

Review #2

Submission deadline:	2023-12-04 11:59:59	923755.284 sec
Late submission with malus:	2023-12-31 23:59:59 (Late submission malus: 100.0000 %)	
Evaluation:	5.5458	
Max. assessment:	5.0000 (Without bonus points)	
Submissions:	20 / 20 Free retries + 10 Penalized retries (-10 % penalty each retry)	
Advices:	2 / 2 Advices for free + 2 Advices with a penalty (-10 % penalty each advice)	

The task is to develop a program to manipulate the statistical data with e-shop reviews.

We assume our e-shop collects user reviews. The reviews arrive continuously, there is a date, a rating (a positive integer), and a review text associated with each review. The reviews are entered such that the dates form a non-decreasing sequence. However, there may exist two or more reviews entered in the same day. An example input review:

```
+ 2023-11-10 10 Short_review
```

The date is Nov 10, 2023, the rating is 10, and the comment is Short_review (there are no whitespace characters in the comment, the comment is at most 4096 characters long). Since the dates must form a non-decreasing sequence, the next review must be dated Nov 10, 2023 or later (but not earlier).

Our statistics is interested in non-empty time intervals such that the average rating and median rating is as different as possible. For instance, input:

```
? 100
```

tries to find an interval such that the interval contains at least 100 reviews and the difference between median rating and average rating in the interval is the highest possible. In general, there may exist many such intervals with the same difference between the average and median. In these cases, we will choose the interval later end date (see the second example run, second query). If there exist more intervals with the same difference between the average and median and the same end date, we choose the interval with more reviews (see the second example run, third query).

The search for the interval works with one day granularity. It means, it must include all reviews from all days of the interval, including all reviews from the starting/ending date. This is demonstrated in the first example run, first query. The result is 1 day long interval (Nov 16, median 42, average 70) even though an interval formed by the first two reviews gives a greater difference (median 10, average 41.5, but it omits one review from Nov 10).

There are new reviews and search requests interleaved in the input. The search requests are served immediately, i.e., the search only includes the reviews entered so far (see the first example run).

The output of the program is the date interval. The program displays the starting/ending day, the average rating, the medium rating, and (optionally) the list of reviews that fit into the interval. The reviews are listed in the order they were entered in the input.

There are two variants of the search command. Search type ? 100 works as described in the previous paragraph. Search type # 100 works the same way, however, it does not list the reviews.

The program must validate input data. If the input is invalid, the program must detect it, it shall output an error message (see below) and terminate. If displayed, the error message must be displayed on the standard output (do not send it to the error output) and the error message must be terminated by a newline (\n). The input is considered invalid, if:

- invalid format of a review or a search command,
- invalid date in a review,
- a date in a review is before the date in the previous review,
- non-numeric, zero, or negative rating in a review (rating must be at least 1),
- non-numeric, zero, or negative value in a search command,
- a search command without preceding reviews (at least one review must be entered before the search command).

Your program will be tested in a restricted environment. The testing environment limits running time and available memory.

The length of the text in a review is at most 4096 characters, there is not any explicit limit on the number of reviews. You will need a dynamic memory allocation to store the reviews.

Example program runs:

Reviews:

```
+ 2023-11-10 10 Short_review
+ 2023-11-10 73 Long_review
+ 2023-11-10 15 Negative_review
+ 2023-11-11 45 Some_text
+ 2023-11-16 42 Useless_comment
+ 2023-11-16 98 Fake_review
? 1
2023-11-16 - 2023-11-16: 70.000000 42
  42: Useless_comment
  98: Fake_review
? 2
2023-11-16 - 2023-11-16: 70.000000 42
  42: Useless_comment
  98: Fake_review
? 6
2023-11-10 - 2023-11-16: 47.166667 42
  10: Short_review
  73: Long_review
  15: Negative_review
  45: Some_text
  42: Useless_comment
  98: Fake_review
? 20
No interval.
# 1
2023-11-16 - 2023-11-16: 70.000000 42
# 2
2023-11-16 - 2023-11-16: 70.000000 42
+ 2023-11-16 15 Updated_review
+ 2023-11-17 120 Sponsored
# 6
2023-11-10 - 2023-11-17: 52.250000 42
+ 2023-11-17 1 Not_sponsored
# 6
2023-11-11 - 2023-11-17: 53.500000 42
+ 2023-11-17 1 Not_sponsored
# 6
2023-11-16 - 2023-11-17: 46.166667 15
+ 2023-11-17 1 Not_sponsored
# 6
2023-11-11 - 2023-11-17: 40.375000 15
+ 2023-11-17 1800 Sponsored
# 6
2023-11-16 - 2023-11-17: 259.750000 15
+ 2023-11-17 1800 Sponsored
# 6
2023-11-17 - 2023-11-17: 620.500000 1
+ 2023-11-17 1800 Sponsored
# 6
2023-11-17 - 2023-11-17: 789.000000 120
+ 2023-11-17 1801 Sponsored
# 6
2023-11-17 - 2023-11-17: 915.500000 120
+ 2023-11-17 1802 Sponsored
# 6
2023-11-17 - 2023-11-17: 1014.000000 1800
+ 2023-11-17 1803 Sponsored
# 6
2023-11-16 - 2023-11-17: 852.615385 120
```

+ 2023-11-17 1804 Sponsored
6
2023-11-16 - 2023-11-17: 920.571429 120
+ 2023-11-17 1805 Sponsored
6
2023-11-16 - 2023-11-17: 979.533333 1800
+ 2023-11-17 1806 Sponsored
6
2023-11-11 - 2023-11-17: 973.176471 1800
+ 2023-11-17 180000 Bribed
6
2023-11-17 - 2023-11-17: 14024.571429 1800
+ 2023-11-17 180000000 Hacked
6
2023-11-17 - 2023-11-17: 12013089.600000 1801

Reviews:

+ 2023-11-10 10 Short_review
+ 2023-11-11 20 Short_review
1
2023-11-10 - 2023-11-11: 15.000000 10
+ 2023-11-12 15 Short_review
+ 2023-11-13 10 Short_review
+ 2023-11-13 20 Short_review
1
2023-11-13 - 2023-11-13: 15.000000 10
+ 2023-11-14 10 Short_review
+ 2023-11-14 20 Short_review
1
2023-11-13 - 2023-11-14: 15.000000 10
5
2023-11-11 - 2023-11-14: 15.833333 15
+ 2023-11-15 15 Short_review
+ 2023-11-16 10 Short_review
+ 2023-11-16 20 Short_review
1
2023-11-16 - 2023-11-16: 15.000000 10
5
2023-11-11 - 2023-11-14: 15.833333 15

Reviews:

+ 2023-11-10 10 A_review_with_long_text
? 1
2023-11-10 - 2023-11-10: 10.000000 10
10: A_review_with_long_text
+ 2023-11-09 10 A_review_with_short_text
Invalid input.

Reviews:

+ 2000-02-29 10 Review_#1
+ 2004-02-29 10 Review_#2
+ 2020-02-29 10 Review_#3
? 1
2000-02-29 - 2020-02-29: 10.000000 10
10: Review_#1
10: Review_#2
10: Review_#3
+ 2023-02-28 10 Review_#4
? 1
2000-02-29 - 2023-02-28: 10.000000 10
10: Review_#1
10: Review_#2
10: Review_#3

10: Review_#4
+ 2023-02-29 10 Review
Invalid input.

Reviews:
+ 2100-02-29 10 Review_#1
Invalid input.

Reviews:
+ 2000-02-29 0 Review_#1
Invalid input.

Advice:

- The example runs above list both the output of your program (boldface font) and user input (regular font). The bold/regular formatting is included here, in the problem statement page, to increase readability of the listing. Your program must output the text without any additional markup.
- Do not forget the newline (\n) after the last output line.
- Use Gregorian calendar rules when validating dates. The tests use reasonable range of years (1800 - 3000).
- The median is positively defined if the number of reviews is odd. When analyzing even number of reviews, use the smaller of the "middle" values. That is, ratings 6 15 7 result in median value 7. By the above definition, ratings 6 15 7 3 result in median value 6.
- The resulting interval must contain at least one review (median / average is not defined zero reviews).
- There must exist some review in both starting and ending days of the resulting interval.
- There are two speed tests included in this task. The extra points will be awarded for programs that are able to quickly process inputs with many reviews. The searches in the speed tests are mostly of type # (it takes long time to display the review text).
- A solution of this assignment may be used for code review. However, the program must pass all mandatory tests and all optional tests with 100% results to be eligible for code review (the program does not have to pass bonus tests).

Sample data:

Download

Submit:

Browse...

No file selected.

Submit

☐ **Reference**

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2023-11-22 17:24:27

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Submission status: Evaluated

Evaluation: 5.5000

• **Evaluator: computer**

- Program compiled
- Test 'Basic test with example input data': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.032 s
 - Peak mem usage: 2464 KiB (limit: 4036 KiB)
 - Mandatory test success, evaluation: 100.00 %
- Test 'Borderline test': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.494 s (limit: 2.000 s)
 - Total run time: 1.689 s
 - Mandatory test success, evaluation: 100.00 %
- Test 'Invalid input test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.139 s
 - Optional test success, evaluation: 100.00 %
- Test 'Random test': success

- result: 100.00 %, required: 50.00 %
- Max. run time: 0.464 s (limit: 4.000 s)
- Total run time: 3.788 s
- Optional test success, evaluation: 100.00 %
- Test 'Random test + mem debugger': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.187 s (limit: 4.000 s)
 - Total run time: 1.140 s
 - Optional test success, evaluation: 100.00 %
- Test 'Speed test #1': Abnormal program termination (Time limit exceeded)
 - Program was killed after: 7.009 s (limit: 7.000 s)
 - Bonus test - failed, evaluation: No bonus awarded
 - Time limit exceeded **[Unlock advice (2.00 KiB, incomplete data)]**
- Test 'Speed test #2': Not tested
 - Bonus test - failed, evaluation: No bonus awarded
- Overall ratio: 100.00 % (= 1.00 * 1.00 * 1.00 * 1.00 * 1.00)
- Advices used: 2
- Penalty due to advices: None (2 <= 2 limit)
- Total percent: 100.00 %
- Early submission bonus: 0.50
- Total points: 1.00 * (5.00 + 0.50) = 5.50

		Total	Average	Maximum	Function name
SW metrics:	Functions:	16	--	-- --	
	Lines of code:	294	18.38 ± 21.38	81	main
	Cyclomatic complexity:	81	5.06 ± 5.08	18	main

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2023-11-22 17:21:57

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Submission status: Evaluated

Evaluation: 5.5000

- **Evaluator: computer**
 - Program compiled
 - Test 'Basic test with example input data': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.033 s
 - Peak mem usage: 2464 KiB (limit: 4036 KiB)
 - Mandatory test success, evaluation: 100.00 %
 - Test 'Borderline test': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.469 s (limit: 2.000 s)
 - Total run time: 1.669 s
 - Mandatory test success, evaluation: 100.00 %
 - Test 'Invalid input test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.009 s (limit: 1.000 s)
 - Total run time: 0.140 s
 - Optional test success, evaluation: 100.00 %
 - Test 'Random test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.497 s (limit: 4.000 s)
 - Total run time: 4.095 s
 - Optional test success, evaluation: 100.00 %
 - Test 'Random test + mem debugger': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.169 s (limit: 4.000 s)
 - Total run time: 1.036 s
 - Optional test success, evaluation: 100.00 %

- Test 'Speed test #1': Abnormal program termination (Time limit exceeded)
 - Program was killed after: 7.010 s (limit: 7.000 s)
 - Bonus test - failed, evaluation: No bonus awarded
 - Time limit exceeded **[Unlock advice (2.00 KiB, incomplete data)]**
- Test 'Speed test #2': Not tested
 - Bonus test - failed, evaluation: No bonus awarded
- Overall ratio: 100.00 % (= 1.00 * 1.00 * 1.00 * 1.00 * 1.00)
- Advices used: 2
- Penalty due to advices: None (2 <= 2 limit)
- Total percent: 100.00 %
- Early submission bonus: 0.50
- Total points: 1.00 * (5.00 + 0.50) = 5.50

	Total	Average	Maximum	Function name
SW metrics:	Functions: 16	--	--	--
	Lines of code: 294	18.38 ± 21.38	81	main
	Cyclomatic complexity: 81	5.06 ± 5.08	18	main

18 **2023-11-22 17:15:22** [Download](#)

Submission status: Evaluated

Evaluation: 5.5000

- **Evaluator: computer**
 - Program compiled
 - Test 'Basic test with example input data': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.034 s
 - Peak mem usage: 2464 KiB (limit: 4036 KiB)
 - Mandatory test success, evaluation: 100.00 %
 - Test 'Borderline test': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.525 s (limit: 2.000 s)
 - Total run time: 1.703 s
 - Mandatory test success, evaluation: 100.00 %
 - Test 'Invalid input test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.125 s
 - Optional test success, evaluation: 100.00 %
 - Test 'Random test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.460 s (limit: 4.000 s)
 - Total run time: 3.814 s
 - Optional test success, evaluation: 100.00 %
 - Test 'Random test + mem debugger': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.189 s (limit: 4.000 s)
 - Total run time: 1.118 s
 - Optional test success, evaluation: 100.00 %
 - Test 'Speed test #1': Abnormal program termination (Time limit exceeded)
 - Program was killed after: 7.007 s (limit: 7.000 s)
 - Bonus test - failed, evaluation: No bonus awarded
 - Time limit exceeded **[Unlock advice (2.00 KiB, incomplete data)]**
 - Test 'Speed test #2': Not tested
 - Bonus test - failed, evaluation: No bonus awarded
 - Overall ratio: 100.00 % (= 1.00 * 1.00 * 1.00 * 1.00 * 1.00)
- Advices used: 2
- Penalty due to advices: None (2 <= 2 limit)

- Total percent: 100.00 %
- Early submission bonus: 0.50
- Total points: $1.00 * (5.00 + 0.50) = 5.50$

		Total	Average	Maximum	Function name
SW metrics:	Functions:	17	--	--	--
	Lines of code:	299	17.59 ± 20.99	81	main
	Cyclomatic complexity:	82	4.82 ± 5.02	18	main

17	2023-11-22 17:01:20	Download
Submission status:	Evaluated	
Evaluation:	0.0000	

- **Evaluator: computer**
 - Program compiled
 - Test 'Basic test with example input data': failed
 - result: 33.33 %, required: 100.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.032 s
 - Peak mem usage: 2464 KiB (limit: 4036 KiB)
 - Mandatory test failed, evaluation: 0.00 %
 - Failed (invalid output) [Unlock advice (1.71 KiB)]
 - Failed (invalid output) [Unlock advice (560 B)]
 - Failed (invalid output) [Unlock advice (201 B)]
 - Failed (invalid output) [Unlock advice (356 B)]
 - Overall ratio: 0.00 %
- Advices used: 2
- Penalty due to advices: None (2 <= 2 limit)
- Total percent: 0.00 %
- Early submission bonus: 0.50
- Total points: $0.00 * (5.00 + 0.50) = 0.00$

		Total	Average	Maximum	Function name
SW metrics:	Functions:	17	--	--	--
	Lines of code:	299	17.59 ± 20.99	81	main
	Cyclomatic complexity:	82	4.82 ± 5.02	18	main

16	2023-11-22 16:59:30	Download
Submission status:	Evaluated	
Evaluation:	0.0000	

- **Evaluator: computer**
 - Program compiled
 - Test 'Basic test with example input data': failed
 - result: 33.33 %, required: 100.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.034 s
 - Peak mem usage: 2464 KiB (limit: 4036 KiB)
 - Mandatory test failed, evaluation: 0.00 %
 - Failed (invalid output) [Unlock advice (1.71 KiB)]
 - Failed (invalid output) [Unlock advice (560 B)]
 - Failed (invalid output) [Unlock advice (201 B)]
 - Failed (invalid output) [Unlock advice (356 B)]
 - Overall ratio: 0.00 %
- Advices used: 2
- Penalty due to advices: None (2 <= 2 limit)

- Total percent: 0.00 %
- Early submission bonus: 0.50
- Total points: $0.00 * (5.00 + 0.50) = 0.00$

		Total	Average	Maximum	Function name
SW metrics:	Functions:	17	--	--	--
	Lines of code:	299	17.59 ± 20.99	81	main
	Cyclomatic complexity:	82	4.82 ± 5.02	18	main

15 2023-11-22 16:52:53 [Download](#)

Submission status: Evaluated

Evaluation: 5.0417

• **Evaluator: computer**

- Program compiled
- Test 'Basic test with example input data': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.034 s
 - Peak mem usage: 2464 KiB (limit: 4036 KiB)
 - Mandatory test success, evaluation: 100.00 %
- Test 'Borderline test': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.392 s (limit: 2.000 s)
 - Total run time: 1.676 s
 - Mandatory test success, evaluation: 100.00 %
- Test 'Invalid input test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.131 s
 - Optional test success, evaluation: 100.00 %
- Test 'Random test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.566 s (limit: 4.000 s)
 - Total run time: 3.890 s
 - Optional test success, evaluation: 100.00 %
- Test 'Random test + mem debugger': success
 - result: 91.67 %, required: 50.00 %
 - Max. run time: 0.185 s (limit: 4.000 s)
 - Total run time: 1.026 s
 - Optional test success, evaluation: 91.67 %
 - Failed (invalid output) **[Unlock advice (6.00 KiB, incomplete data)]**
- Test 'Speed test #1': Abnormal program termination (Time limit exceeded)
 - Program was killed after: 7.012 s (limit: 7.000 s)
 - Bonus test - failed, evaluation: No bonus awarded
 - Time limit exceeded **[Unlock advice (2.00 KiB, incomplete data)]**
- Test 'Speed test #2': Not tested
 - Bonus test - failed, evaluation: No bonus awarded
- Overall ratio: 91.67 % ($= 1.00 * 1.00 * 1.00 * 1.00 * 0.92$)
- Advices used: 2
- Penalty due to advices: None ($2 \leq 2$ limit)
- Total percent: 91.67 %
- Early submission bonus: 0.50
- Total points: $0.92 * (5.00 + 0.50) = 5.04$

		Total	Average	Maximum	Function name
SW metrics:	Functions:	17	--	--	--

Lines of code: **299** **17.59 ± 20.99** **81** main
Cyclomatic complexity: **82** **4.82 ± 5.02** **18** main

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Submission status: Evaluated

Evaluation: 5.0417

• Evaluator: computer

- Program compiled
- Test 'Basic test with example input data': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.034 s
 - Peak mem usage: 3324 KiB (limit: 4036 KiB)
 - Mandatory test success, evaluation: 100.00 %
- Test 'Borderline test': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.330 s (limit: 2.000 s)
 - Total run time: 1.534 s
 - Mandatory test success, evaluation: 100.00 %
- Test 'Invalid input test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.150 s
 - Optional test success, evaluation: 100.00 %
- Test 'Random test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.455 s (limit: 4.000 s)
 - Total run time: 3.847 s
 - Optional test success, evaluation: 100.00 %
- Test 'Random test + mem debugger': success
 - result: 91.67 %, required: 50.00 %
 - Max. run time: 0.135 s (limit: 4.000 s)
 - Total run time: 0.995 s
 - Optional test success, evaluation: 91.67 %
 - Failed (invalid output) **[Unlock advice (6.00 KiB, incomplete data)]**
- Test 'Speed test #1': Abnormal program termination (Time limit exceeded)
 - Program was killed after: 7.005 s (limit: 7.000 s)
 - Bonus test - failed, evaluation: No bonus awarded
 - Time limit exceeded **[Unlock advice (2.00 KiB, incomplete data)]**
- Test 'Speed test #2': Not tested
 - Bonus test - failed, evaluation: No bonus awarded
- Overall ratio: 91.67 % (= 1.00 * 1.00 * 1.00 * 1.00 * 0.92)

- Advices used: 2
- Penalty due to advices: None (2 <= 2 limit)
- Total percent: 91.67 %
- Early submission bonus: 0.50
- Total points: 0.92 * (5.00 + 0.50) = 5.04

	Total	Average	Maximum	Function name
SW metrics:	Functions: 17	--	-- --	
	Lines of code: 299	17.59 ± 20.99	81	main
	Cyclomatic complexity: 82	4.82 ± 5.02	18	main

13 2023-11-22 16:00:40 Download

Submission status:	Evaluated
Evaluation:	5.0417
<ul style="list-style-type: none"> • Evaluator: computer <ul style="list-style-type: none"> ◦ Program compiled ◦ Test 'Basic test with example input data': success <ul style="list-style-type: none"> ▪ result: 100.00 %, required: 100.00 % ▪ Max. run time: 0.006 s (limit: 1.000 s) ▪ Total run time: 0.033 s ▪ Peak mem usage: 2464 KiB (limit: 4036 KiB) ▪ Mandatory test success, evaluation: 100.00 % ◦ Test 'Borderline test': success <ul style="list-style-type: none"> ▪ result: 100.00 %, required: 100.00 % ▪ Max. run time: 0.497 s (limit: 2.000 s) ▪ Total run time: 1.679 s ▪ Mandatory test success, evaluation: 100.00 % ◦ Test 'Invalid input test': success <ul style="list-style-type: none"> ▪ result: 100.00 %, required: 50.00 % ▪ Max. run time: 0.006 s (limit: 1.000 s) ▪ Total run time: 0.137 s ▪ Optional test success, evaluation: 100.00 % ◦ Test 'Random test': success <ul style="list-style-type: none"> ▪ result: 100.00 %, required: 50.00 % ▪ Max. run time: 0.434 s (limit: 4.000 s) ▪ Total run time: 3.723 s ▪ Optional test success, evaluation: 100.00 % ◦ Test 'Random test + mem debugger': success <ul style="list-style-type: none"> ▪ result: 91.67 %, required: 50.00 % ▪ Max. run time: 0.141 s (limit: 4.000 s) ▪ Total run time: 0.925 s ▪ Optional test success, evaluation: 91.67 % ▪ Failed (invalid output) [Unlock advice (6.00 KiB, incomplete data)] ◦ Test 'Speed test #1': Abnormal program termination (Time limit exceeded) <ul style="list-style-type: none"> ▪ Program was killed after: 7.005 s (limit: 7.000 s) ▪ Bonus test - failed, evaluation: No bonus awarded ▪ Time limit exceeded [Unlock advice (2.00 KiB, incomplete data)] ◦ Test 'Speed test #2': Not tested <ul style="list-style-type: none"> ▪ Bonus test - failed, evaluation: No bonus awarded ◦ Overall ratio: 91.67 % (= 1.00 * 1.00 * 1.00 * 1.00 * 0.92) • Advices used: 2 • Penalty due to advices: None (2 <= 2 limit) • Total percent: 91.67 % • Early submission bonus: 0.50 • Total points: 0.92 * (5.00 + 0.50) = 5.04 	

		Total	Average	Maximum	Function name
SW metrics:	Functions:	17	--	-- --	
	Lines of code:	299	17.59 ± 20.99	81	main
	Cyclomatic complexity:	82	4.82 ± 5.02	18	main

12	2023-11-22 15:57:00	Download
Submission status:	Evaluated	
Evaluation:	5.5458	
<ul style="list-style-type: none"> • Evaluator: computer <ul style="list-style-type: none"> ◦ Program compiled ◦ Test 'Basic test with example input data': success <ul style="list-style-type: none"> ▪ result: 100.00 %, required: 100.00 % 		

- Max. run time: 0.007 s (limit: 1.000 s)
- Total run time: 0.035 s
- Peak mem usage: 2464 KiB (limit: 4036 KiB)
- Mandatory test success, evaluation: 100.00 %
- Test 'Borderline test': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 0.463 s (limit: 2.000 s)
 - Total run time: 1.710 s
 - Mandatory test success, evaluation: 100.00 %
- Test 'Invalid input test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.006 s (limit: 1.000 s)
 - Total run time: 0.138 s
 - Optional test success, evaluation: 100.00 %
- Test 'Random test': success
 - result: 100.00 %, required: 50.00 %
 - Max. run time: 0.473 s (limit: 4.000 s)
 - Total run time: 3.827 s
 - Optional test success, evaluation: 100.00 %
- Test 'Random test + mem debugger': success
 - result: 91.67 %, required: 50.00 %
 - Max. run time: 0.175 s (limit: 4.000 s)
 - Total run time: 1.020 s
 - Optional test success, evaluation: 91.67 %
 - Failed (invalid output) **[Unlock advice (4.02 KiB, incomplete data)]**
- Test 'Speed test #1': success
 - result: 100.00 %, required: 100.00 %
 - Max. run time: 6.766 s (limit: 7.000 s)
 - Total run time: 7.140 s
 - Bonus test - success, evaluation: 110.00 %
- Test 'Speed test #2': Abnormal program termination (Time limit exceeded)
 - Program was killed after: 7.005 s (limit: 7.000 s)
 - Bonus test - failed, evaluation: No bonus awarded
 - Time limit exceeded **[Unlock advice (2.00 KiB, incomplete data)]**
- Overall ratio: 100.84 % (= 1.00 * 1.00 * 1.00 * 1.00 * 0.92 * 1.10)
- Advices used: 2
- Penalty due to advices: None (2 <= 2 limit)
- Total percent: 100.84 %
- Early submission bonus: 0.50
- Total points: 1.01 * (5.00 + 0.50) = 5.55

		Total	Average	Maximum	Function name
SW metrics:	Functions:	17	--	-- --	
	Lines of code:	299	17.59 ± 20.99	81	main
	Cyclomatic complexity:	82	4.82 ± 5.02	18	main