

Java Multi-Threading

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Assignment

Download the attached text document. It's book in plain text format.

Analyze the book using a java program and perform a word count operation. You have to find out the count of each word in the book.

Along with words, you also need to find out the number of paragraphs and sentences present in the book.

Try it using single threading program and repeat the same through multi-threading approach. Make note of the performance improvement.

ANSWER

Word Count Using File Split Technique – 1 Thread

```
Complete Using the FileSplit Method
Number of Threads used1
Total word count = 2842019
Total number of sentences = 309311
Total number of characters = 16347630
Number of paragraphs = 19442
Time taken in milli seconds 1951
```

Word Count Using File Split Technique – 10 Threads

```
Complete Using the FileSplit Method
Number of Threads used10
Total word count = 2841969
Total number of sentences = 309306
Total number of characters = 16347336
Number of paragraphs = 19449
Time taken in milli seconds 2122
```

Word Count Using Byte Stream Technique – 1 Thread

```
Using Bystream Method
Number of Threads used1
Total Number of Words found : 2861461
Time taken in milli seconds593
```

Word Count Using Byte Stream Technique – 10 Threads

```
Using Bystream Method
Number of Threads used10
Total Number of Words found : 2861469
Time taken in milli seconds599
```

Word Count Using List Strings Technique – 1 Thread

```
Using List String Method  
Number of Threads used1  
Total Number of Words found : 2861461  
Time taken in milli seconds468
```

Word Count Using List Strings Technique – 10 Threads

```
Using List String Method  
Number of Threads used10  
Total Number of Words found : 2861458  
Time taken in milli seconds410
```

Word Count Using Generic Technique – 1 Thread

```
Generic Freaquency calculator Method  
Number of Threads used1  
Total Number of Words found : 2861461  
Time taken in milli seconds571
```

Book Analysis Using Byte Stream Technique – 1 Thread

```
Complete Using the Bystream Method  
Number of Threads used1  
Total word count = 2842020  
Total number of sentences = 309312  
Total number of characters = 16347636  
Number of paragraphs = 19442  
Number of Threads used1  
Time taken in milli seconds1451
```

Book Analysis Using Byte Stream Technique – 10 Threads

```
Complete Using the Bystream Method
Number of Threads used10
Total word count = 2842028
Total number of sentences = 309320
Total number of characters = 16347636
Number of paragraphs = 19451
Number of Threads used10
Time taken in milli seconds1310
```

Book Analysis Using File Split Technique – 1 Thread

```
Complete Using the FileSplit Method
Number of Threads used1
Total word count = 2842019
Total number of sentences = 309311
Total number of characters = 16347630
Number of paragraphs = 19442
Time taken in milli seconds 1951
```

Book Analysis Using File Split Technique – 10 Threads

```
Complete Using the FileSplit Method
Number of Threads used10
Total word count = 2841969
Total number of sentences = 309306
Total number of characters = 16347336
Number of paragraphs = 19449
Time taken in milli seconds 2122
```

Book Analysis Using Generic Technique – 1 Thread

```
Generic Freaquency calculator Method
Total word count = 2842020
Total number of sentences = 309312
Total number of characters = 16347636
Number of paragraphs = 19442
Time taken in milli seconds1565
```
