## Question 2

### Output for sample1updated.txt:

Total numbers in file: 138  
Line #1 average: 428.00  
Line #2 average: 91.25  
Line #3 average: 248.50  
Line #4 average: 66.43  
Line #5 average: 260.29  
Line #6 average: 115.38  
Line #7 average: 216.86  
Line #8 average: 97.17  
Line #9 average: -220.86  
Line #10 average: 71.50  
Line #11 average: 103.00  
Line #12 average: 570.17  
Line #13 average: 239.86  
Line #14 average: 132.29  
Line #15 average: 237.57  
Line #16 average: 444.50  
Line #17 average: -133.43  
Line #18 average: 558.86  
Line #19 average: 303.43  
Line #20 average: 4.29  
Positive percentage: 71.74%  
Negative percentage: 28.26%  
Zeros percentage: 0.00%

### Output for sample2updated.txt:

Total numbers in file: 292  
Line #1 average: 327.60  
Line #2 average: 350.40  
Line #3 average: 370.00  
Line #4 average: 99.40  
Line #5 average: -11.60  
Line #6 average: 606.00  
Line #7 average: 363.80  
Line #8 average: 219.40  
Line #9 average: 490.80  
Line #10 average: 93.40  
Line #11 average: 410.20  
Line #12 average: 280.80  
Line #13 average: 256.40  
Line #14 average: 157.60  
Line #15 average: 604.40  
Line #16 average: 204.20  
Line #17 average: -314.60  
Line #18 average: 228.20  
Line #19 average: 478.80  
Line #20 average: 202.40  
Line #21 average: 218.40  
Line #22 average: 294.80  
Line #23 average: 149.00  
Line #24 average: 530.80  
Line #25 average: 25.80  
Line #26 average: 223.60  
Line #27 average: 188.50  
Line #28 average: -318.80  
Line #29 average: 673.00  
Line #30 average: 32.80  
Line #31 average: 455.40  
Line #32 average: 484.60  
Line #33 average: 162.00  
Line #34 average: 384.40  
Line #35 average: 761.40  
Line #36 average: -67.40  
Line #37 average: 61.00  
Line #38 average: 339.80  
Line #39 average: 387.00  
Line #40 average: 431.80  
Line #41 average: 316.80  
Line #42 average: 632.00  
Line #43 average: 426.00  
Line #44 average: 117.40  
Line #45 average: 548.60  
Line #46 average: 548.80  
Line #47 average: 105.40  
Line #48 average: 270.60  
Line #49 average: 281.80  
Line #50 average: 386.80  
Line #51 average: -32.00  
Line #52 average: 435.00  
Line #53 average: 511.40  
Line #54 average: 221.80  
Line #55 average: 206.60  
Line #56 average: 284.80  
Line #57 average: 172.80  
Line #58 average: 588.00  
Positive percentage: 79.79%  
Negative percentage: 20.21%  
Zeros percentage: 0.00%

## Question 3

1. Supported Files
2. Supported file Bookshelf2.java

|  |  |
| --- | --- |
| Bookshelf (Computing the total amount on request) | Bookshelf2 (Computing the total amount on insertion) |
| Pro – In case a book changes its page amount it won’t affect the result. | Pro – The Calculation is O(1) complexity |
| Con – The calculation is O(n) complexity | Con – If book will change its page amount, this will be done in the Book object and will not affect the total amount that was calculated which will give a wrong result. Possible solution is to remove the Book from the shelf, change it and then add it again. |

1. Answers (according to the forum its ‘book’ not ‘ball’):
   1. Yes, false can be also returned in this case which is not stated now. Also, an exemption can be thrown in this case which shall also be stated in the method description.
   2. There shall be added a check that the book is not null.
   3. The description is stronger since now the behavior of the function and its output will be defined better.