



INSTITUTO TECNOLÓGICO Y DE ESTUDIOS  
SUPERIORES DE MONTERREY

## Actividad 4.2. Ejercicio de programación 1

Mónica María del Rivero Sánchez - A01362368

**Pruebas de software y aseguramiento de la calidad  
2026**

**8 de febrero del**

# P1 Results

## TC1

```
Results saved to 'StatisticsResults.txt'
(base) PS C:\Users\delrivero.m\al01362368_Numeros de actividadA4.2\P1\source> python computeStatistics.py TC1.txt
Reading data from 'TC1.txt'...

Successfully loaded 400 numbers.
Calculating statistics...

=====
DESCRIPTIVE STATISTICS RESULTS
=====
Count of numbers: 400
Mean: 242.3200
Median: 239.5000
Mode: 393.0000
Standard Deviation: 145.4400
Variance: 21152.7996
=====
Elapsed Time: 0.005681 seconds
=====
```

## TC2

```
Reading data from 'TC2.txt'...

Successfully loaded 1977 numbers.
Calculating statistics...

=====
DESCRIPTIVE STATISTICS RESULTS
=====
Count of numbers: 1977
Mean: 250.7840
Median: 247.0000
Mode: 230.0000
Standard Deviation: 144.2078
Variance: 20795.8880
=====
Elapsed Time: 0.235433 seconds
=====
```

## TC3

```
(base) PS C:\Users\delrivero.m\al01362368_Numeros de actividadA4.2\P1\source> python computeStatistics.py TC3.txt
Reading data from 'TC3.txt'...

Successfully loaded 12624 numbers.
Calculating statistics...

=====
DESCRIPTIVE STATISTICS RESULTS
=====
Count of numbers: 12624
Mean: 249.7762
Median: 249.0000
Mode: 94.0000
Standard Deviation: 145.3236
Variance: 21118.9504
=====
Elapsed Time: 7.663255 seconds
=====
```

## TC4

```
(base) PS C:\Users\delrivero.m\al01362368_Numeros de actividadA4.2\P1\source> python computeStatistics.py tc4.txt
Reading data from 'tc4.txt'...

Successfully loaded 12624 numbers.
Calculating statistics...

=====
DESCRIPTIVE STATISTICS RESULTS
=====
Count of numbers: 12624
Mean: 149.0027
Median: 147.7500
Mode: 123.7500
Standard Deviation: 130.4196
Variance: 17009.2682
=====
Elapsed Time: 7.696065 seconds
=====
```

## TC5

```
(base) PS C:\Users\delrivero.m\al01362368_Numeros de actividadA4.2\P1\source> python computeStatistics.py tc5.TXT
Reading data from 'tc5.TXT'...

Warning: Invalid data at line 5: 'ABA' - Skipping
Warning: Invalid data at line 155: '23,45' - Skipping
Warning: Invalid data at line 232: '11;54' - Skipping
Warning: Invalid data at line 239: 'll' - Skipping

Total invalid entries skipped: 4

Successfully loaded 307 numbers.
Calculating statistics...

=====
DESCRIPTIVE STATISTICS RESULTS
=====
Count of numbers: 307
Mean: 241.4951
Median: 241.0000
Mode: 393.0000
Standard Deviation: 145.7023
Variance: 21229.1724
=====
Elapsed Time: 0.004837 seconds
=====
```

## TC6

```
Results saved to 'StatisticsResults.txt'
(base) PS C:\Users\delrivero.m\al01362368_Numeros de actividadA4.2\P1\source> python computeStatistics.py tc6.TXT
Reading data from 'tc6.TXT'...

Successfully loaded 3000 numbers.
Calculating statistics...

=====
DESCRIPTIVE STATISTICS RESULTS
=====
Count of numbers: 3000
Mean: 187906599279774728192.0000
Median: 188000049965542998016.0000
Mode: No mode (all values appear once)
Standard Deviation: 107399951657667592192.0000
Variance: 11534749616069338239761958751339425038336.0000
=====
Elapsed Time: 0.439833 seconds
=====
```

## TC7

```

Results saved to 'StatisticsResults.txt'
• (base) PS C:\Users\delrivero.m\al01362368_Numeros de actividadA4.2\P1\source> python computeStatistics.py tc7.TXT
Reading data from 'tc7.TXT'...

Warning: Invalid data at line 183: 'ABBA' - Skipping
Warning: Invalid data at line 229: 'ERROR' - Skipping

Total invalid entries skipped: 2

Successfully loaded 12767 numbers.
Calculating statistics...

=====
DESCRIPTIVE STATISTICS RESULTS
=====
Count of numbers: 12767
Mean: 247467395499714900464.0000
Median: 246640973074290016256.0000
Mode: No mode (all values appear once)
Standard Deviation: 144611318601233137664.0000
Variance: 209124315380632110741744778947884613632.0000
=====
Elapsed Time: 8.303500 seconds
=====

Results saved to 'StatisticsResults.txt'
```

## Pylint result

```

• (base) PS C:\Users\delrivero.m\al01362368_Numeros de actividadA4.2\P1\source> 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 9.93/10 (previous run: 9.93/10, +0.00)
```

## P2

### TC1

```

=====
NUMBER BASE CONVERTER
=====

Input file: TC1.txt
Output file: ConversionResults.txt
=====

Processing 200 items from 'TC1.txt'...

-----

CONVERSION RESULTS:
=====

Decimal: 6980368 | Binary: 110101010000110001000 | Hexadecimal: 6A8310
Decimal: 5517055 | Binary: 10101000010111011111111 | Hexadecimal: 542EFF
Decimal: 1336159 | Binary: 101000110001101011111 | Hexadecimal: 14635F
Decimal: 6750185 | Binary: 110011011111111101001 | Hexadecimal: 66FFE9
Decimal: 1771937 | Binary: 110110000100110100001 | Hexadecimal: 1B09A1
Decimal: 360952 | Binary: 10110000011111000 | Hexadecimal: 581F8
Decimal: 5672561 | Binary: 10101101000111001110001 | Hexadecimal: 568E71
Decimal: 916583 | Binary: 1101111110001100111 | Hexadecimal: DFC67
Decimal: 2700138 | Binary: 10100010011001101010 | Hexadecimal: 29336A
Decimal: 9645053 | Binary: 10010011001010111111101 | Hexadecimal: 932BFD

... (180 more results) ...
```

```

... (180 more results) ...

Decimal: 5828308 | Binary: 1011000111011011010100 | Hexadecimal: 58EED4
Decimal: 8058535 | Binary: 1111010111011010100111 | Hexadecimal: 7AF6A7
Decimal: 9035191 | Binary: 100010011101110110110111 | Hexadecimal: 89DB7
Decimal: 7922103 | Binary: 111100011100001101010111 | Hexadecimal: 78E1B7
Decimal: 9366003 | Binary: 100011101110100111110011 | Hexadecimal: 8EE9F3
Decimal: 4555717 | Binary: 1000101100000111000101 | Hexadecimal: 4583C5
Decimal: 3526753 | Binary: 1101011101000001100001 | Hexadecimal: 3D0061
Decimal: 3176815 | Binary: 110000011100101101111 | Hexadecimal: 30796F
Decimal: 858440 | Binary: 11010001100101001000 | Hexadecimal: D1948
Decimal: 2250854 | Binary: 100010010110000110010 | Hexadecimal: 225866

=====
STATISTICS
=====
Total items processed: 200
Total errors: 0
Execution time: 0.003205 seconds
=====

Results saved to 'ConversionResults.txt'

```

## TC2

```

(base) PS C:\Users\deRivero.m\al01362368_Número de actividadA4.2\P2\source> python convertNumbers.py TC2.txt
=====
NUMBER BASE CONVERTER
=====
Input file: TC2.txt
Output file: ConversionResults.txt
=====

Processing 200 items from 'TC2.txt'...
-----

CONVERSION RESULTS:
=====
Decimal: 7116776 | Binary: 1101100100101111101000 | Hexadecimal: 6C97E8
Decimal: 1666340 | Binary: 110010110110100100100 | Hexadecimal: 196024
Decimal: 8886983 | Binary: 10000111001101011000111 | Hexadecimal: 879AC7
Decimal: 839365 | Binary: 11001100111010000101 | Hexadecimal: CCEC5
Decimal: 924280 | Binary: 11000001101001111000 | Hexadecimal: E1A78
Decimal: 1026310 | Binary: 111101010010000010 | Hexadecimal: FA906
Decimal: 1615293 | Binary: 11000101001011011101 | Hexadecimal: 18A5BD
Decimal: 1063875 | Binary: 100000011101111000011 | Hexadecimal: 103BC3
Decimal: 679035 | Binary: 10100101110001111011 | Hexadecimal: A5C7B
Decimal: 5201970 | Binary: 1001111011000000010010 | Hexadecimal: 4F6032

... (180 more results) ...

Decimal: 8052752 | Binary: 11110101110000000010000 | Hexadecimal: 7AE010
Decimal: 6359493 | Binary: 11000010000100111000101 | Hexadecimal: 6109C5
Decimal: 1967646 | Binary: 11110000001000011110 | Hexadecimal: 1E061E
Decimal: 6575052 | Binary: 11001000010100111100100 | Hexadecimal: 6453CC
Decimal: 2323342 | Binary: 1000110111001110001110 | Hexadecimal: 2373BE
Decimal: 6735768 | Binary: 11001101100011110010000 | Hexadecimal: 66C790
Decimal: 8895858 | Binary: 100001111011110101110010 | Hexadecimal: 87BD72
Decimal: 4238091 | Binary: 1000000101010100001011 | Hexadecimal: 4AAB0B
Decimal: 7093069 | Binary: 1101100001110101001101 | Hexadecimal: 6C3B4D
Decimal: 39 | Binary: 100111 | Hexadecimal: 27

=====
STATISTICS
=====
Total items processed: 200
Total errors: 0
Execution time: 0.002419 seconds
=====


```

## TC3

#### CONVERSION RESULTS:

```
=====
Decimal: -39 | Binary: 1111111111111111111111011001 | Hexadecimal: FFFFFFFD9
Decimal: -36 | Binary: 11111111111111111111111011100 | Hexadecimal: FFFFFFFDC
Decimal: 8 | Binary: 1000 | Hexadecimal: 8
Decimal: 34 | Binary: 100010 | Hexadecimal: 22
=====
```

... (180 more results) ...

```
=====
Decimal: 47 | Binary: 101111 | Hexadecimal: 2F
Decimal: -13 | Binary: 1111111111111111111111100111 | Hexadecimal: FFFFFFFF3
Decimal: -32 | Binary: 1111111111111111111111111100000 | Hexadecimal: FFFFFFFE0
Decimal: 1 | Binary: 1 | Hexadecimal: 1
Decimal: 1 | Binary: 1 | Hexadecimal: 1
Decimal: -25 | Binary: 1111111111111111111111111100111 | Hexadecimal: FFFFFFFE7
Decimal: -33 | Binary: 1111111111111111111111111011111 | Hexadecimal: FFFFFFFDF
Decimal: 16 | Binary: 10000 | Hexadecimal: 10
Decimal: 17 | Binary: 10001 | Hexadecimal: 11
Decimal: 4 | Binary: 100 | Hexadecimal: 4
=====
```

#### STATISTICS

```
=====
Total items processed: 200
Total errors: 0
Execution time: 0.001771 seconds
=====
```

## TC4

```
=====
STATISTICS ...
Output file: ConversionResults.txt
=====
```

Processing 41 items from 'TC4.TXT'...

```
=====
ERROR - Line 8: Invalid number format: 'ABC'
ERROR - Line 21: Invalid number format: 'ERR'
ERROR - Line 41: Invalid number format: 'VAL'
=====
```

#### CONVERSION RESULTS:

```
=====
Decimal: -39 | Binary: 1111111111111111111111011001 | Hexadecimal: FFFFFFFD9
Decimal: -36 | Binary: 11111111111111111111111011100 | Hexadecimal: FFFFFFFDC
Decimal: 8 | Binary: 1000 | Hexadecimal: 8
Decimal: 34 | Binary: 100010 | Hexadecimal: 22
Decimal: 17 | Binary: 10001 | Hexadecimal: 11
Decimal: 49 | Binary: 110001 | Hexadecimal: 31
Decimal: 5 | Binary: 101 | Hexadecimal: 5
Decimal: 0 | Binary: 0 | Hexadecimal: 0
Decimal: 33 | Binary: 100001 | Hexadecimal: 21
=====
```

#### STATISTICS

```
=====
Total items processed: 38
Total errors: 3
Execution time: 0.001559 seconds
=====
```

## Pylint

```
➊ (base) PS C:\Users\delrivero.m\o1362368_Número de actividadA4.2\P2\source> 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 9.92/10 (previous run: 9.85/10, +0.08)
```

P3

TC1

WORD FREQUENCY ANALYSIS RESULTS	
WORD	FREQUENCY
conservative	2
achievement	1
adequate	1
adventures	1
anal	1

TC2

=====

WORD FREQUENCY ANALYSIS RESULTS

=====

Total words processed: 184

Distinct words found: 144

Execution time: 0.0033 seconds

WORD	FREQUENCY
amongst	4
brass	4
chain	4
doc	4
filme	4
holders	4
inflation	4
kingston	4
lease	4
monaco	4
revenues	4
targeted	4
pre	3
wood	3
advantages	1
afternoon	1
algebra	1

TC3

Total words processed: 500  
Distinct words found: 487  
Execution time: 0.0314 seconds

WORD	FREQUENCY
notice	3
blues	2
charity	2
copy	2
flood	2
hurt	2
pairs	2
pipe	2
pottery	2
reveals	2
suggestion	2
thumb	2
acquisition	1
advances	1
affects	1
aids	1
allergy	1
ambient	1
an	1
analyzed	1

TC4

Total words processed: 1000  
Distinct words found: 949  
Execution time: 0.1357 seconds

WORD	FREQUENCY
started	3
annual	2
benchmark	2
book	2
castle	2
charts	2
clients	2
coastal	2
confidential	2
consist	2
contains	2
crazy	2
data	2
ddr	2
detroit	2
diamonds	2
diseases	2
dramatically	2
earning	2
farm	2

TC5

=====

WORD FREQUENCY ANALYSIS RESULTS

=====

Total words processed: 5000

Distinct words found: 3750

Execution time: 1.9026 seconds

WORD	FREQUENCY
kg	5
managed	5
pets	5
schools	5
wilderness	5
employers	4
explain	4
gps	4
keeping	4
loud	4
manufactured	4
margaret	4
nb	4
opens	4
passion	4
petersburg	4
products	4
published	4
qualities	4
recommends	4
relates	4
seasons	4
sentences	4
suggestions	4
terrorist	4
threats	4
toner	4
travelling	4
useful	4
webcams	4
worldcat	4
wrap	4
corpus	3
downtown	3
drinks	3
.	-

## Pylint

```
(base) PS C:\Users\delrivero.m\al01362368_Numer0 de actividadA4.2\P3\source> 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 9.93/10 (previous run: 7.40/10, +2.53)
```