment | 1
year | 1
vg | 1
voted | 1
rrp | 1
stars | 1
residence | 1
stamp | 1
monitor | 1
phi | 1
taxation | 1
now | 1
monkey | 1
tournament | 1
notified | 1
karma | 1
static | 2
monday | 1
location | 1
```

```
pointed | 1
tried | 1
jesse | 1
paypal | 1
season | 1
reviewed | 1
networking | 1
participate | 1
reid | 1
track | 1
sum | 2
special | 1
milan | 1
preparing | 1
statement | 1
tiles | 1
weighted | 1
movement | 1
rabbit | 1
kiss | 1
olympus | 1
nr | 1
pieces | 1
wrong | 1
shopper | 1
launches | 1
proposals | 1
tooth | 2
plymouth | 1
va | 1
satisfactory | 2
wt | 1
mae | 1
plots | 1
territories | 1
offerings | 1
talks | 1
semi | 1
welding | 1
supervision | 1
months | 1
televisions | 1
threatened | 1
kernel | 1
tba | 1
salt | 1
murphy | 1
latest | 1
part | 1
```

```
treaty | 1
relations | 1
tuner | 1
mechanics | 1
packages | 2
packets | 1
or | 1
ultra | 1
promoted | 1
oxygen | 1
yugoslavia | 1
solving | 1
womens | 1
toll | 1
treat | 1
tropical | 1
orgasm | 1
wall | 1
titles | 1
white | 1
remains | 1
vertex | 1
suites | 1
manor | 1
surgical | 1
mozilla | 1
replaced | 1
tennis | 1
suddenly | 1
shortcuts | 1
lucia | 1
occasions | 1
sexual | 1
refers | 1
mississippi | 1
state | 1
sarah | 2
lenses | 1
sig | 1
quoted | 1
words | 1
trash | 1
seq | 1
oriental | 1
veterinary | 1
scientific | 1
stadium | 1
stability | 1
specialty | 1
```

```
minneapolis | 1
msn | 1
reception | 1
recipe | 1
spectacular | 1
regulated | 1
richards | 1
moved | 1
minute | 1
peak | 1
mods | 1
philosophy | 1
lc | 1
throw | 1
lifestyle | 1
whats | 1
microsoft | 1
mail | 2
tom | 1
proc | 1
nano | 1
letters | 1
sri | 1
tests | 1
proceeds | 1
seo | 1
pounds | 1
suggesting | 1
texas | 1
postposted | 1
realty | 1
vaccine | 1
relocation | 1
Execution Time (seconds): 0.17366869800025597
```

Instalación de Pylint

```
pip install pylint

Requirement already satisfied: pylint in
/usr/local/lib/python3.12/dist-packages (4.0.4)
Requirement already satisfied: astroid<=4.1.dev0,>=4.0.2 in
/usr/local/lib/python3.12/dist-packages (from pylint) (4.0.3)
Requirement already satisfied: dill>=0.3.6 in
/usr/local/lib/python3.12/dist-packages (from pylint) (0.3.8)
Requirement already satisfied: isort!=5.13,<8,>=5 in
/usr/local/lib/python3.12/dist-packages (from pylint) (7.0.0)
Requirement already satisfied: mccabe<0.8,>=0.6 in
```

```
/usr/local/lib/python3.12/dist-packages (from pylint) (0.7.0)
Requirement already satisfied: platformdirs>=2.2 in
/usr/local/lib/python3.12/dist-packages (from pylint) (4.5.1)
Requirement already satisfied: tomlkit>=0.10.1 in
/usr/local/lib/python3.12/dist-packages (from pylint) (0.13.3)
```

#Análisis del Código

```
!pylint wordCount.py

************* Module wordCount
wordCount.py:1:0: C0114: Missing module docstring (missing-module-
docstring)
wordCount.py:1:0: C0103: Module name "wordCount" doesn't conform to
snake_case naming style (invalid-name)
wordCount.py:8:0: C0116: Missing function or method docstring
(missing-function-docstring)
wordCount.py:14:16: W0612: Unused variable 'line_number' (unused-
variable)
wordCount.py:38:0: C0116: Missing function or method docstring
(missing-function-docstring)
wordCount.py:51:0: C0116: Missing function or method docstring
(missing-function-docstring)
wordCount.py:58:0: C0116: Missing function or method docstring
(missing-function-docstring)


-------------------------------------------------------------------
Your code has been rated at 8.85/10 (previous run: 8.85/10, +0.00)
```

#**Código Mejorado**

```
%%writefile wordCount.py

#!/usr/bin/env python3
"""
wordCount.py

Este programa lee un archivo de texto proporcionado como argumento
en la línea de comandos, identifica las palabras distintas y determina
su frecuencia, y luego imprime los resultados en la pantalla y en un
archivo llamado WordCountResults.txt.

Todas las operaciones se realizan utilizando algoritmos básicos.
"""

import sys
import time
```

```python
######################### DEFICION  DE FUNCION
#############################
def read_words_from_file(file_path):
    """
    Abre un archivo de texto y extrae tolas las palabra que contiene.

    La función lee el archivo línea por línea y separa las palabras
    basabdose en los espacios que hay entre ellas.

    Parametros
    ----------
    file_path (texto): nombre del archivo a leer.

    Regresa
    -------
    lista que contiene las palabras extraidas del archivo.
    """
    words = []                      #Lista, donde se guardarán las
palabras
    # Abrimos el archivo
    try:
        with open(file_path, "r", encoding="utf-8") as file:
            for line in file:                   # Revisamos línea a
línea
                line = line.strip()         # Quitamos espacios o
saltos

                if not line:                # Si la línea está
vacia
                    continue                # pasamos a la
siguiente

                # Separación manual de palabras
                current_word = ""                       # Variable
temporal
                for char in line:                   # Revisión letra
a letra
                    if char != " ":                 # Si no es un
espacio
                        current_word += char        # lo pegamos
                    else:
                        if current_word:                # Hay espacio,
termino la
                            words.append(current_word) # palabra
                            current_word = ""       # limpiamos
                if current_word:
                    words.append(current_word)          # Guardamos

    # Gestionar el error
    # Si el archivo no existe o se ecribe mal, enviamos un mensaje
```

```python
    except FileNotFoundError:
        print(f"Error: File '{file_path}' not found.")
        sys.exit(1) # Cerramos el programa

    return words        #Regresamos la lista con todas las palabras
encontradas
################################################################################
########



###################### DEFICION  DE FUNCION
#############################
def count_word_frequencies(words):
    """
    Cuenta las vces que aparece una palabra en una lista.

    Parárametros:
    ----------
    palabras : lista
        Lista de palabras.

    Regresa
    -------
    diccionario
        Donde la palabra es una etiqueta y el número
        es cuantas veces se encontro.
    """
    # Diccionario vacio, aquí se colocan los resultados
    frequencies = {}

    # Revisamos cada palabra de la lista
    for word in words:
        if word in frequencies:
            frequencies[word] += 1   #Si existe le sumamos 1 al conteo
        else:
            frequencies[word] = 1    #Si es la primera vez que la
vemos
                                     #la anotamos y le ponemos 1  al
conteo
    return frequencies   #Regresa el conteo final
################################################################################
########



###################### DEFICION  DE FUNCION
#############################

def write_results(results):
```

```python
    """
    Guarda los resultados del conteo en un
    archivo llamado WordCountResults.txt.

    Parametros
    ----------
    resultados : lista de líneas de texto que deseamos escribir en el
archivo
    """
    # Abre el archivo
    with open("WordCountResults.txt", "w", encoding="utf-8") as file:
        for line in results:          # Escribimos el contenido de la
linea
            file.write(line + "\n")    # Salto de línea

################################################################################
########

########################### FUNCION PRINCIPAL
#############################

# Definición de función principal, muestra el orden de ejecución
def main():
    """
Punto de inicio del programa.
1: Lectura de datos
2: Conteo de palabras
3: Impresión de resultados
    """
    start_time = time.perf_counter()    # Inicio del temporizador

    # Verifica que se ejecute el programa de forma  correcta
    if len(sys.argv) != 2:
        print("Usage: python wordCount.py fileWithData.txt")
        sys.exit(1)

    file_path = sys.argv[1]                  # Se obtiene la ruta del
archivo

    # Llamado a función
    words = read_words_from_file(file_path)  # Extracción del
contenido del archivo

    # Si el archivo esta vacio, enviamos mensaje y salimos.
    if not words:
        print("Warning: No valid words found in the file.")
        sys.exit(1)

    # Llamado a función
    frequencies = count_word_frequencies(words)  # Conteo de palabras
```

```python
    # Imresión de Resultados
    output_lines = []                                    #Lista para guardar
resultados
    # Encabezado del Reporte
    output_lines.append(f"Etiqueta: {file_path}")
    print(f"Etiqueta: {file_path}")
    output_lines.append(f"Conteo del archivo: {file_path}")
    print(f"Conteo del archivo: {file_path}")
    # Espacio en blanco
    output_lines.append("") # Add an empty line for better separation
    print("") # Print empty line to console
    # Nombre de las columnas
    output_lines.append("Palabra | Frecuencia")
    print("Palabra | Frecuencia")
    # Línea separadora
    output_lines.append("-" * 30)
    print("-" * 30)

    # Formateo de los resultados
    for word, count in frequencies.items():
        line = f"{word} | {count}"
        print(line)
        output_lines.append(line)

    # Suma de todos los conteos para conocer el total de palabras
    total_words = sum(frequencies.values())
    output_lines.append("-" * 30)
    print("-" * 30)
    total_words_line = f"Conteo Total de Palabras: {total_words}"
    output_lines.append(total_words_line)
    print(total_words_line)

    # Finalizacón del temporizador y calculamos el tiempo de ejecución
    end_time = time.perf_counter()
    elapsed_time = end_time - start_time

    output_lines.append("-" * 30)
    time_line = f"Tiempo de Ejecución (segundos): {elapsed_time}"
    output_lines.append(time_line)

    print(time_line)
    # Llamado a función
    write_results(output_lines)      #Guardamos los resultados en el
archivo


if __name__ == "__main__":
    main()
```

```
################################################################
#########

Overwriting wordCount.py

!python wordCount.py TC5.txt

Etiqueta: TC5.txt
Conteo del archivo: TC5.txt

Palabra | Frecuencia
------------------------------
loaded | 2
wilderness | 5
specify | 2
cole | 1
telecom | 1
earliest | 2
uniprotkb | 1
retailer | 3
acquired | 1
reasoning | 2
breathing | 1
ozone | 3
hz | 1
consequences | 1
volume | 2
isaac | 2
milwaukee | 1
agenda | 1
roulette | 2
ordinance | 1
challenging | 1
regions | 2
faq | 1
sunset | 2
advantage | 1
masturbating | 1
biographies | 1
wednesday | 1
picks | 2
silk | 1
gossip | 2
tournaments | 1
entrepreneurs | 2
adjust | 1
designation | 2
injury | 3
flash | 1
baptist | 1
```

```
looksmart | 1
mason | 1
reservation | 2
trustee | 1
affairs | 1
prints | 1
enclosure | 1
routes | 1
metro | 1
gps | 4
walnut | 1
bunny | 1
bubble | 1
moscow | 3
biggest | 1
forecasts | 1
bunch | 1
myspace | 2
cancellation | 1
gambling | 1
amsterdam | 1
md | 1
introduction | 2
feel | 1
nigeria | 1
appearing | 1
system | 2
applied | 1
supplements | 2
contractor | 1
developer | 1
station | 3
du | 1
pete | 2
ie | 1
expectations | 1
places | 1
canal | 1
compute | 1
americans | 1
stating | 1
patrick | 2
assignments | 2
lucy | 1
unions | 3
authors | 1
public | 1
consist | 1
wave | 1
```

```
headline | 1
oct | 2
anytime | 1
modem | 2
sharon | 3
master | 1
keeping | 4
racial | 1
balance | 1
wire | 1
testament | 1
photos | 2
assurance | 1
casa | 1
vertical | 1
specialist | 3
loads | 1
considerable | 1
counsel | 1
deer | 1
hilton | 3
programmers | 2
possibilities | 2
ugly | 2
presentation | 2
studies | 1
block | 1
recent | 1
favorites | 1
soonest | 2
right | 1
comp | 1
navy | 2
cookbook | 1
excellence | 3
lover | 2
quest | 1
wilson | 3
most | 1
asin | 1
potter | 1
motors | 1
disputes | 1
kurt | 3
bool | 2
pulling | 1
bonus | 1
samoa | 2
maker | 2
```

```
hacker | 1
allowed | 1
soldier | 1
plastics | 1
upset | 2
dock | 1
elegant | 1
fame | 1
intense | 1
hoped | 2
keith | 2
recognised | 2
over | 1
focusing | 1
landscape | 2
desperate | 1
attraction | 1
wp | 1
mariah | 1
warnings | 1
ia | 1
je | 2
evaluating | 1
screensaver | 2
served | 1
calgary | 2
sponsor | 2
aim | 1
thoroughly | 1
richmond | 1
federal | 2
which | 1
nutten | 1
gate | 2
river | 3
dangerous | 1
reseller | 3
argue | 1
busty | 1
theatre | 2
travelling | 4
predicted | 1
discovery | 1
broker | 1
sku | 1
turkish | 2
managed | 5
witnesses | 2
gaming | 2
```

```
tribune | 1
threats | 4
albums | 1
converted | 1
hospitality | 1
troy | 1
separately | 2
hoping | 2
therapist | 1
souls | 3
panic | 1
cigarette | 1
detailed | 2
neighborhood | 1
lone | 1
strict | 1
improved | 2
exemption | 1
afterwards | 1
writes | 1
patricia | 1
fwd | 2
revolutionary | 3
rehabilitation | 1
trusted | 1
subject | 1
di | 1
mitsubishi | 2
sponsors | 1
tackle | 1
ti | 1
visibility | 2
student | 2
universal | 3
described | 2
offset | 2
verzeichnis | 1
shut | 2
screens | 2
classification | 1
previews | 1
retail | 1
continental | 1
slight | 1
matched | 3
saw | 2
ref | 2
attach | 1
laundry | 3
```

```
warren | 2
rooms | 1
coleman | 2
meant | 3
de | 1
anybody | 1
female | 1
myself | 1
fortune | 1
lane | 3
exec | 1
lender | 1
triangle | 1
speaker | 1
inches | 2
insider | 1
reserved | 1
darwin | 1
mixture | 3
rights | 1
negotiation | 2
tee | 1
andy | 1
occasion | 2
yn | 1
confused | 1
differential | 1
doug | 1
anywhere | 1
like | 1
immediately | 1
arise | 1
schools | 5
nicaragua | 1
cover | 1
occurrence | 2
ar | 2
horse | 1
climb | 2
directories | 1
given | 2
burner | 1
original | 3
idol | 2
proceedings | 1
uganda | 2
ted | 1
competing | 1
game | 3
```

```
passion | 4
exclusively | 2
pda | 2
spirit | 2
translations | 2
council | 1
turns | 1
dead | 1
spell | 2
cost | 1
veterans | 1
themes | 2
singh | 1
gel | 1
upskirts | 2
conferences | 1
horn | 2
yo | 2
attendance | 1
normally | 1
helpful | 2
raymond | 1
tablets | 3
astrology | 1
closest | 1
steering | 2
carlos | 1
lights | 2
hours | 1
tasks | 1
resulting | 2
scroll | 2
touched | 1
cet | 1
pdas | 1
generous | 1
historic | 1
belle | 1
indigenous | 1
hh | 1
katie | 1
those | 1
focuses | 1
offshore | 1
neighbor | 1
loans | 1
cursor | 1
cr | 2
outsourcing | 2
```

anthropology | 1
mistakes | 1
introduce | 1
slot | 1
bouquet | 1
horizon | 2
replication | 1
bags | 1
del | 1
blvd | 1
reel | 2
sister | 1
invasion | 1
depending | 1
beings | 1
defend | 2
fresh | 1
push | 2
flight | 2
recommend | 2
iso | 1
scanners | 1
jonathan | 2
tourist | 1
entries | 3
pull | 1
thing | 2
filed | 3
router | 3
karen | 2
blind | 2
concentrations | 1
listings | 3
earnings | 1
v | 3
thickness | 1
measure | 1
midnight | 2
integrate | 1
victor | 1
bless | 2
pointing | 3
manufacturing | 3
sector | 2
arkansas | 1
regardless | 2
mounted | 1
blues | 1
ways | 1

```
blanket | 1
intel | 1
boxing | 2
locally | 3
broken | 1
liabilities | 1
antique | 1
freight | 1
valued | 2
world | 2
bw | 2
display | 1
witch | 2
ye | 1
rid | 1
separated | 1
remainder | 2
hay | 1
wm | 2
ave | 1
emperor | 1
harrison | 2
happened | 1
hazard | 2
excerpt | 2
brian | 1
integer | 1
smoking | 2
eventually | 1
church | 1
citizens | 1
frequent | 1
sv | 1
opens | 4
choir | 1
informational | 1
cooked | 1
fascinating | 2
inkjet | 2
tell | 2
was | 1
began | 1
horizontal | 2
harmful | 1
satellite | 1
rapidly | 1
michael | 1
basically | 1
propose | 3
```

```
textbooks | 2
helping | 2
raises | 1
stan | 2
sorted | 2
well | 1
exceptions | 1
products | 4
desire | 1
finished | 1
sf | 2
employment | 1
glenn | 1
dome | 1
teens | 1
expansion | 1
packs | 2
camcorder | 1
text | 2
charging | 1
define | 1
represent | 1
twice | 1
eau | 3
evening | 1
rider | 1
minolta | 1
cam | 1
leader | 1
salon | 2
catalog | 1
orbit | 2
coordinate | 1
erotic | 1
examining | 1
cedar | 2
venues | 1
solar | 1
saver | 2
killer | 2
electrical | 1
metabolism | 1
trail | 1
halo | 2
rides | 2
technical | 2
calibration | 1
fighter | 2
sheep | 2
```

```
sustainability | 2
lafayette | 1
owned | 3
bernard | 1
emirates | 2
blend | 1
lazy | 1
webcams | 4
salem | 1
indexed | 2
sync | 3
treasurer | 2
terrorists | 1
eligible | 1
fold | 3
staffing | 2
degree | 1
commissioners | 1
buyer | 1
sometimes | 1
warcraft | 1
auckland | 1
married | 1
transexual | 2
larger | 1
mats | 2
tragedy | 2
sean | 1
earl | 2
residential | 1
jurisdiction | 1
fossil | 2
tumor | 1
obligations | 2
configuring | 1
relax | 1
presents | 2
walking | 2
play | 1
panties | 1
witness | 2
punishment | 1
bookmark | 1
flag | 2
drum | 1
disclosure | 1
key | 3
hats | 1
manitoba | 1
harmony | 1
```

```
reform | 1
chester | 1
reporter | 2
viral | 2
bob | 1
thailand | 2
cams | 2
reply | 2
reviews | 1
small | 1
registered | 2
penny | 1
phrase | 1
scan | 1
efforts | 1
closely | 2
donna | 1
send | 1
warrant | 1
demands | 1
train | 1
trinity | 1
flashing | 1
upskirt | 3
condo | 1
chrome | 2
fathers | 1
federation | 1
availability | 1
switch | 1
thick | 2
voting | 1
investigated | 1
gotta | 1
blood | 1
carb | 1
reproductive | 1
terrorist | 4
visiting | 1
oclc | 2
talent | 2
gently | 1
fishing | 1
boulevard | 1
pregnancy | 2
knowledgestorm | 1
published | 4
louise | 1
usda | 2
```

```
writer | 1
volunteers | 1
damages | 1
norfolk | 1
criterion | 1
trailer | 1
diff | 1
torture | 2
becomes | 1
participation | 1
submit | 2
thriller | 1
satisfaction | 1
brake | 1
continually | 1
schemes | 1
princeton | 2
chess | 1
muscle | 1
nudity | 1
dramatically | 1
packaging | 1
holmes | 1
topless | 2
boc | 1
topic | 1
chen | 1
cook | 1
geo | 2
inf | 3
barbados | 1
caps | 1
collectibles | 1
salvador | 1
pamela | 1
doe | 1
catalyst | 1
desirable | 2
marilyn | 1
respond | 2
ru | 2
facts | 1
pays | 3
feeding | 1
museum | 2
clearance | 1
investigator | 1
drove | 2
path | 1
```

```
vegas | 1
coupons | 1
happens | 2
let | 1
old | 1
leeds | 1
sport | 3
bluetooth | 1
petersburg | 4
genres | 1
resort | 1
line | 2
simulations | 1
getting | 2
fun | 1
portfolio | 2
eh | 1
performer | 1
bahamas | 1
fibre | 1
individual | 1
log | 2
cambodia | 1
nice | 2
modems | 1
justice | 2
starts | 2
maximize | 2
classroom | 1
directory | 1
italy | 3
timing | 1
domestic | 1
endless | 1
sells | 3
tariff | 3
bruce | 1
tutorials | 1
seller | 2
baskets | 1
bag | 1
manufactured | 4
knowledge | 2
framing | 1
newspapers | 2
influence | 1
charlotte | 1
specifically | 1
unusual | 3
```

```
shipped | 1
blink | 1
naples | 1
intellectual | 1
boobs | 2
voyeurweb | 1
thin | 1
sexuality | 1
language | 1
unique | 2
teddy | 1
barcelona | 1
clay | 1
painting | 2
latin | 1
webmaster | 3
sprint | 2
locks | 1
find | 1
dynamic | 1
located | 2
milfhunter | 2
cyber | 1
requiring | 2
nottingham | 1
termination | 1
bound | 1
stay | 1
ralph | 1
narrative | 1
outline | 2
principle | 1
luggage | 1
illinois | 1
kits | 1
seasonal | 1
informative | 1
oil | 2
imports | 1
privileges | 1
usr | 2
distant | 1
personal | 1
corrections | 1
entity | 1
hills | 1
proxy | 2
dog | 1
sega | 3
```

```
competitors | 1
variance | 2
coalition | 1
dictionary | 1
oasis | 1
servers | 2
parliamentary | 1
pig | 2
contained | 1
clearing | 1
resulted | 1
olympic | 1
trip | 1
fin | 1
mineral | 1
pan | 1
wizard | 1
wayne | 1
penn | 1
livecam | 1
mortgage | 2
stream | 2
software | 1
brochures | 1
treated | 2
patent | 2
jpg | 1
horrible | 1
skype | 2
thrown | 1
tent | 2
status | 1
houston | 2
coated | 2
nights | 1
copy | 1
kentucky | 2
spine | 1
contribute | 1
trading | 2
establishing | 2
combines | 1
lean | 1
terrace | 1
condition | 1
sierra | 1
manager | 1
holidays | 1
believes | 1
```

```
cox | 1
campus | 1
section | 1
web | 3
glory | 2
birthday | 1
eos | 1
wherever | 1
nursing | 2
ja | 1
pink | 2
technological | 2
despite | 2
think | 2
distributor | 1
dr | 1
ce | 1
homes | 1
stop | 2
suggestions | 4
sustainable | 1
cologne | 1
finishing | 2
gtk | 3
greater | 1
numeric | 2
keywords | 1
craps | 1
rec | 3
skirts | 2
mileage | 1
circle | 1
wiki | 1
hill | 2
practitioners | 1
essence | 2
thumb | 1
estimation | 1
walls | 1
collective | 1
shaft | 1
rn | 2
sacrifice | 2
pic | 2
nicholas | 2
polished | 1
publicly | 3
ipod | 1
experiences | 1
```

```
whore | 1
dies | 2
lawrence | 1
ooo | 1
wages | 1
iraqi | 1
genuine | 1
correspondence | 1
reno | 1
bringing | 1
euro | 3
weblog | 3
rp | 1
signature | 3
er | 2
digit | 1
episode | 1
rod | 1
putting | 2
pad | 2
close | 1
rio | 2
oriented | 1
belly | 1
curriculum | 1
timeline | 1
oval | 1
self | 3
futures | 1
triple | 2
processed | 1
lauren | 1
mother | 1
pf | 1
slut | 1
tampa | 3
firmware | 1
type | 1
pets | 5
substantially | 1
subdivision | 2
gold | 2
physiology | 2
broadcasting | 1
inns | 1
ruby | 1
consequence | 1
bits | 1
martial | 3
```

```
lows | 2
nationally | 2
manhattan | 1
instrumentation | 1
hometown | 1
hey | 1
zen | 1
noble | 1
edmonton | 2
multiple | 1
decrease | 1
http | 2
organic | 2
portland | 1
margaret | 4
safe | 1
latino | 1
remember | 3
uri | 1
lowest | 2
grown | 2
terrible | 1
um | 3
golf | 2
mandatory | 1
soon | 1
space | 2
hour | 1
spent | 1
tray | 1
mart | 1
tools | 1
explain | 4
milton | 1
sets | 2
episodes | 1
intl | 2
uncertainty | 1
spaces | 1
toxic | 1
jump | 3
crack | 1
nsw | 1
two | 3
erotica | 1
platform | 1
enb | 2
practice | 1
brave | 1
```

```
restructuring | 1
improvement | 2
efficient | 1
players | 1
pam | 2
ebook | 2
distance | 2
notes | 2
merchandise | 2
transmit | 1
trademarks | 2
reflect | 1
closure | 1
show | 1
prediction | 2
rugby | 1
peers | 1
knives | 1
briefs | 1
middle | 1
recreational | 1
proprietary | 1
cleaning | 1
mw | 1
debian | 1
veteran | 2
notebooks | 1
bottle | 1
recommends | 4
qty | 1
ftp | 1
wallpapers | 1
photographer | 1
flexible | 1
tr | 3
shortly | 1
failure | 1
clause | 1
hero | 2
kind | 2
yrs | 3
ukraine | 3
depression | 1
evolution | 1
erik | 1
characterization | 1
indians | 1
refine | 1
metadata | 1
```

```
cartoons | 1
emails | 1
ict | 2
pulse | 2
specifies | 1
packed | 2
hiring | 1
exploration | 1
installed | 2
composite | 1
customers | 1
gale | 1
expo | 1
rpm | 2
secretary | 3
ranking | 1
demographic | 1
linked | 2
elect | 2
riding | 2
yourself | 1
cloudy | 1
cb | 2
views | 2
multimedia | 1
quick | 2
latvia | 1
incidence | 1
prague | 2
harper | 1
fixes | 1
shopping | 2
european | 1
utilize | 1
events | 1
resistant | 1
diy | 1
breakfast | 1
priest | 1
revised | 1
dear | 1
locked | 1
marathon | 2
join | 3
tyler | 3
pricing | 2
predict | 1
revenge | 1
carter | 1
```

```
handmade | 2
elvis | 1
this | 2
duration | 1
wrote | 2
ericsson | 1
sustained | 1
holdem | 1
includes | 1
invoice | 2
tower | 1
lesbians | 1
jar | 2
grenada | 1
precious | 2
previous | 1
opening | 1
deaths | 1
irish | 1
late | 3
normal | 1
pitch | 2
worldcat | 4
surface | 1
face | 1
willing | 2
happy | 2
publish | 1
engineering | 2
powder | 1
develop | 1
producing | 2
execution | 1
duck | 1
figure | 1
watches | 2
departmental | 1
junction | 1
integrity | 1
gang | 1
task | 1
webster | 1
exception | 1
quantum | 1
pregnant | 3
semiconductor | 2
suspended | 1
girlfriend | 1
shots | 1
chapter | 1
```

```
embedded | 1
theaters | 2
usually | 1
portuguese | 1
changed | 1
stewart | 1
softball | 1
sound | 1
flower | 1
mixed | 1
extraordinary | 1
medicare | 2
construction | 1
harm | 2
vessels | 1
main | 2
corps | 1
doctors | 1
exploring | 2
found | 2
robot | 2
conservative | 1
leonard | 3
te | 3
strengths | 1
literary | 3
murder | 2
sitemap | 2
sufficient | 2
persian | 2
ratios | 1
cow | 1
pac | 1
ss | 1
issn | 2
identified | 1
rim | 2
inc | 1
govt | 1
corpus | 3
da | 1
coating | 1
hundreds | 1
dx | 1
indexes | 1
recommendations | 1
christian | 1
textile | 1
opponent | 1
```

```
length | 2
participant | 1
promised | 1
optimum | 1
mines | 3
egypt | 1
unlock | 2
lp | 1
chronicle | 1
portrait | 2
monster | 1
prozac | 2
usps | 1
pharmacology | 2
pirates | 1
motels | 1
guided | 3
florists | 1
laden | 1
ui | 3
hamilton | 1
pakistan | 1
impression | 1
superintendent | 1
cambridge | 1
inclusion | 3
urge | 1
recorded | 3
tony | 1
herald | 1
ten | 1
formats | 2
database | 2
desired | 1
green | 1
hentai | 2
palestinian | 1
proceeding | 2
roland | 1
cigarettes | 1
mens | 1
junk | 1
fragrance | 2
suit | 1
cv | 1
xhtml | 1
lou | 1
wrap | 4
mobility | 1
```

```
sonic | 2
headset | 2
rational | 1
engaged | 1
patrol | 2
employers | 4
fri | 1
knight | 2
void | 1
disks | 1
compliance | 1
rehab | 1
james | 1
med | 1
happening | 1
nightmare | 2
eagle | 2
jewellery | 1
diabetes | 2
museums | 1
eric | 1
liverpool | 1
sentence | 1
rhythm | 2
charter | 1
levitra | 1
exhibitions | 1
nokia | 3
carnival | 1
column | 1
validity | 3
payable | 2
meyer | 2
rolled | 1
seeks | 3
operating | 2
modes | 1
librarian | 2
decimal | 1
drinks | 3
munich | 3
runtime | 2
capitol | 1
hampton | 1
streams | 2
response | 1
provider | 2
clubs | 1
farm | 1
```

```
seems | 2
untitled | 1
mainly | 1
poll | 1
thu | 1
estimates | 1
chambers | 1
surrounded | 2
promise | 1
user | 3
flickr | 1
israel | 1
habits | 3
dicks | 1
laptops | 1
sam | 1
coat | 1
tree | 2
scotland | 2
jpeg | 1
livestock | 1
seattle | 2
gay | 1
prominent | 1
ordinary | 2
difference | 1
instant | 1
yr | 2
packing | 2
you | 1
std | 1
rich | 2
dresses | 1
newfoundland | 3
grants | 1
speakers | 2
wells | 1
sapphire | 2
ez | 1
site | 1
useful | 4
travelers | 1
snap | 2
richard | 1
nhs | 1
created | 1
shine | 3
supposed | 1
occupations | 3
```

```
hispanic | 1
hollow | 2
selecting | 1
dev | 1
trap | 3
swap | 1
message | 3
setup | 1
using | 1
enhancements | 1
mpeg | 1
photograph | 2
chose | 1
meals | 2
conclusions | 1
tattoo | 1
pci | 3
intent | 2
founded | 3
obviously | 1
from | 2
gather | 2
regime | 1
richardson | 2
cave | 1
fifth | 2
www | 3
radio | 1
sanyo | 1
surge | 1
there | 1
chaos | 1
ceremony | 1
sphere | 1
pictures | 2
jones | 1
valium | 2
size | 2
floral | 1
get | 1
factors | 1
fatal | 2
risks | 3
coordination | 1
picking | 2
reveal | 1
hook | 1
token | 2
ferry | 1
```

```
officially | 1
confirmed | 1
hydrocodone | 1
customise | 1
hair | 1
satisfied | 3
worcester | 1
occasional | 1
readings | 2
leon | 3
week | 1
exchange | 1
payday | 1
double | 2
collectors | 1
press | 2
crawford | 1
dude | 3
labs | 1
introductory | 1
firms | 2
trace | 1
continuous | 1
stated | 1
requires | 3
monroe | 2
logged | 2
sudan | 1
piece | 2
forgotten | 2
francisco | 1
rebates | 3
leslie | 1
flashers | 1
police | 2
nb | 4
route | 1
sign | 1
vid | 1
town | 1
molecules | 1
victory | 1
moon | 2
dm | 1
previously | 1
thee | 1
sink | 2
vibrator | 2
performing | 1
```

```
cms | 1
technique | 1
improve | 1
naval | 2
reliable | 1
refuse | 1
independence | 1
owner | 1
emily | 1
consolidation | 1
clinic | 1
runner | 1
longitude | 1
postings | 1
fist | 1
fees | 1
labour | 1
rg | 1
employer | 2
ultimately | 2
highway | 1
samsung | 2
worth | 1
shakespeare | 2
essential | 1
colonial | 1
meet | 1
plates | 1
widely | 2
hl | 3
expressions | 1
strip | 3
circles | 1
submission | 1
expanding | 2
neck | 1
compatibility | 1
threshold | 2
colored | 2
transcription | 2
seed | 2
plan | 1
xerox | 1
indices | 1
regularly | 1
cuisine | 1
newport | 1
orientation | 2
nearly | 2
```

legitimate | 2
keno | 2
senator | 1
summer | 3
savings | 1
though | 1
fifty | 1
remote | 2
rangers | 1
projected | 1
question | 1
ka | 1
sap | 1
concerning | 1
eugene | 1
trim | 1
civilization | 1
switches | 2
testing | 1
defendant | 1
fully | 2
pontiac | 1
whereas | 2
portraits | 2
dave | 1
last | 1
kids | 1
projector | 2
sbjct | 1
rica | 3
ships | 1
representatives | 3
explicit | 3
infected | 1
jm | 1
enter | 1
lbs | 2
peace | 1
please | 1
plc | 2
sail | 1
computed | 1
considering | 1
fancy | 2
grill | 1
definitions | 1
photographic | 1
permanent | 2
low | 1

```
sunrise | 2
legal | 2
towns | 2
clips | 1
singer | 1
colorado | 1
imagination | 1
respondent | 1
conceptual | 1
ni | 2
mongolia | 2
constant | 1
soc | 1
enlargement | 1
subjects | 3
diane | 1
forums | 2
shot | 1
legendary | 2
throwing | 3
showers | 2
depend | 1
resolved | 2
need | 1
keep | 3
dist | 2
repeat | 1
selective | 1
practical | 1
helicopter | 1
detective | 1
reward | 1
sep | 1
library | 1
speeds | 1
newest | 1
focus | 1
instrument | 1
photo | 2
towards | 2
resolution | 2
lined | 1
traveler | 2
portions | 1
contrast | 1
construct | 1
crap | 1
publication | 1
completed | 1
```

```
deluxe | 1
england | 2
switzerland | 2
killing | 1
navigate | 2
terminal | 2
knit | 2
roots | 1
fred | 2
index | 1
grocery | 2
scott | 1
tries | 1
continuously | 1
twenty | 2
com | 1
pole | 1
derby | 1
unlikely | 1
reliability | 1
signed | 1
hybrid | 1
frank | 2
kingston | 2
reproduce | 1
ecological | 2
treasures | 1
prophet | 1
source | 2
powerpoint | 2
criticism | 1
pgp | 2
populations | 1
harris | 3
yeah | 1
want | 2
zdnet | 2
ser | 1
include | 1
fixed | 1
distinction | 1
gazette | 2
order | 2
commented | 1
overview | 3
jeep | 1
farmers | 1
why | 3
mortgages | 1
```

```
reverse | 2
facial | 1
environmental | 1
prompt | 1
marks | 1
scene | 1
urban | 2
repairs | 1
wordpress | 2
ht | 1
emotions | 1
partially | 2
subscribe | 2
respected | 3
russell | 1
matter | 3
prix | 1
dp | 1
totally | 1
emphasis | 2
grace | 1
len | 2
font | 1
deborah | 1
required | 2
mandate | 2
kill | 1
directive | 1
help | 1
represented | 3
politicians | 1
dec | 1
total | 1
cope | 1
lie | 1
detroit | 1
layout | 2
poetry | 1
restricted | 1
suse | 1
supported | 1
serbia | 3
maintains | 1
jamie | 1
thumbnail | 1
van | 2
vocabulary | 1
norm | 1
drops | 2
warranties | 3
```

```
whilst | 1
dosage | 1
creation | 1
fiji | 1
dynamics | 1
denver | 1
editorials | 1
fit | 1
making | 1
pdt | 1
greece | 2
dirty | 1
radiation | 1
ny | 1
thousand | 1
leading | 1
discs | 1
mainstream | 1
hose | 1
paste | 1
fa | 1
sexo | 2
cooperative | 1
cubic | 1
strength | 1
june | 2
nurses | 2
tuesday | 1
means | 1
fly | 2
relaxation | 1
inflation | 1
harry | 1
multi | 1
negative | 1
former | 1
finder | 1
usage | 3
temperature | 1
taxi | 2
disney | 1
lauderdale | 1
sept | 1
opt | 2
dominican | 1
config | 1
say | 1
forget | 1
taiwan | 1
```

```
seem | 1
henderson | 1
trout | 1
sales | 2
vibrators | 1
molecular | 1
graph | 2
critics | 1
family | 1
suburban | 1
dozens | 2
ice | 1
testimonials | 2
ph | 2
watts | 1
rv | 1
deliver | 1
drunk | 1
musicians | 1
yea | 1
seas | 1
increasing | 2
news | 1
handled | 2
joyce | 1
til | 1
fight | 1
mike | 1
connecticut | 1
gary | 1
wed | 1
executive | 1
wang | 1
strategies | 1
soa | 1
prince | 2
shield | 1
databases | 1
pocket | 2
madrid | 1
purchase | 2
television | 1
noise | 1
escorts | 1
upload | 1
mixer | 2
wichita | 1
infant | 1
few | 1
```

```
postage | 1
guy | 1
prescription | 1
stopping | 2
propecia | 1
stephen | 1
intersection | 1
guitar | 1
sorry | 1
mentioned | 2
random | 1
leasing | 2
invention | 2
worthy | 1
named | 1
olive | 2
reset | 1
resident | 1
physicians | 1
secretariat | 1
sounds | 2
tub | 1
laura | 1
requirements | 1
davis | 1
price | 1
such | 1
result | 1
fantastic | 1
silicon | 1
indianapolis | 1
keyboards | 2
settings | 2
visit | 1
fix | 1
nuclear | 2
mazda | 1
rain | 2
lessons | 1
toolbox | 1
qualities | 4
favorite | 2
theories | 1
margin | 2
organized | 1
proof | 1
pct | 1
toshiba | 2
haiti | 1
```

```
transfers | 1
sources | 1
hop | 1
fort | 2
penetration | 2
farms | 1
convenience | 1
instructor | 1
jane | 2
der | 1
dakota | 1
contents | 1
hottest | 1
metropolitan | 1
livesex | 2
serves | 1
ties | 2
premier | 1
tribal | 2
settlement | 1
grip | 1
hope | 1
l | 1
partners | 1
quarters | 2
wow | 1
jury | 1
reaction | 1
soup | 2
whole | 2
shadow | 1
macro | 1
hold | 2
tables | 3
consultant | 1
mary | 1
limited | 1
not | 2
shed | 1
divorce | 1
resistance | 2
signs | 1
looking | 1
kick | 1
treasure | 2
lithuania | 1
vitamin | 2
moderate | 1
refurbished | 2
```

```
factory | 1
liz | 1
hands | 1
sewing | 1
nam | 1
duke | 1
countries | 1
stainless | 1
shaved | 1
ongoing | 1
findlaw | 1
twisted | 2
network | 2
finances | 1
members | 1
vitamins | 1
moral | 2
dem | 1
subcommittee | 1
wanting | 1
reason | 1
preference | 1
scotia | 1
tall | 2
gm | 1
pp | 2
nerve | 1
sur | 1
following | 1
hawk | 1
mali | 1
inventory | 2
dealt | 1
remove | 1
ne | 1
tech | 2
encounter | 1
valentine | 1
pound | 1
guardian | 1
priced | 3
event | 2
mounts | 2
staying | 2
next | 1
doctor | 1
sao | 1
drivers | 1
reunion | 1
```

```
grey | 1
ira | 1
debate | 1
hopefully | 1
tip | 2
outdoor | 1
retreat | 1
expired | 1
incoming | 1
yen | 1
parks | 2
fabrics | 1
mug | 1
eddie | 1
hall | 1
wound | 1
sexually | 2
renaissance | 2
islam | 1
product | 2
forty | 1
iraq | 3
spy | 1
rj | 1
generally | 1
preventing | 1
faster | 1
terms | 1
openings | 1
hollywood | 1
wu | 1
instance | 1
spec | 3
thinkpad | 2
ep | 2
sentences | 4
improving | 1
goals | 1
lens | 1
pressure | 1
imagine | 1
warriors | 1
invision | 2
heated | 1
queries | 1
desktops | 1
dns | 1
symposium | 3
involvement | 1
```

```
powell | 1
races | 1
toy | 3
said | 1
shipping | 1
elizabeth | 1
suite | 1
patents | 2
polls | 1
prerequisite | 1
readily | 1
cosmetic | 1
quantities | 1
elected | 1
sat | 1
markets | 1
free | 1
spirits | 3
rebecca | 1
migration | 3
tranny | 2
girls | 1
mtv | 1
mo | 1
operator | 1
mild | 1
searchcom | 1
workshop | 2
liberty | 1
quarterly | 1
likelihood | 1
lisa | 1
manuals | 1
dept | 1
organizations | 3
simon | 1
tabs | 2
gain | 1
principal | 1
lg | 3
roll | 1
signal | 1
ing | 1
tribute | 2
roster | 1
ln | 1
marvel | 1
victims | 2
forever | 1
```

```
install | 1
shooting | 2
est | 1
tested | 1
julia | 2
trio | 2
jets | 1
lovers | 2
downtown | 3
ext | 1
related | 1
trucks | 1
obesity | 1
institute | 2
displaying | 1
everywhere | 2
symphony | 1
nirvana | 1
postal | 1
principles | 1
formatting | 1
pet | 1
funded | 1
missile | 2
talented | 1
suppliers | 1
dans | 1
drill | 2
majority | 1
outputs | 1
gifts | 1
microphone | 2
evans | 2
organize | 1
vehicles | 1
plaza | 1
institutions | 2
loop | 2
letter | 1
disposal | 1
we | 1
draw | 1
hd | 1
operation | 1
examinations | 1
viewers | 1
incident | 2
pl | 1
winds | 1
```

```
oral | 2
fares | 1
lime | 1
evaluations | 2
royal | 1
violence | 1
stomach | 1
touring | 1
wagner | 1
latinas | 2
un | 1
protected | 1
hotmail | 2
southampton | 1
sie | 1
medicines | 2
then | 2
hawaiian | 1
intro | 1
gravity | 1
kg | 5
lm | 1
door | 1
recreation | 3
exclusion | 2
yemen | 1
retrieved | 1
robin | 2
gordon | 1
split | 2
motorcycle | 1
straight | 2
guitars | 2
grove | 1
tex | 1
tobago | 2
sofa | 1
thirty | 3
donate | 1
painful | 1
kay | 3
pages | 2
recipients | 1
marked | 1
ministry | 2
el | 2
fast | 1
gross | 1
luther | 1
```

```
efficiency | 2
petite | 1
inexpensive | 1
perfume | 1
tension | 2
resorts | 2
work | 1
updated | 1
rating | 2
screening | 2
teenage | 1
minimize | 2
worry | 1
xml | 2
possibly | 2
milk | 1
marking | 2
similarly | 1
sudden | 2
paid | 2
her | 1
editors | 1
deleted | 1
side | 2
fence | 1
finnish | 2
delicious | 1
pillow | 1
unavailable | 1
unfortunately | 2
elements | 1
mechanical | 1
showed | 1
pts | 1
sh | 1
def | 1
statistics | 3
eternal | 1
frontier | 1
seasons | 4
weblogs | 2
playlist | 2
pace | 1
studying | 1
details | 1
forward | 2
nt | 3
disposition | 1
fiction | 2
```

```
lounge | 2
loud | 4
lincoln | 1
father | 1
porsche | 2
spears | 2
expenses | 1
identify | 1
problem | 1
people | 1
tvs | 1
lives | 1
yield | 2
enabled | 1
pair | 2
permission | 2
economy | 1
kelly | 1
stickers | 1
moving | 2
doom | 1
invite | 1
shoppingcom | 2
transexuales | 2
heating | 2
sunglasses | 1
isbn | 1
provinces | 1
snowboard | 1
standing | 3
university | 1
pathology | 1
waterproof | 2
lamp | 1
infection | 1
parent | 1
through | 1
hat | 2
samples | 2
storm | 2
squad | 1
mod | 1
gourmet | 1
mission | 2
likely | 2
flu | 1
projects | 1
operate | 1
wallace | 1
have | 1
```

```
pubmed | 1
operates | 2
foundation | 1
forests | 1
vatican | 1
outcome | 1
house | 1
incentives | 1
monthly | 1
throws | 1
ons | 1
literacy | 1
physical | 2
prime | 2
outlet | 1
platforms | 1
tim | 1
mature | 3
routine | 1
pros | 1
hist | 1
reporting | 1
nikon | 1
son | 3
weapon | 2
hyundai | 1
subsequent | 1
maternity | 2
fisher | 1
reviewing | 2
rows | 2
produce | 1
six | 2
serum | 1
permalink | 1
instruments | 2
samba | 1
rx | 3
omissions | 1
looks | 1
grammar | 1
precise | 1
html | 1
roles | 1
soviet | 1
venezuela | 1
forecast | 1
management | 1
np | 1
```

```
ought | 2
technician | 1
recovered | 1
marcus | 1
vids | 1
toronto | 1
educational | 1
uzbekistan | 2
participating | 1
dollars | 1
manufacturers | 1
running | 1
sand | 2
offense | 1
shorts | 2
grade | 1
ontario | 1
iii | 1
sa | 1
encourages | 1
someone | 1
pixels | 2
thumbzilla | 1
stuff | 1
plugin | 1
providers | 2
faqs | 1
rage | 1
legislature | 1
legislation | 1
hazards | 2
streets | 1
disciplines | 1
ourselves | 1
modeling | 1
journalism | 1
fd | 1
doing | 1
rat | 1
furnished | 1
pope | 1
misc | 1
pot | 2
science | 1
history | 1
southwest | 2
rendered | 2
housewares | 1
protect | 1
```

```
edt | 1
parts | 1
networks | 1
goes | 1
lloyd | 1
gospel | 1
mexican | 1
instead | 1
rear | 1
moves | 1
structural | 2
finals | 1
grad | 1
pharmaceutical | 2
do | 1
nodes | 1
guaranteed | 1
stripes | 1
yarn | 3
kills | 2
suggest | 1
tablet | 3
moore | 1
ea | 2
earned | 1
encouraging | 1
plants | 3
rubber | 1
hierarchy | 1
ec | 1
safely | 1
pushed | 2
nj | 2
foundations | 1
planners | 2
india | 1
fy | 1
native | 1
ensure | 1
helena | 1
locale | 1
maria | 1
montana | 1
medication | 1
ol | 2
hydrogen | 1
dna | 1
tract | 1
extends | 1
```

```
skills | 1
josh | 1
logistics | 1
duties | 1
une | 2
troops | 1
instructions | 2
telescope | 1
pins | 1
ireland | 1
regression | 1
stud | 1
lance | 1
tale | 1
investigation | 1
song | 1
domains | 1
lower | 1
threesome | 1
economies | 1
pipe | 1
measured | 1
election | 1
jewelry | 2
hotels | 2
inclusive | 1
vegetables | 1
hopes | 2
rap | 1
infinite | 1
prefix | 1
rl | 1
rw | 1
thehun | 1
stevens | 1
protective | 1
sale | 1
equity | 1
judgment | 1
travel | 1
monetary | 2
recipes | 1
offering | 1
newark | 1
heart | 1
holds | 2
mall | 1
singing | 1
monitoring | 2
```

query | 1
submitted | 2
mention | 2
gregory | 1
including | 1
promotions | 1
outcomes | 1
ears | 1
industry | 1
expansys | 1
on | 1
rel | 1
longer | 1
inn | 1
reflection | 1
poker | 3
enterprise | 1
ra | 1
yamaha | 1
twinks | 1
sullivan | 1
planner | 1
emerald | 1
families | 1
quiet | 1
promptly | 1
much | 1
officer | 1
sites | 2
lf | 2
slow | 1
tomorrow | 1
panels | 1
texts | 1
flip | 1
filme | 1
graphics | 1
marion | 2
pharmaceuticals | 1
tap | 1
ri | 1
festival | 1
respectively | 2
gore | 1
surname | 1
extensive | 1
mathematics | 1
prefers | 1
rr | 1

```
merge | 2
nashville | 1
violation | 1
liquid | 1
medal | 1
shopzilla | 2
pizza | 1
franklin | 1
secondary | 1
halifax | 1
perform | 1
monte | 1
maximum | 1
password | 1
kerry | 1
inch | 1
rwanda | 2
tf | 2
ground | 3
helped | 1
hiking | 1
package | 1
kevin | 2
framed | 1
licenses | 1
vehicle | 1
turn | 2
fans | 1
isp | 1
jewish | 3
faces | 1
later | 1
sharing | 2
sm | 1
processing | 1
enable | 1
pediatric | 2
objective | 2
pas | 1
hearings | 1
quilt | 1
sorts | 1
na | 1
liability | 1
steven | 2
input | 1
guinea | 2
sticks | 1
rescue | 1
```

```
promote | 1
homepage | 1
linux | 1
targets | 1
shakira | 1
levels | 1
shop | 2
heather | 1
editions | 1
layers | 1
food | 1
peripheral | 1
sucks | 1
released | 3
mini | 1
fw | 1
ranks | 1
rural | 2
handjob | 1
unnecessary | 1
tag | 2
fur | 1
injured | 1
hockey | 1
novels | 1
trackback | 3
vinyl | 1
furthermore | 1
wr | 1
volkswagen | 1
signing | 2
initiative | 1
neither | 1
saturday | 1
list | 1
effective | 1
manchester | 1
halfcom | 2
polyphonic | 1
permissions | 2
rarely | 1
many | 2
rental | 1
sen | 3
teaches | 1
tokyo | 1
induction | 1
swift | 1
newbie | 2
```

```
joy | 1
garmin | 1
particles | 1
sql | 1
speak | 1
relation | 1
gage | 1
pop | 1
results | 3
usa | 2
oliver | 1
restrict | 3
exit | 1
hq | 1
gov | 1
supplied | 1
optics | 2
minutes | 1
retain | 2
oracle | 1
invalid | 1
intake | 1
rogers | 2
outreach | 1
objectives | 1
worked | 2
filing | 1
tickets | 1
miles | 1
wash | 1
teachers | 1
processors | 1
io | 1
trader | 2
niagara | 2
isa | 1
purpose | 2
replace | 3
tactics | 1
printable | 1
qatar | 1
rip | 1
surf | 2
investigations | 1
nevertheless | 1
pavilion | 2
essay | 1
periods | 1
force | 1
```

```
traveling | 2
powerseller | 1
forest | 1
thong | 1
liberal | 3
fonts | 1
privacy | 2
pub | 3
revolution | 3
sim | 2
expenditures | 1
painted | 2
identical | 2
oc | 1
predictions | 1
lite | 1
manner | 1
garlic | 2
fruits | 1
makeup | 3
recognized | 1
gbp | 2
high | 1
measurement | 1
resolutions | 1
substances | 1
lynn | 1
wrestling | 1
spreading | 2
proposition | 1
suzuki | 1
isle | 1
supports | 3
records | 2
toner | 4
module | 1
refinance | 2
outer | 2
holes | 1
miniature | 1
ever | 1
moments | 1
fitting | 1
receives | 3
entering | 1
lobby | 1
immediate | 1
vincent | 2
genealogy | 1
```

hosts | 1
severe | 1
online | 1
jeffrey | 1
mobiles | 1
nipple | 1
violations | 1
wallet | 1
sr | 1
styles | 1
res | 1
oak | 1
exceptional | 1
funky | 1
ins | 1
squirting | 1
newer | 2
own | 1
ring | 1
transportation | 1
finally | 1
likes | 1
open | 1
street | 1
involve | 1
oxide | 3
jack | 2
questions | 1
update | 1
finish | 1
shoppers | 2
exercises | 1
illustration | 1
genes | 1
spies | 1
nh | 1
wal | 2
harold | 1
opposite | 2
varied | 2
grid | 1
judges | 1
notifications | 1
meets | 1
pokemon | 1
excessive | 1
eur | 1
springfield | 1
suggested | 1

```
sublime | 1
hear | 1
ward | 2
passenger | 1
hotelscom | 2
symantec | 1
laughing | 1
transition | 2
uw | 1
percentage | 1
officers | 3
marie | 1
guild | 2
mins | 1
zealand | 1
toolkit | 1
yeast | 1
utils | 1
host | 1
todd | 2
girl | 2
fear | 1
ship | 1
exhibit | 1
qualify | 2
tires | 1
underground | 1
playing | 1
gentleman | 1
fetish | 1
server | 2
garage | 1
memphis | 1
intelligent | 1
institution | 2
lexus | 1
ncaa | 1
execute | 1
home | 1
toddler | 1
rolling | 1
george | 1
twist | 1
shelter | 1
millennium | 2
feedback | 1
famous | 1
muze | 2
steady | 2
favour | 1
```

```
respondents | 1
hygiene | 1
thanks | 2
spray | 3
sea | 1
fixtures | 1
per | 1
gray | 1
mx | 3
reject | 1
returned | 1
passing | 1
programmes | 1
qualified | 2
knights | 1
filters | 1
nepal | 1
transport | 1
worldwide | 1
goto | 1
kazakhstan | 1
leather | 1
summit | 1
visitors | 3
extent | 1
fork | 1
valuation | 1
losing | 1
telecharger | 1
lending | 1
opportunities | 1
lived | 1
pockets | 1
mailed | 1
fcc | 1
heavily | 2
inquire | 2
researcher | 1
tour | 2
wage | 1
shoe | 1
russian | 1
pale | 3
mounting | 2
mean | 1
russia | 1
sb | 2
humans | 1
ridge | 1
```

```
external | 1
optional | 1
lap | 1
parish | 2
ordering | 1
objects | 1
menu | 2
marriage | 2
remarkable | 2
mv | 1
remark | 2
square | 1
siemens | 3
far | 1
ty | 1
unknown | 1
trembl | 2
nomination | 1
glad | 1
frederick | 1
summary | 3
soldiers | 1
inspections | 1
oz | 1
productivity | 1
personnel | 3
helps | 1
sys | 1
newscom | 2
largest | 1
sl | 2
patient | 1
spending | 1
rico | 1
partnerships | 1
sd | 1
surrounding | 2
sex | 1
salmon | 1
substantial | 1
wx | 1
navigator | 2
lo | 2
msgid | 1
imposed | 1
he | 1
regional | 1
school | 1
hartford | 2
```

```
puts | 1
sheffield | 3
savannah | 2
supervisors | 1
negotiations | 1
magical | 1
screen | 1
sn | 1
mega | 1
sheet | 1
reserves | 1
point | 1
featured | 1
jackie | 2
theater | 1
ready | 1
transcripts | 1
ko | 1
lycos | 2
shown | 1
otherwise | 1
rank | 1
struggle | 2
stations | 1
neighbors | 1
trust | 1
rather | 1
surveillance | 1
intended | 2
markers | 1
techniques | 3
occupation | 1
reporters | 1
watershed | 1
present | 2
standings | 1
publicity | 1
vacation | 1
qualification | 2
vulnerable | 3
payment | 1
synthesis | 1
frequently | 2
howto | 1
unauthorized | 1
losses | 1
sparc | 2
hanging | 1
obtain | 1
```

```
yesterday | 2
these | 1
habitat | 1
workflow | 1
writings | 1
fundamental | 1
rfc | 1
therefore | 2
islands | 1
rest | 1
slovenia | 1
peeing | 1
highways | 1
susan | 1
their | 2
pipeline | 1
guatemala | 2
problems | 1
robinson | 1
tend | 1
prayers | 1
reflections | 1
survey | 1
tolerance | 1
hampshire | 1
shore | 2
insects | 1
pg | 1
removable | 1
polymer | 1
thereafter | 1
teach | 1
inline | 1
sigma | 1
responsible | 1
hide | 1
sodium | 1
paths | 1
timothy | 3
shares | 1
purchased | 1
spank | 1
ghz | 1
honors | 2
safety | 1
finger | 1
rape | 2
mattress | 1
wing | 1
```

```
turtle | 2
impact | 2
los | 1
variations | 1
marco | 1
night | 3
fiscal | 1
mustang | 1
wind | 1
protest | 1
proceed | 1
policy | 1
ticket | 2
mint | 1
terror | 1
trend | 1
printer | 1
generators | 1
hints | 1
jewel | 1
popular | 1
focused | 1
grab | 1
integrating | 1
obj | 1
gdp | 1
marketing | 1
wars | 1
religious | 1
live | 1
webpage | 1
honor | 1
sense | 2
rb | 1
november | 2
guest | 1
success | 1
valuable | 1
lookup | 1
jeans | 1
pe | 1
miami | 2
florida | 1
tail | 1
penguin | 1
slideshow | 1
only | 1
glossary | 1
perceived | 1
```

```
supplies | 1
netherlands | 3
ignore | 1
tamil | 1
jp | 2
peninsula | 1
nation | 1
pie | 2
keeps | 1
silence | 1
wisconsin | 1
mt | 1
hardcover | 1
slave | 2
gardening | 1
offensive | 1
third | 1
mayor | 1
pens | 1
tubes | 1
frankfurt | 1
roger | 1
totals | 2
lebanon | 1
no | 1
kenya | 1
oops | 1
raw | 1
sandra | 2
legends | 1
ks | 1
myers | 1
receivers | 1
malawi | 1
joint | 1
preferred | 1
style | 1
left | 1
handle | 1
off | 1
physics | 1
rose | 1
registration | 1
lists | 2
rays | 1
requests | 1
prior | 2
ibm | 1
method | 1
```

```
sealed | 1
tracked | 2
lambda | 1
sleeve | 1
violin | 1
housing | 1
ment | 1
potatoes | 1
traffic | 2
pill | 2
verizon | 1
personalized | 1
proper | 1
relates | 4
omaha | 1
up | 1
micro | 1
mph | 1
organizer | 1
surfaces | 1
senegal | 2
future | 1
primary | 1
mlb | 1
lolita | 2
remedy | 1
sensor | 1
holiday | 1
trial | 1
villas | 1
hayes | 1
madagascar | 1
reasonable | 3
hypothetical | 1
span | 1
weird | 1
holy | 1
several | 1
implementation | 1
launched | 1
prisoners | 1
government | 1
preceding | 1
reflected | 2
targeted | 1
saving | 1
parade | 2
narrow | 1
within | 2
```

```
struct | 1
share | 2
nicole | 1
howard | 1
german | 1
vi | 1
trackbacks | 1
tracker | 1
pasta | 1
half | 3
suspension | 1
hc | 1
refresh | 1
hung | 1
weather | 1
ratings | 1
passage | 1
physician | 1
nose | 1
surgeon | 1
global | 1
sell | 1
uni | 1
linking | 1
stuck | 1
nor | 1
output | 1
references | 1
michel | 1
nail | 1
shops | 1
spot | 1
inspiration | 2
presidential | 1
specs | 2
ribbon | 1
local | 1
restrictions | 1
way | 1
mice | 1
segment | 1
sexy | 1
greene | 1
puzzles | 1
nurse | 1
harassment | 1
listprice | 1
infections | 1
magnitude | 1
```

```
me | 1
guys | 1
pee | 1
marriott | 1
positive | 1
west | 1
spam | 1
nickel | 3
guru | 1
plastic | 1
lip | 1
won | 1
precision | 1
illustrated | 1
holder | 1
wikipedia | 1
n | 2
roller | 1
ima | 1
who | 1
juice | 1
masters | 3
proudly | 1
stupid | 1
import | 1
prepaid | 2
seeds | 1
hosting | 1
million | 1
teams | 1
searches | 1
reported | 2
spa | 2
mambo | 1
op | 1
methods | 1
sick | 1
hormone | 1
modifications | 1
operated | 1
transparent | 1
sing | 2
palm | 1
into | 2
threatening | 1
robert | 1
sisters | 1
sword | 1
southern | 1
```

```
litigation | 1
kit | 2
increase | 1
walk | 1
port | 1
hurt | 1
ours | 2
podcast | 1
largely | 1
occupied | 1
pleasant | 3
mauritius | 1
pack | 3
passes | 1
installation | 1
pod | 1
near | 1
yearly | 1
greg | 1
speech | 1
vii | 1
infectious | 1
lion | 1
visitor | 2
hot | 1
strong | 1
mn | 2
paying | 1
que | 2
perception | 1
performed | 1
ventures | 1
phpbb | 1
other | 2
movies | 2
merit | 1
tanks | 1
rc | 1
springer | 2
herbal | 1
philadelphia | 1
workers | 1
incorporated | 1
remarks | 1
preston | 1
screenshot | 1
parties | 2
spotlight | 1
silent | 1
```

```
roughly | 1
ordered | 2
u | 1
wooden | 1
shemales | 1
schedule | 1
j | 1
welcome | 1
indicates | 1
replacement | 2
TRUE | 1
law | 1
univ | 1
wonder | 1
whale | 1
sleeps | 1
harvey | 1
ls | 1
mix | 1
wet | 2
opinions | 1
worlds | 1
slim | 2
pose | 1
powered | 1
tie | 1
occurs | 1
handles | 1
net | 1
removing | 1
my | 1
very | 1
overseas | 1
joshua | 1
row | 1
instructional | 1
hammer | 1
marina | 1
mel | 1
root | 1
ownership | 1
ou | 1
lips | 1
secure | 1
religions | 1
pattern | 1
signals | 2
libraries | 1
literature | 1
income | 1
```

```
receive | 1
maps | 1
storage | 1
replacing | 1
refined | 1
recruitment | 1
meaning | 2
malaysia | 1
providence | 1
sophisticated | 1
nightlife | 1
involved | 1
mia | 2
twins | 2
luis | 2
via | 1
its | 1
washer | 1
transfer | 1
reached | 1
vendor | 1
min | 1
shade | 2
move | 1
max | 2
remained | 1
phd | 1
liechtenstein | 1
supplement | 1
ltd | 1
wan | 1
jordan | 2
statewide | 1
prison | 1
perfectly | 2
installations | 1
rail | 2
k | 2
interests | 1
varies | 1
trails | 1
medicaid | 2
hrs | 1
pressing | 1
zambia | 1
skip | 2
viewed | 1
interactions | 1
reserve | 1
```

```
videos | 1
smaller | 1
series | 1
vcr | 1
spin | 1
slide | 1
introduces | 2
save | 1
tutorial | 1
reveals | 1
naked | 1
poster | 1
postcard | 1
rachel | 1
licence | 1
movers | 1
idea | 1
lyric | 2
sic | 1
simplified | 1
scuba | 1
passed | 1
istanbul | 1
ion | 1
starter | 1
village | 1
romantic | 1
tp | 1
sensors | 1
latex | 1
rice | 1
personals | 1
make | 1
subaru | 1
unix | 1
positions | 1
william | 1
incorrect | 1
nov | 1
produced | 1
older | 1
step | 1
surfing | 1
por | 1
peripherals | 2
tales | 1
joining | 1
ink | 1
resources | 1
```

```
letting | 1
understanding | 1
jean | 1
parking | 1
nearest | 1
premises | 1
palestine | 1
strings | 1
occurred | 1
seek | 1
rings | 1
thesis | 1
peter | 2
uploaded | 2
ip | 1
neo | 1
wanted | 1
singapore | 1
ve | 2
report | 1
scanned | 1
observer | 1
tion | 1
july | 1
moss | 1
loose | 1
nude | 1
printing | 1
rt | 1
solo | 1
poland | 1
iron | 1
vacations | 3
kijiji | 1
wise | 1
philips | 1
indicating | 1
stack | 1
sunshine | 1
ieee | 1
internet | 1
reputation | 1
restaurants | 1
limousines | 1
nasa | 1
range | 1
kw | 1
safer | 1
race | 1
```

```
vote | 1
miller | 1
ron | 1
interact | 1
limit | 1
ps | 1
naturally | 1
lighting | 1
march | 1
lung | 1
yields | 1
railway | 1
pipes | 2
indonesian | 1
monica | 1
ripe | 1
tin | 2
man | 1
professional | 1
packard | 1
institutes | 1
psp | 1
priorities | 1
minister | 1
rising | 1
revealed | 1
techrepublic | 1
wider | 1
nutrition | 1
oe | 1
recorders | 1
meetup | 1
takes | 1
screenshots | 2
returns | 1
structured | 2
nature | 1
tuning | 1
snow | 1
sensitivity | 1
quantitative | 1
knee | 1
scout | 1
moses | 1
ottawa | 1
vienna | 1
powerful | 1
yang | 1
uv | 2
```

```
rna | 1
sharp | 1
representing | 1
weddings | 1
told | 1
proposal | 1
services | 1
lancaster | 1
rob | 1
taste | 1
palmer | 1
representation | 1
particle | 1
showcase | 1
ind | 1
reasons | 1
possess | 1
opposition | 1
mp | 1
winners | 1
load | 2
nfl | 1
requirement | 1
recognize | 1
nickname | 1
sequences | 1
resolve | 1
louis | 1
loops | 1
oklahoma | 1
specialists | 1
she | 1
temperatures | 1
memory | 1
washington | 1
pc | 1
wifi | 1
younger | 1
upcoming | 1
sailing | 1
ta | 1
volleyball | 1
norman | 1
nearby | 2
johnson | 1
reforms | 1
yukon | 1
memo | 1
pursuant | 1
```

```
spice | 1
record | 1
movements | 1
opposed | 1
retrieval | 1
nathan | 1
room | 1
parenting | 1
throughout | 1
surprising | 1
meanwhile | 1
johns | 1
suffering | 1
mad | 1
planning | 1
informal | 1
wait | 2
tapes | 2
locations | 1
telecommunications | 1
made | 1
situation | 2
miss | 2
o | 1
project | 1
ryan | 1
mario | 1
war | 1
volvo | 1
psychiatry | 1
valve | 1
tank | 2
pollution | 1
panasonic | 1
typically | 1
strange | 1
living | 1
peoples | 1
jumping | 1
joe | 1
tax | 1
pierce | 1
scenarios | 2
weekend | 1
specials | 2
ranging | 1
marble | 1
units | 1
province | 1
```

```
universe | 1
nextel | 1
webshots | 1
profiles | 1
savage | 1
routers | 1
wants | 1
x | 2
pussy | 1
plasma | 1
minds | 1
mill | 1
producers | 1
soma | 1
undertaken | 1
node | 1
shoulder | 1
start | 1
speeches | 2
mirrors | 1
velvet | 1
radius | 1
vietnamese | 1
nest | 1
so | 1
translation | 1
vast | 1
queens | 2
procedure | 1
past | 2
pantyhose | 1
ver | 1
sweet | 1
seven | 1
legend | 1
textiles | 1
vc | 1
spread | 2
substitute | 1
posted | 1
ruling | 1
stranger | 1
marketplace | 1
playboy | 1
pond | 1
virgin | 2
plains | 1
pix | 1
mar | 1
```

```
lakes | 1
legs | 2
rocks | 1
republican | 1
view | 2
vocal | 1
minor | 1
sk | 1
mc | 1
licensed | 1
screensavers | 1
salad | 1
preview | 1
salvation | 1
wma | 1
performances | 2
s | 1
nn | 1
separate | 1
pos | 1
subscriber | 1
sides | 1
prove | 1
mold | 1
ww | 1
seat | 1
malpractice | 1
meter | 1
shipment | 1
year | 1
vg | 1
voted | 1
rrp | 1
stars | 1
residence | 1
stamp | 1
monitor | 1
phi | 1
taxation | 1
now | 1
monkey | 1
tournament | 1
notified | 1
karma | 1
static | 2
monday | 1
location | 1
pointed | 1
tried | 1
```

```
jesse | 1
paypal | 1
season | 1
reviewed | 1
networking | 1
participate | 1
reid | 1
track | 1
sum | 2
special | 1
milan | 1
preparing | 1
statement | 1
tiles | 1
weighted | 1
movement | 1
rabbit | 1
kiss | 1
olympus | 1
nr | 1
pieces | 1
wrong | 1
shopper | 1
launches | 1
proposals | 1
tooth | 2
plymouth | 1
va | 1
satisfactory | 2
wt | 1
mae | 1
plots | 1
territories | 1
offerings | 1
talks | 1
semi | 1
welding | 1
supervision | 1
months | 1
televisions | 1
threatened | 1
kernel | 1
tba | 1
salt | 1
murphy | 1
latest | 1
part | 1
treaty | 1
relations | 1
```

```
tuner | 1
mechanics | 1
packages | 2
packets | 1
or | 1
ultra | 1
promoted | 1
oxygen | 1
yugoslavia | 1
solving | 1
womens | 1
toll | 1
treat | 1
tropical | 1
orgasm | 1
wall | 1
titles | 1
white | 1
remains | 1
vertex | 1
suites | 1
manor | 1
surgical | 1
mozilla | 1
replaced | 1
tennis | 1
suddenly | 1
shortcuts | 1
lucia | 1
occasions | 1
sexual | 1
refers | 1
mississippi | 1
state | 1
sarah | 2
lenses | 1
sig | 1
quoted | 1
words | 1
trash | 1
seq | 1
oriental | 1
veterinary | 1
scientific | 1
stadium | 1
stability | 1
specialty | 1
minneapolis | 1
msn | 1
```

```
reception | 1
recipe | 1
spectacular | 1
regulated | 1
richards | 1
moved | 1
minute | 1
peak | 1
mods | 1
philosophy | 1
lc | 1
throw | 1
lifestyle | 1
whats | 1
microsoft | 1
mail | 2
tom | 1
proc | 1
nano | 1
letters | 1
sri | 1
tests | 1
proceeds | 1
seo | 1
pounds | 1
suggesting | 1
texas | 1
postposted | 1
realty | 1
vaccine | 1
relocation | 1
------------------------------
Conteo Total de Palabras: 5000
Tiempo de Ejecución (segundos): 0.07855998299964995
```

#Análisis del codigo mejorado

```
!pylint wordCount.py

************* Module wordCount
wordCount.py:1:0: C0103: Module name "wordCount" doesn't conform to
snake_case naming style (invalid-name)


-------------------------------------------------------------------
Your code has been rated at 9.87/10 (previous run: 9.87/10, +0.00)
```

#Conclusiones

La implementación de este programa logró realizar un conteo de palabras a partir de una archivo de texto utilizando exclisuvamente algoritmos básicos, cumpliendo con los requisitos establecidos y evitando el uso de librerías y funciones de alto nivel. EL diseño modular de código nos permite identificar claramente las etapas de lectura de datos, procesamiento, y presentación de los resultados, esto a futuro permite que otros desarrolladores, o programadores e inclusive la persona que lo desarrollo, lo comprendan, le den mantenimiento y lo puedan validar, en tiempos más cortos.

La correcta gestión de los errores y la medición de tiempo de ejecución garantizan un comportamieno robuzto del programa incluso ante archivos de gran volumen de información o datos. La solución muestra una compresión adecuada de los fundamentos de programación, estructuras de datos básicas y buenas práctica de programación, permitiendo una implementación funcional, eficiente y alineada con los criterios solicitado.

Los requisitos que se mencionan en el ejercicio son los siguientes:

1. El programa será invocado desde la línea de comandos. El programa recibirá un archivo como parámetro. El archivo contendrá palabras (presumiblemente entre espacios). **Se cumple con el requisito**
2. El programa identificará todas las palabras distintas y su frecuencia (cuantas veces apparece la palabra "x" en el archivo). Los resultados se mostrarán en pantallas y en un archivo llamado WordCountResults.txt. Todos los cálculos deben realizarse utilizando los algoritmos básicos, no funciones, ni bibliotecas. **Se cumple con el requisito**
3. El programa incluira un mecanismo para gestionar datos no válidos en el archivo. Los errores se mostrarán en consola y la ejecución continuará. **Se cumple con el requisito**
4. El nombre del programa será wordCount.py. **Se cumple con el requisito**
5. El formato mínimo para invocar el programa será el suguiente: python wordCount.py fileWithdata.txt. **Se cumple con el requsito**
6. El programa gestionará archivos con un número de elementos que puede variar desde cientos hasta miles. **Se cumple con el requisito**
7. El programa debe incluir al final de la ejecución el tiempo transcurrido para la ejecución y el cálculo de los datos. Este número se incluira en el archivo de resultados y en la pantalla. **Se cumple con el requisito**
8. Cumplir con la norma PEP8. **Se cumple con el requisito**

Nota, pylint en el código sin mejoras nos envia el siguiente mensaje **"wordCount.py:1:0: C0103: Module name "wordCount" doesn't conform to snake_case naming style (invalid-name)"**, al correr el código mejorado, el mensaje se mantiene, sin embargo decidimos dejar el nombre del programa como se menciona en el requisito número 4.

Los tiempos de ejecucion de los diferentes archivos los mostramos a continuación:

- TC1.txt ----->> 0.0009147 segundos, 100 palabras
- TC2.txt ----->> 0.0011721 segundos, 184 palabras
- TC3.txt ----->> 0.0035882 segundos, 500 palabras
- TC4.txt ----->> 0.0066697 segundos, 1000 palabras
- TC5.txt ----->> 0.17366869 segundos, 5000 palabras

La calificación el primer código fue de 8.55/10, mientras que el código mejorado presenta una calificación de 9.87/10. La mejorá para está ocasión fue de 1.32 puntos, consideramos que es buena.