



Tecnológico de Monterrey

Instituto Tecnológico y de Estudios Superiores de Monterrey

TC4017.10 Pruebas de software y aseguramiento de la calidad

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Actividad 4.2 Ejercicio de programación 1

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Resultados

Ejercicio de programación 1: Compute statistics

TC1.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python compute_statistics.py TC1.txt
+-----+-----+-----+-----+-----+-----+-----+
| Count | Valid | Mean | Median | Mode | Standard deviation | Variance |
+-----+-----+-----+-----+-----+-----+-----+
| 400 | 400 | 242.32 | 239.5 | N/A | 145.25810683056557 | 21152.79959899749 |
+-----+-----+-----+-----+-----+-----+-----+
Execution time: 0.001693964005 seconds
```

TC2.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python compute_statistics.py TC2.txt
+-----+-----+-----+-----+-----+-----+-----+
| Count | Valid | Mean | Median | Mode | Standard deviation | Variance |
+-----+-----+-----+-----+-----+-----+-----+
| 1977 | 1977 | 250.7840161861406 | 247.0 | 230.0 | 144.17131868884059 | 20795.88804398353 |
+-----+-----+-----+-----+-----+-----+-----+
Execution time: 0.002681970596 seconds
```

TC3.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python compute_statistics.py TC3.txt
+-----+-----+-----+-----+-----+-----+-----+
| Count | Valid | Mean | Median | Mode | Standard deviation | Variance |
+-----+-----+-----+-----+-----+-----+-----+
| 12624 | 12624 | 249.77621989860583 | 249.0 | 94.0 | 145.31784980917962 | 21118.950393821862 |
+-----+-----+-----+-----+-----+-----+-----+
Execution time: 0.117065191269 seconds
```

TC4.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python compute_statistics.py TC4.txt
+-----+-----+-----+-----+-----+-----+-----+
| Count | Valid | Mean | Median | Mode | Standard deviation | Variance |
+-----+-----+-----+-----+-----+-----+-----+
| 12624 | 12624 | 149.00267347908746 | 147.75 | 123.75 | 130.41441961308894 | 17009.26821851143 |
+-----+-----+-----+-----+-----+-----+-----+
Execution time: 0.068205118179 seconds
```

TC5.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python compute_statistics.py TC5.txt
The following element is not a number: ABA
The following element is not a number: 23,45
The following element is not a number: 11;54
The following element is not a number: ll
+-----+-----+-----+-----+-----+-----+-----+
| Count | Valid | Mean | Median | Mode | Standard deviation | Variance |
+-----+-----+-----+-----+-----+-----+-----+
| 311 | 307 | 241.49511400651465 | 241.0 | N/A | 145.46484786056646 | 21229.17236166996 |
+-----+-----+-----+-----+-----+-----+-----+
Execution time: 0.096889734268 seconds
```

TC6.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python compute_statistics.py TC6.txt
+-----+-----+-----+-----+-----+-----+-----+
| Count | Valid |      Mean      |      Median      | Mode | Standard deviation |      Variance      |
+-----+-----+-----+-----+-----+-----+-----+
| 3000 | 3000 | 1.8790659927977473e+20 | 1.88008049965543e+20 | N/A | 1.0738205017381e+20 | 1.1534749616069338e+40 |
+-----+-----+-----+-----+-----+-----+-----+
Execution time: 0.364662885666 seconds
```

TC7.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python compute_statistics.py TC7.txt
The following element is not a number: ABBA
The following element is not a number: ERROR
+-----+-----+-----+-----+-----+-----+-----+
| Count | Valid |      Mean      |      Median      | Mode | Standard deviation |      Variance      |
+-----+-----+-----+-----+-----+-----+-----+
| 12769 | 12767 | 2.474673954997149e+20 | 2.4664097307429e+20 | N/A | 1.4460564700984703e+20 | 2.091243115380632e+40 |
+-----+-----+-----+-----+-----+-----+-----+
Execution time: 0.039991378784 seconds
```

Ejercicio de programación 2: Converter

TC1.txt

```
• (venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python convert_numbers.py TC1.txt
+-----+-----+-----+-----+
| Number | Decimal |      Binary      |      Hexadecimal      |
+-----+-----+-----+-----+
| 1 | 6980368 | 11010101000001100010000 | 6A8310 |
| 2 | 5517055 | 10101000010111011111111 | 542EFF |
| 3 | 1336159 | 101000110001101011111 | 14635F |
| 4 | 6750185 | 1100110111111111101001 | 66FFE9 |
| 5 | 1771937 | 110110000100110100001 | 1B09A1 |
| 6 | 360952 | 1011000000111111000 | 581F8 |
| 7 | 5672561 | 10101101000111001110001 | 568E71 |
| 8 | 916583 | 11011111110001100111 | DFC67 |
| 9 | 2700138 | 1010010011001101101010 | 29336A |
+-----+-----+-----+-----+
| 190 | 6263187 | 10111111001000110010011 | 5F9193 |
| 191 | 5828308 | 10110001110111011010100 | 58EED4 |
| 192 | 8058535 | 11110101111011010100111 | 7AF6A7 |
| 193 | 9035191 | 100010011101110110110111 | 89DDB7 |
| 194 | 7922103 | 11110001110000110110111 | 78E1B7 |
| 195 | 9366003 | 100011101110100111110011 | 8EE9F3 |
| 196 | 4555717 | 10001011000001111000101 | 4583C5 |
| 197 | 3526753 | 1101011101000001100001 | 35D061 |
| 198 | 3176815 | 1100000111100101101111 | 30796F |
| 199 | 858440 | 11010001100101001000 | D1948 |
| 200 | 2250854 | 1000100101100001100110 | 225866 |
+-----+-----+-----+-----+
Execution time: 0.05 seconds
```

TC2.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python convert_numbers.py TC2.txt
```

| Number | Decimal | Binary | Hexadecimal |
|--------|---------|--------------------------|-------------|
| 1 | 7116776 | 11011001001011111101000 | 6C97E8 |
| 2 | 1666340 | 110010110110100100100 | 196D24 |
| 3 | 8886983 | 100001111001101011000111 | 879AC7 |
| 4 | 839365 | 11001100111011000101 | CCEC5 |
| 5 | 924280 | 11100001101001111000 | E1A78 |
| 6 | 1026310 | 11111010100100000110 | FA906 |
| 7 | 1615293 | 110001010010110111101 | 18A5BD |
| 8 | 1063875 | 100000011101111000011 | 103BC3 |
| 9 | 679035 | 10100101110001111011 | A5C7B |
| 190 | 1932131 | 111010111101101100011 | 1D7B63 |
| 191 | 8052752 | 11110101110000000010000 | 7AE010 |
| 192 | 6359493 | 11000010000100111000101 | 6109C5 |
| 193 | 1967646 | 111100000011000011110 | 1E061E |
| 194 | 6575052 | 11001000101001111001100 | 6453CC |
| 195 | 2323342 | 1000110111001110001110 | 23738E |
| 196 | 6735760 | 11001101100011110010000 | 66C790 |
| 197 | 8895858 | 100001111011110101110010 | 87BD72 |
| 198 | 4238091 | 10000001010101100001011 | 40AB0B |
| 199 | 7093069 | 11011000011101101001101 | 6C3B4D |
| 200 | 39 | 100111 | 27 |

Execution time: 0.04 seconds

TC3.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python convert_numbers.py TC3.txt
```

| Number | Decimal | Binary | Hexadecimal |
|--------|---------|------------|-------------|
| 1 | -39 | 1111011001 | FFFFFFD9 |
| 2 | -36 | 1111011100 | FFFFFFDC |
| 3 | 8 | 1000 | 8 |
| 4 | 34 | 100010 | 22 |
| 5 | 17 | 10001 | 11 |
| 6 | 49 | 110001 | 31 |
| 7 | 5 | 101 | 5 |
| 8 | 39 | 100111 | 27 |
| 9 | 0 | 0 | 0 |
| 190 | 47 | 101111 | 2F |
| 191 | 47 | 101111 | 2F |
| 192 | -13 | 1111110011 | FFFFFFF3 |
| 193 | -32 | 1111100000 | FFFFFFE0 |
| 194 | 1 | 1 | 1 |
| 195 | 1 | 1 | 1 |
| 196 | -25 | 1111100111 | FFFFFFE7 |
| 197 | -33 | 1111011111 | FFFFFFDF |
| 198 | 16 | 10000 | 10 |
| 199 | 17 | 10001 | 11 |
| 200 | 4 | 100 | 4 |

Execution time: 0.07 seconds

TC4.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>
>> python convert_numbers.py TC4.txt
The following element is not a number: ABC
The following element is not a number: ERR
The following element is not a number: VAL
```

| Number | Decimal | Binary | Hexadecimal |
|--------|---------|------------|-------------|
| 1 | -39 | 1111011001 | FFFFFFD9 |
| 2 | -36 | 1111011100 | FFFFFFDC |
| 3 | 8 | 1000 | 8 |
| 4 | 34 | 100010 | 22 |
| 5 | 17 | 10001 | 11 |
| 6 | 49 | 110001 | 31 |
| 7 | 5 | 101 | 5 |
| 8 | ABC | #VALUE! | #VALUE! |
| 9 | 0 | 0 | 0 |

| | | | |
|----|-----|------------|----------|
| 31 | 33 | 100001 | 21 |
| 32 | 29 | 11101 | 1D |
| 33 | 26 | 11010 | 1A |
| 34 | -5 | 1111111011 | FFFFFFFB |
| 35 | -36 | 1111011100 | FFFFFFDC |
| 36 | 12 | 1100 | C |
| 37 | 45 | 101101 | 2D |
| 38 | -50 | 1111001110 | FFFFFFCE |
| 39 | 0 | 0 | 0 |
| 40 | -6 | 1111111010 | FFFFFFFA |
| 41 | VAL | #VALUE! | #VALUE! |

Execution time: 0.01 seconds

Ejercicio de programación 3: Count Words

TC1.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2> python word_count.py TC1.txt
```

| Word | Count |
|------------|-------|
| mother | 1 |
| tions | 1 |
| pin | 1 |
| sure | 1 |
| regulatory | 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 |

Grand Total 100 words
Execution time: 0.001033 seconds

TC2.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>  
>> python word_count.py TC2.txt
```

| Word | Count |
|----------|-------|
| conduct | 1 |
| kuwait | 1 |
| literacy | 1 |
| table | 1 |
| parent | 1 |
| olympic | 1 |
| ht | 1 |
| algebra | 1 |
| lease | 4 |

| | |
|------------|---|
| 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 |

```
Grand Total 184 words  
Execution time: 0.001128 seconds
```

TC3.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>  
>> python word_count.py TC3.txt
```

| Word | Count |
|------------|-------|
| 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 |

| | |
|--------------|---|
| 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 |

```
+-----+  
Grand Total 500 words  
Execution time: 0.004000 seconds
```

TC4.txt

```
(venv) PS D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>  
>> python word_count.py TC4.txt
```

| Word | Count |
|--------------|-------|
| 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 |

| | |
|-------------|---|
| 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 |

```
Grand Total 1000 words  
Execution time: 0.004006 seconds
```


TC5.txt

```
(venv) D:\TEC DE MONTERREY MATERIAS\PRUEBAS DE SOFTWARE Y ASEGURAMIENTO DE LA CALIDAD\A00822314_A4.2>python word_count.py TC5.txt
```

| Word | Count |
|--------------|-------|
| 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 |

| | |
|-------------|---|
| 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 |

```
Grand Total 5000 words  
Execution time: 0.012940 seconds
```