#

### Intel Core i5-6500, 3.20 GHz, 8 G RAM

*-mx512m (for JRE 8 java section only)*

**Section 1**

**. NET DLL**

**1.1. .NET – write action**

*easy\_WriteXLSXFile*

## Test 1

 1 sheet x 1,000 rows x 10 columns = 10,000 cells, 64KB

 *Time to populate the sheets = 81 milliseconds*

 *Time to generate the file = 930 milliseconds*

## Test 2

 1 sheet x 2,000 rows x 10 columns = 20,000 cells, 121KB

 *Time to populate the sheets = 92 milliseconds*

 *Time to generate the file = 1 second and 60 milliseconds*

## Test 3

 1 sheet x 5,000 rows x 10 columns = 50,000 cells, 293KB

 *Time to populate the sheets = 108 milliseconds*

 *Time to generate the file = 1 second and 559 milliseconds*

## Test 4

 1 sheet x 10,000 rows x 10 columns = 100,000 cells, 579KB

 *Time to populate the sheets = 142 milliseconds*

 *Time to generate the file = 2 seconds and 200 milliseconds*

## Test 5

 1 sheet x 50,000 rows x 10 columns = 500,000 cells, 2.79MB

 *Time to populate the sheets = 353 milliseconds*

 *Time to generate the file = 7 seconds and 60 milliseconds*

## Test 6

 1 sheet x 50,000 rows x 20 columns = 1,000,000 cells, 5.38MB

 *Time to populate the sheets = 759 milliseconds*

 *Time to generate the file = 13 seconds and 981 milliseconds*

## Test 7

 2 sheets x 5,000 rows x 10 columns = 100,000 cells, 580KB

 *Time to populate the sheets = 139 milliseconds*

 *Time to generate the file = 2 seconds and 208 milliseconds*

## Test 8

 5 sheets x 5,000 rows x 10 columns = 250,000 cells, 1.4MB

 *Time to populate the sheets = 224 milliseconds*

 *Time to generate the file = 4 seconds and 7 milliseconds*

*easy\_WriteXLSFile*

## Test 1

 1 sheet x 1,000 rows x 10 columns = 10,000 cells, 280KB

 *Time to populate the sheets = 87 milliseconds*

 *Time to generate the file = 523 milliseconds*

## Test 2

 1 sheet x 2,000 rows x 10 columns = 20,000 cells, 555KB

 *Time to populate the sheets = 100 milliseconds*

 *Time to generate the file = 574 milliseconds*

## Test 3

 1 sheet x 5,000 rows x 10 columns = 50,000 cells, 1.34MB

 *Time to populate the sheets = 102 milliseconds*

 *Time to generate the file = 751 milliseconds*

## Test 4

 1 sheet x 10,000 rows x 10 columns = 100,000 cells, 2.69MB

 *Time to populate the sheets = 140 milliseconds*

 *Time to generate the file = 1 second and 138 milliseconds*

## Test 5

 1 sheet x 50,000 rows x 10 columns = 500,000 cells, 13.7MB

 *Time to populate the sheets = 357 milliseconds*

 *Time to generate the file = 3 seconds and 249 milliseconds*

## Test 6

 1 sheet x 50,000 rows x 20 columns = 1,000,000 cells, 28.6MB

 *Time to populate the sheet = 747 milliseconds*

 *Time to generate the file = 5 seconds and 594 milliseconds*

## Test 7

 2 sheets x 5,000 rows x 10 columns = 100,000 cells, 2.68MB

 *Time to populate the sheets = 145 milliseconds*

 *Time to generate the file = 1 second and 81 milliseconds*

## Test 8

 5 sheets x 5,000 rows x 10 columns = 250,000 cells, 6.7MB

 *Time to populate the sheets = 213 milliseconds*

 *Time to generate the file = 1 seconds and 838 milliseconds*

*easy\_WriteXLSBFile*

## Test 1

 1 sheet x 1,000 rows x 10 columns = 10,000 cells, 43.2KB

 *Time to populate the sheets = 85 milliseconds*

 *Time to generate the file = 768 milliseconds*

## Test 2

 1 sheet x 2,000 rows x 10 columns = 20,000 cells, 80.1KB

 *Time to populate the sheets = 104 milliseconds*

 *Time to generate the file = 902 milliseconds*

## Test 3

 1 sheet x 5,000 rows x 10 columns = 50,000 cells, 190KB

 *Time to populate the sheets = 107 milliseconds*

 *Time to generate the file = 1 second and 201 milliseconds*

## Test 4

 1 sheet x 10,000 rows x 10 columns = 100,000 cells, 376KB

 *Time to populate the sheets = 135 milliseconds*

 *Time to generate the file = 1 second and 704 milliseconds*

## Test 5

 1 sheet x 50,000 rows x 10 columns = 500,000 cells, 1.79MB

 *Time to populate the sheets = 361 milliseconds*

 *Time to generate the file = 4 seconds and 607 milliseconds*

## Test 6

 1 sheet x 50,000 rows x 20 columns = 1,000,000 cells, 4.42MB

 *Time to populate the sheets = 759 milliseconds*

 *Time to generate the file = 8 seconds and 310 milliseconds*

## Test 7

 2 sheets x 5,000 rows x 10 columns = 100,000 cells, 377KB

 *Time to populate the sheets = 137 milliseconds*

 *Time to generate the file = 1 seconds and 541 milliseconds*

## Test 8

 5 sheets x 5,000 rows x 10 columns = 250,000 cells, 941KB

 *Time to populate the sheets = 220 milliseconds*

 *Time to generate the file = 2 seconds and 404 milliseconds*

*easy\_WriteTXTFile***,** *easy\_WriteCSVFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 73KB

*Time to populate the sheets = 85 milliseconds*

*Time to write the file = 452 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 152KB

*Time to populate the sheets = 97 milliseconds*

 *Time to write the file = 602 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 389KB

*Time to populate the sheets = 99 milliseconds*

 *Time to write the file = 1 second and 160 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 784KB

*Time to populate the sheets = 160 milliseconds*

*Time to write the file = 1 second and 841* *milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 4.08MB

 *Time to populate the sheets = 364 milliseconds*

*Time to write the file = 6 seconds and 614* *milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 8.43MB

 *Time to populate the sheets = 752 milliseconds*

 *Time to write the file = 12 seconds and 606 milliseconds*

*easy\_WriteXMLFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 717KB

*Time to populate the sheets = 83 milliseconds*

*Time to write the file = 557 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.40MB

*Time to populate the sheets = 118 milliseconds*

 *Time to write the file = 684 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 3.52MB

*Time to populate the sheets = 104 milliseconds*

 *Time to write the file = 1 second and 174 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 7.06MB

*Time to populate the sheets = 128 milliseconds*

 *Time to write the file = 1 second and 752 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 35.6MB

 *Time to populate the sheets = 358 milliseconds*

*Time to write the file = 6 seconds and* 136 *milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 69.7MB

 *Time to populate the sheets = 783 milliseconds*

 *Time to write the file = 10 seconds and 298 milliseconds*

*easy\_WriteHTMLFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 399KB

*Time to populate the sheets = 87 milliseconds*

 *Time to write the file = 420 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 804KB

*Time to populate the sheets = 94 milliseconds*

 *Time to write the file = 466 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.96MB

*Time to populate the sheets = 108 milliseconds*

 *Time to write the file = 637 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 3.94MB

*Time to populate the sheets = 127 milliseconds*

 *Time to write the file = 834 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 20.0MB

 *Time to populate the sheets = 368 milliseconds*

 *Time to write the file = 2 seconds and* 698 *milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 38.54MB

 *Time to populate the sheets = 723 milliseconds*

 *Time to write the file = 3 seconds and 696 milliseconds*

**1.2. .NET – read action**

*easy\_ReadXLSActiveSheet\_AsDataSet, easy\_ReadXLSSheet\_AsDataSet, easy\_ReadXLSActiveSheet\_AsList, easy\_ReadXLSSheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 371 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 434 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 496 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 648 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 1 seconds and 722 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 3 seconds and 359 milliseconds*

*easy\_ReadXLSXActiveSheet\_AsDataSet, easy\_ReadXLSXSheet\_AsDataSet, easy\_ReadXLSXActiveSheet\_AsList, easy\_ReadXLSXSheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 385 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 474 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 674 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 1 second and 126 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 3 seconds and 355 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 6 seconds and 125 milliseconds*

*easy\_ReadXLSBActiveSheet\_AsDataSet, easy\_ReadXLSBSheet\_AsDataSet, easy\_ReadXLSBActiveSheet\_AsList, easy\_ReadXLSBSheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 55.3KB

 *Time to read the file = 356 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 94.4KB

 *Time to read the file = 394 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 233KB

 *Time to read the file = 498 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 465KB

 *Time to read the file = 620 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 2.15MB

 *Time to read the file = 1 seconds and 596 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 4.33MB

 *Time to read the file = 2 seconds and 802 milliseconds*

*easy\_ReadXLSSheet\_asXML*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 428 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 506 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 769 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 1 second and 249 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 4 seconds and 306 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 7 seconds and 731 milliseconds*

*easy\_ReadXLSXSheet\_asXML*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 497 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 659 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 1 second and 129 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 1 second and 722 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 6 seconds and 202 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file =12 seconds and 38 milliseconds*

*easy\_ReadXLSBSheet\_asXML*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 55.3KB

 *Time to read the file = 512 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 94.4KB

 *Time to read the file = 570 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 233KB

 *Time to read the file = 848 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 465KB

 *Time to read the file = 1 second and 331 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 2.15MB

 *Time to read the file = 4 seconds and 164 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 4.33MB

 *Time to read the file = 7 seconds and 768 milliseconds*

*easy\_ReadXMLSpreadsheet\_AsDataSet, easy\_ReadXMLSpreadsheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 630KB

 *Time to read the file = 364 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.23MB

 *Time to read the file = 464 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 3.08MB

 *Time to read the file = 1 second and 96 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 6.18MB

 *Time to read the file = 1 seconds and 971 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 31.10MB

 *Time to read the file = 33 seconds and 371 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 62.3MB

 *Time to read the file = 40 seconds and 572 milliseconds*

*easy\_ReadTXTFile\_AsDataSet, easy\_ReadTXTFile\_AsList,*

*easy\_ReadCSVFile\_AsDataSet, easy\_ReadCSVFile\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 73KB

 *Time to read the file = 286 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 152KB

 *Time to read the file = 276 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 389KB

 *Time to read the file = 347 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 784KB

 *Time to read the file = 467 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 4.08MB

 *Time to read the file = 1 seconds and 265 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 8.43MB

 *Time to read the file = 2 seconds and 354 milliseconds*

*easy\_LoadTXTFile, easy\_LoadCSVFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 73KB

 *Time to load the file = 394 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 152KB

 *Time to load the file = 451 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 389KB

 *Time to load the file = 693 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 784KB

 *Time to load the file = 1 second and 147 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 4.08MB

 *Time to load the file = 3 seconds and 907 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 8.43MB

 *Time to load the file = 7 seconds and 874 milliseconds*

*easy\_LoadXLSFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 467 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 472 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 562 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 735 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 1 seconds and 705 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 2 seconds and 778 milliseconds*

*easy\_LoadXLSXFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 559 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 614 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 832 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 1 second and 239 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 3 seconds and 356 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 5 seconds and 936 milliseconds*

*easy\_LoadXLSBFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 55.3KB

 *Time to read the file = 484 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 94.4KB

 *Time to read the file = 490 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 233KB

 *Time to read the file = 552 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 697KB

 *Time to read the file = 630 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 1 seconds and 617 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 2 seconds and 499 milliseconds*

*easy\_LoadXMLSpreadsheetFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 630KB

 *Time to read the file = 531 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.23MB

 *Time to read the file = 763 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 3.08MB

 *Time to read the file = 1 seconds and 496 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 6.18MB

 *Time to read the file = 2 seconds and 971 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 31.10MB

 *Time to read the file = 1 min and 26 seconds and 137 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 62.3MB

 *Time to read the file = 1 min, 28 seconds and 548 milliseconds*

*easy\_LoadHTMLFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 530KB

 *Time to read the file = 2 seconds and 344 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.03MB

 *Time to read the file = 4 seconds and 110 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 2.5MB

 *Time to read the file = 9 seconds and 804 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 5.01MB

 *Time to read the file = 1 min, 19 seconds and 124 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 27.1MB

 *Time to read the file = 1 min, 31 seconds and 430 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 53.5MB

 *Time to read the file = 2 min, 71 seconds and 355 milliseconds*

**Section 2**

**COM+ DLL**

* 1. **COM+ – write action**

*easy\_WriteXLSXFile*

## Test 1

 1 sheet x 1,000 rows x 10 columns = 10,000 cells, 64KB

 *Time to populate the sheets = 281 milliseconds*

 *Time to generate the file = 593 milliseconds*

## Test 2

 1 sheet x 2,000 rows x 10 columns = 20,000 cells, 121KB

 *Time to populate the sheets = 460 milliseconds*

 *Time to generate the file = 664 milliseconds*

## Test 3

 1 sheet x 5,000 rows x 10 columns = 50,000 cells, 293KB

 *Time to populate the sheets = 1 second and 31 milliseconds*

 *Time to generate the file = 929 milliseconds*

## Test 4

 1 sheet x 10,000 rows x 10 columns = 100,000 cells, 579KB

 *Time to populate the sheets = 1 second and 976 milliseconds*

 *Time to generate the file = 1 seconds and 339 milliseconds*

## Test 5

 1 sheet x 50,000 rows x 10 columns = 500,000 cells, 2.79MB

 *Time to populate the sheets = 9 seconds and 542 milliseconds*

 *Time to generate the file = 5 seconds and 58 milliseconds*

## Test 6

 1 sheet x 50,000 rows x 20 columns = 1,000,000 cells, 5.38MB

 *Time to populate the sheets = 18 seconds and 70 milliseconds*

 *Time to generate the file = 10 seconds and 11 milliseconds*

## Test 7

 2 sheets x 5,000 rows x 10 columns = 100,000 cells, 580KB

 *Time to populate the sheets = 1 second and 968 milliseconds*

 *Time to generate the file = 1 seconds and 289 milliseconds*

## Test 8

 5 sheets x 5,000 rows x 10 columns = 250,000 cells, 1.4MB

 *Time to populate the sheets = 4 seconds and 742 milliseconds*

 *Time to generate the file = 2 seconds and 511 milliseconds*

*easy\_WriteXLSFile*

## Test 1

 1 sheet x 1,000 rows x 10 columns = 10,000 cells, 280KB

 *Time to populate the sheets = 277 milliseconds*

 *Time to generate the file = 363 milliseconds*

## Test 2

 1 sheet x 2,000 rows x 10 columns = 20,000 cells, 555KB

 *Time to populate the sheets = 453 milliseconds*

 *Time to generate the file = 417 milliseconds*

## Test 3

 1 sheet x 5,000 rows x 10 columns = 50,000 cells, 1.34MB

 *Time to populate the sheets = 1 second and 19 milliseconds*

 *Time to generate the file = 609 milliseconds*

## Test 4

 1 sheet x 10,000 rows x 10 columns = 100,000 cells, 2.69MB

 *Time to populate the sheets = 1 second and 957 milliseconds*

 *Time to generate the file = 863 milliseconds*

## Test 5

 1 sheet x 50,000 rows x 10 columns = 500,000 cells, 13.7MB

 *Time to populate the sheets = 9 seconds and 468 milliseconds*

 *Time to generate the file = 3 seconds and 363 milliseconds*

## Test 6

 1 sheet x 50,000 rows x 20 columns = 1,000,000 cells, 28.6MB

 *Time to populate the sheet = 18 seconds and 152 milliseconds*

 *Time to generate the file = 6 seconds and 664 milliseconds*

## Test 7

 2 sheets x 5,000 rows x 10 columns = 100,000 cells, 2.68MB

 *Time to populate the sheets = 1 second and 953 milliseconds*

 *Time to generate the file = 800 milliseconds*

## Test 8

 5 sheets x 5,000 rows x 10 columns = 250,000 cells, 6.7MB

 *Time to populate the sheets = 3 seconds and 828 milliseconds*

 *Time to generate the file = 1 seconds and 660 milliseconds*

*easy\_WriteXLSBFile*

## Test 1

 1 sheet x 1,000 rows x 10 columns = 10,000 cells, 43.2KB

 *Time to populate the sheets = 273 milliseconds*

 *Time to generate the file = 621 milliseconds*

## Test 2

 1 sheet x 2,000 rows x 10 columns = 20,000 cells, 80.1KB

 *Time to populate the sheets = 460 milliseconds*

 *Time to generate the file = 699 milliseconds*

## Test 3

 1 sheet x 5,000 rows x 10 columns = 50,000 cells, 190KB

 *Time to populate the sheets = 1 second and 11 milliseconds*

 *Time to generate the file = 968 milliseconds*

## Test 4

 1 sheet x 10,000 rows x 10 columns = 100,000 cells, 376KB

 *Time to populate the sheets = 1 second and 960 milliseconds*

 *Time to generate the file = 1 second and 398 milliseconds*

## Test 5

 1 sheet x 50,000 rows x 10 columns = 500,000 cells, 1.79MB

 *Time to populate the sheets = 9 seconds and 531 milliseconds*

 *Time to generate the file = 5 seconds and 273 milliseconds*

## Test 6

 1 sheet x 50,000 rows x 20 columns = 1,000,000 cells, 4.42MB

 *Time to populate the sheets = 18 seconds and 164 milliseconds*

 *Time to generate the file = 10 seconds and 347 milliseconds*

## Test 7

 2 sheets x 5,000 rows x 10 columns = 100,000 cells, 377KB

 *Time to populate the sheets = 1 second and 953 milliseconds*

 *Time to generate the file = 1 seconds and 316 milliseconds*

## Test 8

 5 sheets x 5,000 rows x 10 columns = 250,000 cells, 941KB

 *Time to populate the sheets = 4 seconds and 730 milliseconds*

 *Time to generate the file = 2 seconds and 546 milliseconds*

*easy\_WriteTXTFile***,** *easy\_WriteCSVFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 73KB

*Time to populate the sheets = 273 milliseconds*

*Time to write the file = 117 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 152KB

*Time to populate the sheets = 449 milliseconds*

 *Time to write the file =* 136 *milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 389KB

*Time to populate the sheets = 1 second and 3 milliseconds*

 *Time to write the file = 183 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 784KB

*Time to populate the sheets = 1 second and 957 milliseconds*

*Time to write the file = 234 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 4.08MB

 *Time to populate the sheets = 9 seconds and 566 milliseconds*

*Time to write the file = 730* *milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 8.43MB

 *Time to populate the sheets = 18 seconds and 156 milliseconds*

 *Time to write the file = 1 seconds and 406 milliseconds*

*easy\_WriteXMLFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 717KB

*Time to populate the sheets = 273 milliseconds*

*Time to write the file = 312 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.40MB

*Time to populate the sheets = 460 milliseconds*

 *Time to write the file = 375 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 3.52MB

*Time to populate the sheets = 1 second and 7 milliseconds*

 *Time to write the file = 558 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 7.06MB

*Time to populate the sheets = 1 second and 957 milliseconds*

 *Time to write the file = 832 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 35.6MB

 *Time to populate the sheets =* 10 *seconds and 66 milliseconds*

*Time to write the file = 3 seconds and* 226 *milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 69.7MB

 *Time to populate the sheets = 17 seconds and 980 milliseconds*

 *Time to write the file = 5 seconds and 722 milliseconds*

*easy\_WriteHTMLFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 399KB

*Time to populate the sheets = 273 milliseconds*

 *Time to write the file = 203 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 804KB

*Time to populate the sheets = 453 milliseconds*

 *Time to write the file = 242 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.96MB

*Time to populate the sheets = 1 second and 7 milliseconds*

 *Time to write the file = 375 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 3.94MB

*Time to populate the sheets = 1 second and 945 milliseconds*

 *Time to write the file = 546 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 20.0MB

 *Time to populate the sheets = 9 seconds and 578 milliseconds*

 *Time to write the file = 2 seconds and 117 milliseconds*

## Test 6

50,000 rows x 20 columns = 1,000,000 cells, 38.54MB

*Time to populate the sheets = 18 seconds and 234 milliseconds*

 *Time to write the file = 3 seconds and 921 milliseconds*

**1.2. COM+ – read action**

*easy\_ReadXLSXActiveSheet\_AsList, easy\_ReadXLSXSheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 183 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 257 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 437 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 714 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 3 seconds and 109 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 6 seconds and 457 milliseconds*

*easy\_ReadXLSActiveSheet\_AsList, easy\_ReadXLSSheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 183 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 214 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 300 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 460 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 1 seconds and 789 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 3 seconds and 773 milliseconds*

*easy\_ReadXLSBActiveSheet\_AsList, easy\_ReadXLSBSheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 55.3KB

 *Time to read the file = 203 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 94.4KB

 *Time to read the file = 242 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 233KB

 *Time to read the file = 308 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 465KB

 *Time to read the file = 441 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 2.15MB

 *Time to read the file = 1 seconds and 453 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 4.33MB

 *Time to read the file = 2 seconds and 925 milliseconds*

*easy\_ReadXLSSheet\_asXML*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 167 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 187 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 250 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 371 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 1 seconds and 312 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 2 seconds and 652 milliseconds*

*easy\_ReadXLSXSheet\_asXML*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 210 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 253 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 417 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 664 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 2 seconds and 769 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 5 seconds and 550 milliseconds*

*easy\_ReadXLSBSheet\_asXML*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 55.3KB

 *Time to read the file = 207 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 94.4KB

 *Time to read the file = 214 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 233KB

 *Time to read the file = 265 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 465KB

 *Time to read the file = 363 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 2.15MB

 *Time to read the file = 1 second and 78 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 4.33MB

 *Time to read the file = 2 seconds and 23 milliseconds*

*easy\_ReadXMLSpreadsheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 630KB

 *Time to read the file = 144 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.23MB

 *Time to read the file = 218 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 3.08MB

 *Time to read the file = 566 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 6.18MB

 *Time to read the file = 1 seconds and 281 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 31.10MB

 *Time to read the file = 23 seconds and 992*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 62.3MB

 *Time to read the file = 31 seconds and 906 milliseconds*

*easy\_ReadTXTFile\_AsList,*

*easy\_ReadCSVFile\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 73KB

 *Time to read the file = 113 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 152KB

 *Time to read the file = 136 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 389KB

 *Time to read the file = 191 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 784KB

 *Time to read the file = 273 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 4.08MB

 *Time to read the file = 1 seconds and 66 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 8.43MB

 *Time to read the file = 2 seconds and 187 milliseconds*

*easy\_LoadTXTFile, easy\_LoadCSVFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 73KB

 *Time to load the file = 156 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 152KB

 *Time to load the file = 171 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 389KB

 *Time to load the file = 210 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 784KB

 *Time to load the file = 304 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 4.08MB

 *Time to load the file = 945 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 8.43MB

 *Time to load the file = 1 seconds and 812 milliseconds*

*easy\_LoadXLSXFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 359 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 414 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 562 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 835 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 3 seconds and 109 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 6 seconds and 54 milliseconds*

*easy\_LoadXLSFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 312 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 343 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 390 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 539 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 1 seconds and 679 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 3 seconds and 156 milliseconds*

*easy\_LoadXLSBFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 55.3KB

 *Time to read the file = 320 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 94.4KB

 *Time to read the file = 351 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 233KB

 *Time to read the file = 414 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 697KB

 *Time to read the file = 523 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 1 seconds and 375 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 2 seconds and 460 milliseconds*

*easy\_LoadXMLSpreadsheetFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 630KB

 *Time to read the file = 289 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.23MB

 *Time to read the file = 414 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 3.08MB

 *Time to read the file = 1 second and 15 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 6.18MB

 *Time to read the file = 2 seconds and 281 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 31.10MB

 *Time to read the file = 1 min and 39 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 62.3MB

 *Time to read the file = 1 min and 429 milliseconds*

*easy\_LoadHTMLFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 530KB

 *Time to read the file = 640 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.03MB

 *Time to read the file = 1 second and 78 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 2.5MB

 *Time to read the file = 2 seconds and 414 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 5.01MB

 *Time to read the file = 4 seconds and 601 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 27.1MB

 *Time to read the file = 25 seconds and 281 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 53.5MB

 *Time to read the file = 51 seconds and 804 milliseconds*

**Section 3**

**JAVA JAR**

**2.1. JAVA – write action**

*easy\_WriteXLSXFile*

## Test 1

 1 sheet x 1,000 rows x 10 columns = 10,000 cells, 271KB

 *Time to populate the sheets = 376 milliseconds*

 *Time to generate the file = 1 second and 237 milliseconds*

## Test 2

 1 sheet x 2,000 rows x 10 columns = 20,000 cells, 538KB

 *Time to populate the sheets = 379 milliseconds*

 *Time to generate the file = 1 second and 934 milliseconds*

## Test 3

 1 sheet x 5,000 rows x 10 columns = 50,000 cells, 1.30MB

 *Time to populate the sheets = 383 milliseconds*

 *Time to generate the file = 3 seconds and 630 milliseconds*

## Test 4

 1 sheet x 10,000 rows x 10 columns = 100,000 cells, 2.61MB

 *Time to populate the sheets = 395 milliseconds*

 *Time to generate the file = 6 seconds and 277 milliseconds*

## Test 5

 1 sheet x 50,000 rows x 10 columns = 500,000 cells, 13.30MB

 *Time to populate the sheets = 487 milliseconds*

 *Time to generate the file = 26 seconds and 246 milliseconds*

## Test 6

 1 sheet x 50,000 rows x 20 columns = 1,000,000 cells, 27.20MB

 *Time to populate the sheets = 618 milliseconds*

 *Time to generate the file = 52 seconds and 781 milliseconds*

## Test 7

 2 sheets x 5,000 rows x 10 columns = 100,000 cells, 2.60MB

 *Time to populate the sheets = 400 milliseconds*

 *Time to generate the file = 6 seconds and 260 milliseconds*

## Test 8

 5 sheets x 5,000 rows x 10 columns = 250,000 cells, 6.50MB

 *Time to populate the sheets = 440 milliseconds*

 *Time to generate the file = 13 seconds and 678 milliseconds*

*easy\_WriteXLSFile*

## Test 1

 1 sheet x 1,000 rows x 10 columns = 10,000 cells, 271KB

 *Time to populate the sheets = 377 milliseconds*

 *Time to generate the file = 1 second and 92 milliseconds*

## Test 2

 1 sheet x 2,000 rows x 10 columns = 20,000 cells, 538KB

 *Time to populate the sheets = 373 milliseconds*

 *Time to generate the file = 1 second and 681 milliseconds*

## Test 3

 1 sheet x 5,000 rows x 10 columns = 50,000 cells, 1.30MB

 *Time to populate the sheets = 379 milliseconds*

 *Time to generate the file = 3 seconds and 383 milliseconds*

## Test 4

 1 sheet x 10,000 rows x 10 columns = 100,000 cells, 2.61MB

 *Time to populate the sheets = 385 milliseconds*

 *Time to generate the file = 6 seconds and 62 milliseconds*

## Test 5

 1 sheet x 50,000 rows x 10 columns = 500,000 cells, 13.30MB

 *Time to populate the sheets = 487 milliseconds*

 *Time to generate the file = 26 seconds and 506 milliseconds*

## Test 6

 1 sheet x 50,000 rows x 20 columns = 1,000,000 cells, 27.20MB

 *Time to populate the sheets = 610 milliseconds*

 *Time to generate the file = 52 seconds and 231 milliseconds*

## Test 7

 2 sheets x 5,000 rows x 10 columns = 100,000 cells, 2.60MB

 *Time to populate the sheets = 390 milliseconds*

 *Time to generate the file = 6 seconds and 81 milliseconds*

## Test 8

 5 sheets x 5,000 rows x 10 columns = 250,000 cells, 6.50MB

 *Time to populate the sheets = 449 milliseconds*

 *Time to generate the file = 13 seconds and 835 milliseconds*

*easy\_WriteXLSBFile*

## Test 1

 1 sheet x 1,000 rows x 10 columns = 10,000 cells, 50.8KB

 *Time to populate the sheets = 368 milliseconds*

 *Time to generate the file = 1 second and 401 milliseconds*

## Test 2

 1 sheet x 2,000 rows x 10 columns = 20,000 cells, 125KB

 *Time to populate the sheets = 371 milliseconds*

 *Time to generate the file = 2 seconds and 218 milliseconds*

## Test 3

 1 sheet x 5,000 rows x 10 columns = 50,000 cells, 305KB

 *Time to populate the sheets = 376 milliseconds*

 *Time to generate the file = 4 seconds and 475 milliseconds*

## Test 4

 1 sheet x 10,000 rows x 10 columns = 100,000 cells, 604KB

 *Time to populate the sheets = 382 milliseconds*

 *Time to generate the file = 8 seconds and 33 milliseconds*

## Test 5

 1 sheet x 50,000 rows x 10 columns = 500,000 cells, 2.92MB

 *Time to populate the sheets = 501 milliseconds*

 *Time to generate the file = 34 seconds and 464 milliseconds*

## Test 6

 1 sheet x 50,000 rows x 20 columns = 1,000,000 cells, 4.58MB

 *Time to populate the sheets = 607 milliseconds*

 *Time to generate the file = 1 minute, 8 seconds and 609 milliseconds*

## Test 7

 2 sheets x 5,000 rows x 10 columns = 100,000 cells, 454KB

 *Time to populate the sheets = 388 milliseconds*

 *Time to generate the file = 7 seconds and 632 milliseconds*

## Test 8

 5 sheets x 5,000 rows x 10 columns = 250,000 cells, 1.10MB

 *Time to populate the sheets = 440 milliseconds*

 *Time to generate the file = 16 seconds and 192 milliseconds*

*easy\_WriteTXTFile***,** *easy\_WriteCSVFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 92.8KB

 *Time to populate the sheets = 369 milliseconds*

*Time to write the file = 200 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 195KB

*Time to populate the sheets = 378 milliseconds*

 *Time to write the file = 221 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 503KB

*Time to populate the sheets = 377 milliseconds*

 *Time to write the file = 242 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 0.99MB

*Time to populate the sheets = 384 milliseconds*

 *Time to write the file = 277 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 5.33MB

 *Time to populate the sheets = 485 milliseconds*

 *Time to write the file = 499 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 11.4MB

 *Time to populate the sheets = 607 milliseconds*

 *Time to write the file = 679 milliseconds*

*easy\_WriteXMLFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 907KB

 *Time to populate the sheets = 362 milliseconds*

 *Time to write the file = 1 second and 84 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.7MB

*Time to populate the sheets = 368 milliseconds*

 *Time to write the file = 1 second and 566 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 4.46MB

*Time to populate the sheets = 379 milliseconds*

 *Time to write the file = 2 seconds and 945 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 8.92MB

*Time to populate the sheets = 381 milliseconds*

 *Time to write the file = 5 seconds and 23 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 45MB

 *Time to populate the sheets = 487 milliseconds*

 *Time to write the file = 21 seconds and 652 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 89.2MB

 *Time to populate the sheets = 604 milliseconds*

 *Time to write the file = 41 seconds and 246 milliseconds*

*easy\_WriteHTMLFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 390KB

 *Time to populate the sheets = 346 milliseconds*

 *Time to write the file = 855 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 788KB

*Time to populate the sheets = 372 milliseconds*

 *Time to write the file = 1 second and 325 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.93MB

*Time to populate the sheets = 372 milliseconds*

 *Time to write the file = 2 seconds and 624 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 3.88MB

*Time to populate the sheets = 387 milliseconds*

 *Time to write the file = 4 seconds and 661 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 19.8MB

 *Time to populate the sheets = 481 milliseconds*

 *Time to write the file = 20 seconds and 437 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 37.8MB

 *Time to populate the sheets = 618 milliseconds*

 *Time to write the file = 40 seconds and 300 milliseconds*

**2.2. JAVA – read action**

*easy\_ReadXLSXActiveSheet\_AsResultSet, easy\_ReadXLSXSheet\_AsResultSet, easy\_ReadXLSXActiveSheet\_AsList, easy\_ReadXLSXSheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 434 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 624 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 879 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 1 second and 92 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 2 seconds and 461 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 4 seconds and 153 milliseconds*

*easy\_ReadXLSActiveSheet\_AsResultSet, easy\_ReadXLSSheet\_AsDataSet, easy\_ReadXLSActiveSheet\_AsList, easy\_ReadxlsSheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 653 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 700 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 834 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 964 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 1 seconds and 767 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 2 seconds and 647 milliseconds*

*easy\_ReadXLSBActiveSheet\_AsResultSet, easy\_ReadXLSBSheet\_AsResultSet, easy\_ReadXLSBActiveSheet\_AsList, easy\_ReadXLSBSheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 664 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 763 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 848 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 965 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 1 seconds and 752 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 2 seconds and 544 milliseconds*

*easy\_ReadXLSXSheet\_asXML*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 828 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 888 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 1 second and 99 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 1 second and 336 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 2 seconds and 520 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 4 seconds and 59 milliseconds*

*easy\_ReadXLSSheet\_AsXML*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 702 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 765 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 873 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 1 second and 34 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 1 seconds and 890 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 2 seconds and 785 milliseconds*

*easy\_ReadXLSBSheet\_asXML*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 630KB

 *Time to read the file = 771 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.23MB

 *Time to read the file = 789 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 3.08MB

 *Time to read the file = 908 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 6.18MB

 *Time to read the file = 1 second and 49 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 31.10MB

 *Time to read the file = 1 seconds and 780 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 62.3MB

 *Time to read the file = 2 seconds and 634 milliseconds*

*easy\_ReadXMLSpreadsheet\_AsResultSet, easy\_ReadXMLSpreadsheet\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 630KB

 *Time to read the file = 468 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.23MB

 *Time to read the file = 614 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 3.08MB

 *Time to read the file = 879 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 6.18MB

 *Time to read the file = 1 seconds and 109 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 31.10MB

 *Time to read the file = 4 seconds and 6 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 62.3MB

 *Time to read the file = 7 seconds and 319 milliseconds*

*easy\_ReadTXTFile\_AsResultSet, easy\_ReadTXTFile\_AsList,*

*easy\_ReadCSVFile\_AsResultSet, easy\_ReadCSVFile\_AsList*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 73KB

 *Time to read the file = 267 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 152KB

 *Time to read the file = 282 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 389KB

 *Time to read the file = 326 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 784KB

 *Time to read the file = 380 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 4.08MB

 *Time to read the file = 708 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 8.43MB

 *Time to read the file = 1 seconds and 255 milliseconds*

*easy\_LoadTXTFile, easy\_LoadCSVFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 73KB

 *Time to load the file = 570 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 152KB

 *Time to load the file = 624 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 389KB

 *Time to load the file = 680 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 784KB

 *Time to load the file = 727 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 4.08MB

 *Time to load the file = 1 seconds and 221 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 8.43MB

 *Time to load the file = 1 seconds and 982 milliseconds*

*easy\_LoadXLSXFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 954 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 1 second and 23 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 1 second and 228 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 1 seconds and 492 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 2 seconds and 815 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 4 seconds and 514 milliseconds*

*easy\_LoadXLSFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 213KB

 *Time to read the file = 721 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 419KB

 *Time to read the file = 790 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 1.01MB

 *Time to read the file = 881 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 2.01MB

 *Time to read the file = 1 second and 80 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 10.20MB

 *Time to read the file = 2 seconds and 173 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 19.60MB

 *Time to read the file = 3 seconds and 363 milliseconds*

*easy\_LoadXLSBFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 78KB

 *Time to read the file = 864 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 138KB

 *Time to read the file = 859 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 347KB

 *Time to read the file = 983 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 698KB

 *Time to read the file = 1 second and 144 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 3.42MB

 *Time to read the file = 2 seconds and 18 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 6.99MB

 *Time to read the file = 3 seconds and 60 milliseconds*

*easy\_LoadXMLSpreadsheetFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 630KB

 *Time to read the file = 886 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.23MB

 *Time to read the file = 1 second and 27 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 3.08MB

 *Time to read the file = 1 seconds and 316 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 6.18MB

 *Time to read the file = 1 seconds and 725 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 31.10MB

 *Time to read the file = 5 seconds and 288 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 62.3MB

 *Time to read the file = 9 seconds and 429 milliseconds*

*easy\_LoadHTMLFile*

## Test 1

 1,000 rows x 10 columns = 10,000 cells, 530KB

 *Time to read the file = 949 milliseconds*

## Test 2

 2,000 rows x 10 columns = 20,000 cells, 1.03MB

 *Time to read the file = 1 second and 139 milliseconds*

## Test 3

 5,000 rows x 10 columns = 50,000 cells, 2.5MB

 *Time to read the file = 1 seconds and 561 milliseconds*

## Test 4

 10,000 rows x 10 columns = 100,000 cells, 5.01MB

 *Time to read the file = 2 seconds and 162 milliseconds*

## Test 5

 50,000 rows x 10 columns = 500,000 cells, 27.1MB

 *Time to read the file = 7 seconds and 837 milliseconds*

## Test 6

 50,000 rows x 20 columns = 1,000,000 cells, 53.5MB

 *Time to read the file = 14 seconds and 171 milliseconds*