# **Bestsellers**

Submission deadline: 2021-11-28 23:59:59

**Late submission with malus:** 2022-01-02 23:59:59 (Late submission malus: 100.0000 %)

Evaluation: 5.0000

**Max. assessment:** 5.0000 (Without bonus points)

**Submissions:** 14 / 20 Free retries + 10 Penalized retries (-10 % penalty each retry)

**Advices:** 4 / 2 Advices for free + 2 Advices with a penalty (-10 % penalty each advice)

The task is to develop a program that processes sales and analyzes best selling products.

Assume we register all products sold in our store. We are interested in the products that are selling the best. Our program is able to display the N best selling products, where N is given as a parameter to our program (the first input value).

Each product is identified by its unique name (a string). The name is at most 99 characters long and does not contain any whitespace. A sold product is given in the input as + product-name. Next, there are analytic commands in the input, in particular:

- command # is designated to display the N best selling products. The listing is formatted according to the examples below. There is product name and the number of sold items for each product. The products are listed in an descending order (better selling products go first). Finally, there is a summary printed as the last line with the sum of the above sold items.
- command? displays the summary only.

The output of the program may be a bit confusing when there are products with equal number of sold items:

• a simple case i presented in the first example run. There are eggs and flour in the listing, we sold 4 items of both. Therefore, these products share 2-nd and 3-rd place in the listing; the order is printed accordingly. Moreover, the relative position of flour/eggs is not given. The testing environment accepts all (here both) variants. Therefore, both listings would be accepted in this case:

```
1. Milk, 5x
2.-3. Eggs, 4x
2.-3. Flour, 4x
4. Beer, 3x

1. Milk, 5x
2.-3. Flour, 4x
2.-3. Eggs, 4x
4. Beer, 3x
```

1.-4. Black tea, 1x

• A more complex case is shown in the second example run. The program is to compute the top N=3 products. However, the listings are longer than 3 items in some cases, e.g.:

```
1.-4. Caffeine, 1x
1.-4. C/C++_for_dummies, 1x
1.-4. Introduction_to_Algorithms, 1x
1.-2. Black_tea, 2x
1.-2. Caffeine, 2x
3.-5. C/C++_for_dummies, 1x
3.-5. Energy_drink, 1x
3.-5. Introduction to Algorithms, 1x
```

The listing is longer than N if there exist further products with sales equal to the sales of the displayed products.

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 sent to the standard output (do not send it to the error output) and the error message must be terminated by a newline (\n). The following is considered invalid:

- the value of N is not an integer, is negative, or zero,
- the command is not recognized (valid commands are +, ? and #),
- a product name is not valid (missing, 100 or more characters).

# Sample program runs:

or:

# **Top N:** 4

+ Fruits

```
+ Milk
+ Milk
+ Sugar
+ Butter
+ Beer
+ Vegetables
+ Milk
+ Beer
+ Milk
+ Beer
+ Sugar
+ Eggs
+ Milk
+ Eggs
+ Eggs
+ Eggs
1. Milk, 5x
2. Eggs, 4x
3. Beer, 3x
4. Sugar, 2x
Top sellers: sold 14 items
+ Flour
+ Flour
+ Flour
+ Flour
1. Milk, 5x
2.-3. Eggs, 4x
2.-3. Flour, 4x
4. Beer, 3x
Top sellers: sold 16 items
+ Flour
Top sellers: sold 17 items
+ Flour
1. Flour, 6x
2. Milk, 5x
3. Eggs, 4x
4. Beer, 3x
Top sellers: sold 18 items
Top N:
Requests:
+ Introduction_to_Algorithms
+ Black_tea
1.-2. Black_tea, 1x
1.-2. Introduction_to_Algorithms, 1x
Top sellers: sold 2 items
+ Caffeine
Top sellers: sold 3 items
+ C/C++_for_dummies
1.-4. Black_tea, 1x
1.-4. Caffeine, 1x
1.-4. C/C++_for_dummies, 1x
1.-4. Introduction_to_Algorithms, 1x
Top sellers: sold 4 items
+ Black_tea
1. Black tea, 2x
2.-4. Caffeine, 1x
2.-4. C/C++_for_dummies, 1x
2.-4. Introduction_to_Algorithms, 1x
Top sellers: sold 5 items
+ Energy drink
+ Caffeine
1.-2. Black_tea, 2x
1.-2. Caffeine, 2x
3.-5. C/C++_for_dummies, 1x
3.-5. Energy_drink, 1x
3.-5. Introduction_to_Algorithms, 1x
Top sellers: sold 7 items
```

```
Top sellers: sold 7 items
+ Energy_drink
Top sellers: sold 6 items
+ Energy drink
Top sellers: sold 7 items
+ Caffeine
Top sellers: sold 8 items
+ Energy_drink
+ Energy_drink

    Energy_drink, 5x

2. Caffeine, 3x
3. Black_tea, 2x
Top sellers: sold 10 items
+ C/C++ for dummies
1. Energy drink, 5x
2. Caffeine, 3x
3.-4. C/C++_for_dummies, 2x
3.-4. Black_tea, 2x
Top sellers: sold 12 items
```

```
Top N:
```

# Requests:

\* Avoiding invalid input 3-rd edition

Invalid input.

### Advice:

- The sample 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.
- The number of different products and the number of items sold may be arbitrarily high. There is not any explicit limit. If you need to store the list of sold items/products, you have to use dynamically allocated memory. Static allocation will not work.
- Product name as such is limited to 99 characters. Therefore, the name itself is may be stored into some fixed-size array (and it is recommended to do so).
- Structures are recommended for this assignment. For example, use structure to aggregate the name of a product and its sales.
- The program is tested with several tests. First, the program is tested for valid outputs. Next, the program is tested for correct memory usage (memory debugger is used). Finally, the efficiency of your program is tested.
- A basic solution does not have to be extremely fast. Such implementation passes the mandatory and some optional tests. The result will be at most 100 %.
- The first bonus test uses long inputs with many different products sold. However, the value of N is relatively small. The naive algorithm is not efficient enough to compute the result in given time; an improved algorithm must be used instead.
- Finally, there is second speed test. In addition to long inputs, the value of N is high. You may assume that the ? command is very frequent whereas command # is used with low frequency (long listings would slow down the program significantly).
- A program that passes all mandatory and optional tests with 100 % result may be submitted to code review (i.e., you do not need to pass bonus tests for code review).
- Use C programming language to solve the problem. Do not use C++ data structures, these are disabled in this assignment.

Sample data: Download

# Reference

# Evaluator: computer

- Program compiled
- Test 'Základní test s aprametry podle ukázky': success
  - result: 100.00 %, required: 100.00 %
  - Max. run time: 0.006 s (limit: 2.000 s)
  - Total run time: 0.017 s
  - Peak mem usage: 5500 KiB (limit: 5996 KiB)
  - Mandatory test success, evaluation: 100.00 %
- Test 'Test mezních hodnot': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 0.041 s (limit: 3.000 s)
  - Total run time: 0.085 s
  - Optional test success, evaluation: 100.00 %
- Test 'Test ošetření vstupních dat': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 0.005 s (limit: 1.000 s)
  - Total run time: 0.036 s
  - Optional test success, evaluation: 100.00 %
- Test 'Test náhodnými daty': success

```
result: 100.00 %, required: 50.00 %
  Max. run time: 0.063 s (limit: 2.000 s)
  Total run time: 0.365 s
Optional test success, evaluation: 100.00 %
```

- Test 'Test náhodnými daty + mem debugger': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 0.084 s (limit: 2.000 s)
  - Total run time: 0.624 s
  - Optional test success, evaluation: 100.00 %
- Test 'Test rychlosti I': success
  - result: 100.00 %, required: 100.00 %
  - Max. run time: 0.537 s (limit: 2.000 s)
  - Total run time: 0.537 s
  - Bonus test success, evaluation: 120.00 %
- Test 'Test rychlosti II': success
  - result: 100.00 %, required: 100.00 %
  - Max. run time: 0.490 s (limit: 1.500 s)
  - Total run time: 0.490 s
  - Bonus test success, evaluation: 125.00 %
- Overall ratio: 150.00 % (= 1.00 \* 1.00 \* 1.00 \* 1.00 \* 1.00 \* 1.20 \* 1.25)
- Total percent: 150.00 %
- Early submission bonus: 0.50
- Total points: 1.50 \* (5.00 + 0.50) = 8.25

Total Average Maximum Function name

**Functions:** 13 SW metrics:

Lines of code:  $322\ 24.77 \pm 10.89$ 49 updateTop Cyclomatic complexity: **78** 14 updateTop  $6.00 \pm 3.21$ 

14	2021-11-26 16:07:37	Download
Submission status:	Evaluated	
Evaluation:	5.0000	

## Evaluator: computer

- Program compiled
- Test 'Basic test with example data': success
  - result: 100.00 %, required: 100.00 %
  - Max. run time: 0.006 s (limit: 2.000 s)
  - Total run time: 0.018 s
  - Peak mem usage: 5496 KiB (limit: 5996 KiB)
  - Mandatory test success, evaluation: 100.00 %
- Test 'Borderline test': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 1.028 s (limit: 3.000 s)
  - Total run time: 1.078 s
  - Optional 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: 0.042 s
  - Optional test success, evaluation: 100.00 %
- Test 'Random test': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 0.507 s (limit: 2.000 s)
  - Total run time: 3.498 s
  - Optional test success, evaluation: 100.00 %
- Test 'Random test + mem debugger': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 0.256 s (limit: 2.000 s)
  - Total run time: 1.455 s
  - Optional test success, evaluation: 100.00 %
- Test 'Speed test I': Abnormal program termination (Time limit exceeded)
  - Program was killed after: 2.006 s (limit: 2.000 s)
  - Bonus test failed, evaluation: No bonus awarded

  - Test 'Speed test II': 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: 1
- Penalty due to advices: None (1 <= 2 limit)
- Total percent: 100.00 %
- Total points: 1.00 \* 5.00 = 5.00

SW metrics: Total Average Maximum Function name Functions: 2 -- -- -- Lines of code: 120  $60.00 \pm 51.00$  111 main Cyclomatic complexity: 31  $15.50 \pm 12.50$  28 main

13 2021-11-26 16:02:28 Download

**Submission status:** Evaluated **Evaluation:** 0.0000

# Evaluator: computer

- o Program compiled
- o Test 'Basic test with example data': failed
  - result: 33.33 %, required: 100.00 %
  - Max. run time: 0.007 s (limit: 2.000 s)
  - Total run time: 0.017 s
  - Peak mem usage: 5496 KiB (limit: 5996 KiB)
  - Mandatory test failed, evaluation: 0.00 %
  - Failed (invalid output)
  - Failed (invalid output)
- Overall ratio: 0.00 %
- Advices used: 1
- Penalty due to advices: None (1 <= 2 limit)
- Total percent: 0.00 %
- Total points: 0.00 \* 5.00 = 0.00

Total Average Maximum Function name

Cyclomatic complexity: **31** 15.50  $\pm$  12.50 28 main

12 2021-11-26 15:58:28 <u>Download</u>

Submission status:EvaluatedEvaluation:2.5000

# · Evaluator: computer

- Program compiled
- Test 'Basic test with example data': success
  - result: 100.00 %, required: 100.00 %
  - Max. run time: 0.007 s (limit: 2.000 s)
  - Total run time: 0.020 s
  - Peak mem usage: 5496 KiB (limit: 5996 KiB)
  - Mandatory test success, evaluation: 100.00 %
- Test 'Borderline test': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 1.068 s (limit: 3.000 s)
  - Total run time: 1.116 s
  - Optional 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: 0.045 s
  - Optional test success, evaluation: 100.00 %
- Test 'Random test': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 0.584 s (limit: 2.000 s)
  - Total run time: 3.792 s
  - Optional test success, evaluation: 100.00 %
- Test 'Random test + mem debugger': failed
  - result: 8.33 %, required: 50.00 %
  - Max. run time: 0.255 s (limit: 2.000 s)
  - Total run time: 1.536 s
  - Optional test failed, evaluation: 50.00 %
  - Failed (invalid output)
  - Failed (invalid output)Failed (invalid output)
  - Failed (invalid output)
  - Valled (invalid output)
    - Input data [4096 B / 464805 B]

+ Ykzterjuzdmmqrccaetgnvvgkgvkdg + Eopljhzzxjzsmvklxycjccxvuzadwy + Dmvmdbgnfywkhisugixtvpkgkmpgov + Puukjjhedppdyxgdsrjyskddwevwfg + Lvnpymwqbyjwdlryqwvhcgkthcgulh + Rmqizxpxjepnsdphclimfnrsmbsxrv + Ziqrznubhfmziwiiywmhtzzeimbrqk + Vrzlnolencxxwwghpkixogxkrolrov + Okkejsybergmlptpfilqfjcurqbclu + Ihzjwphufidqeyxirggomfscvoeqfm + Ocmkyuouhowbytmnunnxpamjmboxeu + Pmpsvnmbytdbsevosiqkhbgjetqwmo + Cfrbwhppphgywexntbcdllgrpvdqvd + Qjeyldidhcsdwtcdtpwaowituwhrlh + Jpkogfyfvkujtvnzwftxxotahxcvxm + Itxqxcjdifqintxgjqhvzxvsqmtfon + Gdslagsssoadjdsxzstohscctfzgio + Jhjhpreswzqumvpfmzgnghgxokyvie + Yjrznqdnylrxnynnfeyasuxnvdxujo + Ecipldffdshzzlwqwmktfeufnsyngj + Fvcsrvitswsymbmpdbqwsrbuuookks + Axecjwnxymotlsqzxjipcehkhkerbx + Izgyndjbvstfufkqxhlvmkedyawwoq + Dwfefoferecxcqftzjskavnpaigtrv + Afkdjimxubthqmplmiwmukuinccuur + Xylazgtmrjptfesaotvhpokoksydlk + Ouiiubuwyfwxudxfyibbtbojsoazfq + Wxpakkyhrkpbifwvqrodqzwlslwawo + Nsudvjplkzqwazlpwhbponteiarews + Chdxunnvmhxtjsmsfcadjxondxjyib + Tachxmcdtrckzlrsmxmvjdlircydpp + Zcrvjwkomokghjyhkpgdkuhfbnsyse + Cecdcbnadcozortujisqjwfutzczxk + Geuizhwacdhlcwtizpfnphwllisswh + Mddytgdkrrjipytzaxvslzhrjuvyon + Wajkxxjsavudkldhohutdadheuucox + Ykzterjuzdmmqrccaetgnvvgkgvkdg + Lvnpymwqbyjwdlryqwvhcgkthcgulh + Sxrhgtmgmrocdmfvdhhqitestgaxca + Tnixfgsokanbsgqexxyjnezciffccq + Tchorhptxojkdbyabqxinzecilgkjr + Pmqsxzfdjjdjbphcrctcjazbrxkrhy + Lqjrxpqunwauvmtqlhcxqrgkiypyvf + Niimnykpwhitgcztzsygcbyurebnki + Xmrfwmdpoqwhgsbulphpifpzdfsdpm + Oukzfnhkloxklcbnqebpnhnxkutkdk + Tzujewgokaicgzzwgbgbwhmmtnwfsu + Agxyrrrjjksuspdvbyrktyatmkxcfb + Stupyvitibjljthdsutnvyvthzrfpy + Obhnlxcfqikpzofzpxzfcvwsewwnzx + Ezjzmjxckcahegmgmcmoemhmnsnamu + Xtokwyrsjzradlxbchzzsyvckiwegr + Sligwagdmbvxtuzduhxwobtnnclmmc + Otliojvwlonwytlsymqlediqvnixpf + Bpniqjwdeayoysfpbsiwuzclvayagv + Kjkzboqfhjzdpzbahfkwpwhadhjmhx + Uiaefpqjmchlfuaacbvshfuqbjkocd + Lrvoxbrjpsislttagkwnpxfzxryacm + Tzowydwpketotyaubxzyjlwtkrckti + Hgutflbjklxiiymzrnoexhivwygcqt + Knhrgivfysibvrcgjjsgsdgheozmqx + Puysslgmygyqddebgbouaucvnnnuyn

# <skipping 460709 B>

# dfynjiqn + Wsfkmhgqxcpjffepgfjyqrtvyzvmyf + Egbunyrllcgfrzscxbnqlehkclernf + Cycbhxvmjkmlvhkxsizadaruewyhlu # + Agoslcdehgybepzhyinhmeetculzzc + Onsigwvwsgntqahcednplbinrsozzv + Juqqfbsbbogvqfpkegttvxngfjvcdm + Puimiiypupkseyfrsskkhpquimnjau + Ozyvcmfmwtmmynenfifaejnaovjufc ? + Naoohmghispzhxwfacwcyqnarnapnj + Paihfdipqwlqrmuquorwvvhjkwdlfm + Awtglsqpfdxawfrjekbdputsebkzcr

```
+ Eugobedfbqxfhxvsskdgndfwgilrba
+ Tjwmhnnbhdthrgaqguoygdonzxfrjq
+ Ahdbkoegkuxwvlshkzbuhdfomnjfue
+ Hzqcodgrhwimtadznourjkqvbfpxwr
+ Kcquerizoebmaibhlorncepyybnnjf
+ Qrwkaomnkounmbihgssnpbknofzeiu
+ Chvoolabbqjxykrbgmerubkdzuqncz
+ Puimiiypupkseyfrsskkhpquimnjau
+ Qxqqqmzphqxefezavswyqglqtushsk
+ Ihzjwphufidqeyxirggomfscvoeqfm
+ Zfyjnrewhhtqawpjimzshhnjczobes
+ Wlxipuovakxwskmoohevymvizjlygd
+ Shorkorfjxlljooplujzfekjmxixel
+ Rsyintoetfhfntapwvyjwqsdfqolzf
+ Cycbhxvmjkmlvhkxsizadaruewyhlu
+ Ngpruxlbkmsyablnqlhdpbdnfijrnx
+ Agxyrrrjjksuspdvbyrktyatmkxcfb
+ Csntzqgirznhfatrquxkpnxbbuyevl
+ Mfeaxscvnqplmyvrxxzoiofhzkspvk
+ Agoslcdehgybepzhyinhmeetculzzc
+ Ezuovkofqccrgdpmvglbhzckvjqqgr
+ Ndiebcmqzhukjztsjvvyedchenlehc
+ Jpkogfyfvkujtvnzwftxxotahxcvxm
+ Qxsoyazpkecfbwevmrhtvyhaufhtsj
+ Icvfkuxxmgwrfswavzilfthuxcgoxw
+ Huefphyddfdoogesomficsgoilfsmo
+ Etseabmmlfazfqxjpjoudqyqxuunie
+ Obzvapbdniadwokcmtgenduowekajp
+ Zhydujhviuugetsrqugshfdfynjiqn
+ Fgleiruautgothwnajcgmohrrmbvzl
+ Vlcptgoexlwjgwgslwbaemytlwmigl
+ Ycfiqlbbybplsppvgsdwtdufcveizp
+ Xzvxyxdqmjzdcxslwdpqgegrckzouj
+ Iebthjkdjgllcfvhhyxanzcyybmduw
+ Uurmybxsmoafupmdfpqoaujusnmjot
+ Gkjydjkfwqlstjpxcfebintuvzojmm
+ Lrvoxbrjpsislttagkwnpxfzxryacm
+ Lejzmcuhmefrdnqrrpfhzagsewctzd
+ Xgavvnqcqjuiunxdibnrfgovrkapii
+ Trphnelaalmtgieinugmvnyopgmwiz
+ Oougirralwdwurgzdsdqwumxvyleph
+ Cycbhxvmjkmlvhkxsizadaruewyhlu
+ Llwsvrbzzezavzosspbvrycttctofp
+ Ofgtdgqxwckqjubjtqkxmjhjogkfwb
+ Riadrrxdzapmhlqhmrfmykoasqlkwp
+ Llhjgkfpgjzmizbemrflnovoltnkoa
+ Awwmmyqqlnsidynwkigcpknpvxbmyg
+ Apkxfoazjlvidsvddcoxlgzylukdno
+ Dqccwxiluikfpddpajuqspaktivvcc
+ Etseabmmlfazfqxjpjoudqyqxuunie
```

# Output data [4096 B / 1076405 B]

```
Top N:
Requests:
1. Gwatmcqqrevmmhumavbkponotmwtff, 26x
2. Cmrdhuylkpgfviabituvnmbgiufdgi, 25x
3.-4. Npaygnaqqijpcdbupvbdbnklgorbly, 24x
3.-4. Ztjoilfshtkveoayshcnsteihyhzbo, 24x
5.-9. Onywdumaofaneotsolavksotxksoov, 23x
5.-9. Wrucynqoyaahjjamazxfweptaerghu, 23x
5.-9. Navtuhkyfugyebrupkmcprymjtjoup, 23x
5.-9. Ufvfreiyrbvmvhdidtkwfugkfabwvq, 23x
5.-9. Rlcpkkirmvyajfdvplpudbxfxwjnsq, 23x
10.-11. Uxxqtvunmzfnkucbdcdqqtcjuhljdy, 22x
10.-11. Kyqmlonlytoyqwumwxtzzhghmyiihf, 22x
12.-17. Essjupztodvaqxxvljhofeuztorcqo, 21x
12.-17. Bakyeemkopbpfsgsluwzqavbuvgzia, 21x
```

```
12.-17. Huzghhahlymfiilpjnalfmvshrhcfa, 21x
12.-17. Xbdsinniwggmkzydwyvsurktcdrmes, 21x
12.-17. Fpfdmgibgmmxhnikdxuzytbhbiklyn, 21x
12.-17. Yacjmpwkpbbzocirrqlziubyyhfqfh, 21x
18.-32. Tzujewgokaicgzzwgbgbwhmmtnwfsu, 20x
18.-32. Agxyrrrjjksuspdvbyrktyatmkxcfb, 20x
18.-32. Qlfjszlazxqltsmkxltaomqomutavo, 20x
18.-32. Tvikajxjexdhychzbfpvfrpasgnzhr, 20x
18.-32. Kwzwfcivkxoqszoqvabwkdwglonstr, 20x
18.-32. Abeawkeanomuwuhrgduehivvkvhbhm, 20x
18.-32. Vqyiizmcenhzohtlavnywjkkhlixcu, 20x
18.-32. Pjszugcoabzzxwejxsanqlywntwhnx, 20x
18.-32. Uwpeoyodntnsesdcxzwjgfcbsfzqkp, 20x
18.-32. Zacyvtlujxobrluubqqhebjzvtdpuk, 20x
18.-32. Ebyftwniclrbzoumffmvqhvghdcbqc, 20x
18.-32. Lejzmcuhmefrdnqrrpfhzagsewctzd, 20x
18.-32. Waetkjwsicspzxlimjkxuntxjxsako, 20x
18.-32. Cdpaxdxfsovhehzkrfrgpbqkoliocy, 20x
18.-32. Sfymixamwcphzxjndvxbjqgrmsglyl, 20x
Top sellers: sold 684 items
Top sellers: sold 705 items
1. Gwatmcqqrevmmhumavbkponotmwtff, 26x
2. Cmrdhuylkpgfviabituvnmbgiufdgi, 25x
3.-5. Npaygnagqijpcdbupvbdbnklgorbly, 24x
3.-5. Ztjoilfshtkveoayshcnsteihyhzbo, 24x
3.-5. Rlcpkkirmvyajfdvplpudbxfxwjnsq, 24x
6.-9. Onywdumaofaneotsolavksotxksoov, 23x
6.-9. Wrucyngoyaahjjamazxfweptaerghu, 23x
6.-9. Navtuhkyfugyebrupkmcprymjtjoup, 23x
6.-9. Ufvfreiyrbvmvhdidtkwfugkfabwvq, 23x
10.-11. Uxxqtvunmzfnkucbdcdqqtcjuhljdy, 22x
10.-11. Kyqmlonlytoyqwumwxtzzhghmyiihf, 22x
12.-17. Essjupztodvagxxvljhofeuztorcgo, 21x
12.-17. Bakyeemkopbpfsgsluwzqavbuvgzia, 21x
12.-17. Huzghhahlymfiilpjnalfmvshrhcfa, 21x
<skipping 1072309 B>
rrehuwnnshlcfobcqrhafztwz, 37x
14.-29. Bbuoirwdpqxqkdiecztfjgpkpnhpfl, 37x
14.-29. Vmztwuaijbhelindswfeoubkfiyytl, 37x
14.-29. Kdizudkzfgdqyrgpkgnqfizplwnwrl, 37x
14.-29. Uhmfbajwktqpsuloqwqwqyfdqerbjk, 37x
14.-29. Kyymrkexehuopcrtgmgecbispxvlcc, 37x
14.-29. Ssoyowhbhyskrbktitwerejwibiqvp, 37x
14.-29. Vobtbpyelvhdpkxhzcczlgejihjani, 37x
14.-29. Pvyzqswjllxjidqnzlkcrshylgrwpt, 37x
14.-29. Otjcirerjpgpspcnrlnguitnqvdhpe, 37x
14.-29. Navtuhkyfugyebrupkmcprymjtjoup, 37x
14.-29. Wrucynqoyaahjjamazxfweptaerghu, 37x
14.-29. Tjwmhnnbhdthrgaqguoygdonzxfrjq, 37x
14.-29. Ycfiqlbbybplsppvgsdwtdufcveizp, 37x
Top sellers: sold 1110 items
Top sellers: sold 1111 items
1. Kwzwfcivkxoqszoqvabwkdwglonstr, 46x
2.-3. Npaygnaqqijpcdbupvbdbnklgorbly, 41x
2.-3. Ykbtauufzuuovewaepyudoleufdoaa, 41x
4.-7. Uxxqtvunmzfnkucbdcdqqtcjuhljdy, 40x
4.-7. Ztjoilfshtkveoayshcnsteihyhzbo, 40x
4.-7. Rlcpkkirmvyajfdvplpudbxfxwjnsq, 40x
4.-7. Amzuagmiftbrkekgdtijygjqtxuyyv, 40x
8.-10. Kyqmlonlytoyqwumwxtzzhghmyiihf, 39x
8.-10. Rjxetcpsmnsuedunpdomhykvqzwesa, 39x
8.-10. Gkjydjkfwqlstjpxcfebintuvzojmm, 39x
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11.-13. Onywdumaofaneotsolavksotxksoov, 38x 11.-13. Jsejsvdqflakrioqstnjghcetaurxt, 38x 11.-13. Imcmhujwntiosklkwahqnmacxfyopc, 38x 14.-30. Sfymixamwcphzxjndvxbjggrmsglyl, 37x 14.-30. Cmrdhuylkpgfviabituvnmbgiufdgi, 37x 14.-30. Gnvmxrrehuwnnshlcfobcqrhafztwz, 37x 14.-30. Bbuoirwdpqxqkdiecztfjgpkpnhpfl, 37x 14.-30. Vmztwuaijbhelindswfeoubkfiyytl, 37x 14.-30. Kdizudkzfgdqyrgpkgnqfizplwnwrl, 37x 14.-30. Uhmfbajwktqpsuloqwqwqyfdqerbjk, 37x 14.-30. Kyymrkexehuopcrtgmgecbispxvlcc, 37x 14.-30. Ssoyowhbhyskrbktitwerejwibiqvp, 37x 14.-30. Vobtbpyelvhdpkxhzcczlgejihjani, 37x 14.-30. Pvyzqswjllxjidqnzlkcrshylgrwpt, 37x 14.-30. Otjcirerjpgpspcnrlnguitnqvdhpe, 37x 14.-30. Navtuhkyfugyebrupkmcprymjtjoup, 37x

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14.-30. Wrucyngoyaahjjamazxfweptaerghu, 37x
14.-30. Tjwmhnnbhdthrgaqguoygdonzxfrjq, 37x
14.-30. Ycfiqlbbybplsppvgsdwtdufcveizp, 37x
14.-30. Lejzmcuhmefrdngrrpfhzagsewctzd, 37x
Top sellers: sold 1148 items
Top sellers: sold 1148 items
Top sellers: sold 1148 items
Reference [4096 B / 1091098 B]
Top N:
Requests:
1. Gwatmcqqrevmmhumavbkponotmwtff, 26x
2. Cmrdhuylkpgfviabituvnmbgiufdgi, 25x
3.-4. Npaygnaqqijpcdbupvbdbnklgorbly, 24x
3.-4. Ztjoilfshtkveoayshcnsteihyhzbo, 24x
5.-9. Rlcpkkirmvyajfdvplpudbxfxwjnsq, 23x
5.-9. Ufvfreiyrbvmvhdidtkwfugkfabwvq, 23x
5.-9. Onywdumaofaneotsolavksotxksoov, 23x
5.-9. Wrucynqoyaahjjamazxfweptaerghu, 23x
5.-9. Navtuhkyfugyebrupkmcprymjtjoup, 23x
10.-11. Kyqmlonlytoyqwumwxtzzhghmyiihf, 22x
10.-11. Uxxqtvunmzfnkucbdcdqqtcjuhljdy, 22x
12.-19. Fpfdmgibgmmxhnikdxuzytbhbiklyn, 21x
12.-19. Yacjmpwkpbbzocirrqlziubyyhfqfh, 21x
12.-19. Essjupztodvaqxxvljhofeuztorcqo, 21x
12.-19. Xylazgtmrjptfesaotvhpokoksydlk, 21x
12.-19. Bakyeemkopbpfsgsluwzqavbuvgzia, 21x
12.-19. Xbdsinniwggmkzydwyvsurktcdrmes, 21x
12.-19. Cecdcbnadcozortujisqjwfutzczxk, 21x
12.-19. Huzghhahlymfiilpjnalfmvshrhcfa, 21x
20.-35. Zacyvtlujxobrluubqqhebjzvtdpuk, 20x
20.-35. Ebyftwniclrbzoumffmvqhvghdcbqc, 20x
20.-35. Tvikajxjexdhychzbfpvfrpasgnzhr, 20x
20.-35. Kwzwfcivkxogszogvabwkdwglonstr, 20x
20.-35. Vqyiizmcenhzohtlavnywjkkhlixcu, 20x
20.-35. Waetkjwsicspzxlimjkxuntxjxsako, 20x
20.-35. Lejzmcuhmefrdngrrpfhzagsewctzd, 20x
20.-35. Tzujewgokaicgzzwgbgbwhmmtnwfsu, 20x
20.-35. Fvcsrvitswsymbmpdbqwsrbuuookks, 20x
20.-35. Uwpeoyodntnsesdcxzwjgfcbsfzqkp, 20x
20.-35. Cdpaxdxfsovhehzkrfrgpbqkoliocy, 20x
20.-35. Pjszugcoabzzxwejxsanqlywntwhnx, 20x
20.-35. Qlfjszlazxqltsmkxltaomqomutavo, 20x
20.-35. Abeawkeanomuwuhrgduehivvkvhbhm, 20x
20.-35. Sfymixamwcphzxjndvxbjqgrmsglyl, 20x
20.-35. Agxyrrrjjksuspdvbyrktyatmkxcfb, 20x
Top sellers: sold 746 items
Top sellers: sold 767 items
1. Gwatmcqqrevmmhumavbkponotmwtff, 26x
2. Cmrdhuylkpgfviabituvnmbgiufdgi, 25x
3.-5. Npaygnaqqijpcdbupvbdbnklgorbly, 24x
3.-5. Ztjoilfshtkveoayshcnsteihyhzbo, 24x
3.-5. Rlcpkkirmvyajfdvplpudbxfxwjnsq, 24x
6.-9. Navtuhkyfugyebrupkmcprymjtjoup, 23x
6.-9. Onywdumaofaneotsolavksotxksoov, 23x
6.-9. Wrucynqoyaahjjamazxfweptaerghu, 23x
6.-9. Ufvfreiyrbvmvhdidtkwfugkfabwvq, 23x
10.-11. Uxxqtvunmzfnkucbdcdqqtcjuhljdy, 22x
10.-11. Kyqmlonlytoyqwumwxtzzhghmyiihf, 22x
<skipping 1087002 B>
dkzfgdqyrgpkgnqfizplwnwrl, 37x
14.-30. Ssoyowhbhyskrbktitwerejwibiqvp, 37x
14.-30. Rmqizxpxjepnsdphclimfnrsmbsxrv, 37x
14.-30. Wrucynqoyaahjjamazxfweptaerghu, 37x
14.-30. Pvyzqswjllxjidqnzlkcrshylgrwpt, 37x
14.-30. Otjcirerjpgpspcnrlnguitnqvdhpe, 37x
14.-30. Vobtbpyelvhdpkxhzcczlgejihjani, 37x
14.-30. Bbuoirwdpqxqkdiecztfjgpkpnhpfl, 37x
14.-30. Gnvmxrrehuwnnshlcfobcqrhafztwz, 37x
14.-30. Kyymrkexehuopcrtgmgecbispxvlcc, 37x
14.-30. Tjwmhnnbhdthrgaqguoygdonzxfrjq, 37x
14.-30. Ycfiqlbbybplsppvgsdwtdufcveizp, 37x
14.-30. Uhmfbajwktqpsuloqwqwqyfdqerbjk, 37x
Top sellers: sold 1147 items
Top sellers: sold 1148 items
1. Kwzwfcivkxoqszoqvabwkdwglonstr, 46x
```

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2.-3. Npaygnaggijpcdbupvbdbnklgorbly, 41x
2.-3. Ykbtauufzuuovewaepyudoleufdoaa, 41x
4.-7. Amzuagmiftbrkekgdtijygjqtxuyyv, 40x
4.-7. Uxxqtvunmzfnkucbdcdqqtcjuhljdy, 40x
4.-7. Ztjoilfshtkveoayshcnsteihyhzbo, 40x
4.-7. Rlcpkkirmvyajfdvplpudbxfxwjnsq, 40x
8.-10. Gkjydjkfwqlstjpxcfebintuvzojmm, 39x
8.-10. Kyqmlonlytoyqwumwxtzzhghmyiihf, 39x
8.-10. Rjxetcpsmnsuedunpdomhykvqzwesa, 39x
11.-13. Imcmhujwntiosklkwahqnmacxfyopc, 38x
11.-13. Jsejsvdqflakrioqstnjghcetaurxt, 38x
11.-13. Onywdumaofaneotsolavksotxksoov, 38x
14.-31. Cmrdhuylkpgfviabituvnmbgiufdgi, 37x
14.-31. Vmztwuaijbhelindswfeoubkfiyytl, 37x
14.-31. Vobtbpyelvhdpkxhzcczlgejihjani, 37x
14.-31. Kdizudkzfgdqyrgpkgnqfizplwnwrl, 37x
14.-31. Ssoyowhbhyskrbktitwerejwibiqvp, 37x
14.-31. Bbuoirwdpqxqkdiecztfjgpkpnhpfl, 37x
14.-31. Tjwmhnnbhdthrgaqguoygdonzxfrjq, 37x
14.-31. Rmqizxpxjepnsdphclimfnrsmbsxrv, 37x
14.-31. Wrucyngoyaahjjamazxfweptaerghu, 37x
14.-31. Gnvmxrrehuwnnshlcfobcqrhafztwz, 37x
14.-31. Pvyzqswjllxjidqnzlkcrshylgrwpt, 37x
14.-31. Sfymixamwcphzxjndvxbjqgrmsglyl, 37x
14.-31. Navtuhkyfugyebrupkmcprymjtjoup, 37x
14.-31. Otjcirerjpgpspcnrlnguitnqvdhpe, 37x
14.-31. Kyymrkexehuopcrtgmgecbispxvlcc, 37x
14.-31. Ycfiqlbbybplsppvgsdwtdufcveizp, 37x
14.-31. Lejzmcuhmefrdngrrpfhzagsewctzd, 37x
14.-31. Uhmfbajwktqpsuloqwqwqyfdqerbjk, 37x
Top sellers: sold 1185 items
Top sellers: sold 1185 items
Top sellers: sold 1185 items
```

# Failed (invalid output)

# Input data [4096 B / 481405 B]

+ Ayetkdqycuyjewzoemiqtylmcvzteu + Ggphmrqtcjkhdgvjbmydzlzrgoykru + Qpbitnhhyepcqkkzmvhnpbryiekmgx + Szajgpkhnygwmtpnflxcjadasmuvtk + Pfaweduimviccsxhanpmoeznitjyiw + Ybribpnjgmmzweknovjqkkkbjjdorl + Hrwosrvlcosihmozjqgiddwtncjyzi + Theewyswmivgongnbaiigsrtfrfaaw + Dglpocwykjgddbodrseypswevandfv + Dnfszpwcvfchaaznggmobkwcpqupjy + Ifvajphdnhzmzcxyxwjvetxqasahth + Phmtjgglgfwmgiilsmgiziydftivrf + Wvhrfwlczatmavjwjvnbkhjvhhebzj + Yxujbofbcfafajcnndxtjiogghiwry + Cteuqvvfkpljetmwjlyprpikhzarcu + Gxrekbczuffqbwjdwphfswxhysltat + Tliqmadgbwucvhaawgureqlaqiyltk + Ajvtlrnfmpkmrjdkvgziobmybbfmdq + Yscokwfswikypsomxtppmsszngqdwq + Lwxfplimhbgrlabkhciunpbytrafvl + Avaujszknmcpnvnfngksshaolfakpt + Ehrsnwlbnvdchwzdizxypymhvwkixv + Aphkwkiyjyiiegmtipghlfshobejuy + Ccgylbnveanqvjwzrjjwmhskprkbay + Xtnosdbuhuisyqklkdmdringzndyha

+ Huhrwdkpvnrsczsyfbyfutlwmdwuvv + Zljqxrpdhdczuovhmlgctbrinlpwld + Yztswvzhkvbtjuqvdgvzlksmviejhc + Ohbpyiuftyjyefivxtydxxaiuggjpe

+ Gyqlixtxkdybsmtfkjtybismgxunsa + Rlcbkeobiqutceqxkwevxtrhvtwcvo + Sbzzkxdavcaftzeinqznzngpxyrcku

+ Rlcbkeobiqutceqxkwevxtrhvtwcvo + Mupuvfszuoqtbtqjcimrskjabkeorb

+ Ubrqrdiezpoulqpxpsqzeecloojdcn + Desmepcflcwqzwninlcmiknndhnxzq + Wrpsyrjcivgehblzlukpnczinwyoif

+ Ypncrpglmcscbilgkhepvqbypcrvsq + Namlysstaazkpeyfptmljwglcrbyjw

+ Mmhlqfubxfxullrdygmewwdgjzyyrs + Xsrpbsuochrynvpceugcwlgahlbive

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+ Lhiwuzqdzktejzfcgbywhejaiyqehu
+ Ogrjohfsbmafqvihfasbwfkylhdera
+ Mvdrkujautlwtmjbphzsgsvioiixzo
+ Szajgpkhnygwmtpnflxcjadasmuvtk
+ Egjydrmcxelmmxynslxuebjjsozhja
+ Srdycdkwdwegqrwtbtxnwlmewbmcjb
+ Mupuvfszuoqtbtqjcimrskjabkeorb
+ Lvzfjukdvmwypauzhhtowgohtynfxd
+ Tbfprdiykyujlxkbumqfqsruynhest
+ Ngmewvkcbxvwdiefvnmtcawegmxbmp
+ Hggxletqqtvkjasucvtdpfgocdrfjs
+ Tcovziwbbxpvvfgmphwdsvxogclzbu
+ Uxzwptskipghudethdowzncbqbuahr
+ Ubrqrdiezpoulqpxpsqzeecloojdcn
+ Joxgfmkxhmqkvtybuyzptsocucghwo
<skipping 477309 B>
zuwervbn
+ Pgxcfoelvlsumpdloovjyivhcicgit
+ Qaroiomsgvieyqacpysqiicaukmwxb
+ Yswkfcqlcwpxlfuxvhfutqdzrcxnhm
+ Qpzxavaqbvvtxiljlkuafyhjfhrjvq
+ Lwxfplimhbgrlabkhciunpbytrafvl
+ Hsodudkindgtvfgcjwtbukmrbdicur
+ Gmdmksqjxubwcvtexapwirbhcukodp
+ Ggpoqyrzktriwgpuagpuqqsreuoifs
+ Aphkwkiyjyiiegmtipghlfshobejuy
+ Ivgqnucekuypfnmhhzidplbzvraegf
+ Ccgylbnveanqvjwzrjjwmhskprkbay
+ Phmtjgqlqfwmgiilsmgiziydftivrf
+ Ssckqhptxzomdtjfsdbdnkbvnbxbwr
+ Upfewxoolpynnrdeyrkpxfbjclmtbz
+ Rsxixoqrjcniaegaxgfmlcrzqgeanj
+ Kydfiscevcvevhnlphwfsvvucxpqai
+ Webxjwsztpezevsykkjgvedtgtfgih
+ Temjltufydothlgmmbzuujmnraarsa
+ Xtnosdbuhuisyqklkdmdringzndyha
+ Mcaplzlihefqgphcmwqppyamqlsifr
+ Kqgcvxtgnjhwgqxmitdsnzykigtqac
+ Kvfprvgigmtwzdyfgpfzrlbrvvixat
+ Njaqopqtmjwhqsuwgyrwxijinptail
+ Ssckqhptxzomdtjfsdbdnkbvnbxbwr
+ Kagjewcxcvcwpoaaddmuepkufzuwxf
+ Hsodudkindgtvfgcjwtbukmrbdicur
+ Szrhptohswgprzopogyjuynlryrjym
+ Sfdnexiemefeqbaglrsdxdmtgwknwm
+ Acbkfqoyfhubloltllhvvjjdnphhfx
+ Ddwvuqsisatdnufgbqrfqjuuwikikm
+ Drbeeyqqwqloojxzfeohblcfiyghfb
+ Vtduwlhdzqbvvlracoskrwbrfnhswo
+ Psucvqdqznjeucxrsmctutowfenepf
+ Vzruobavyfnvdnnmbzmxqwtrbfndlu
+ Evydhueffhakchimtcrewjdmevbguv
+ Spdrdazjkkihdpvvpzgvgtrviglufi
+ Hsodudkindgtvfgcjwtbukmrbdicur
+ Vpvohwakzedrwxmsmwykksojącrcgt
+ Sagsfxkigbnnhenlwrcfzepgiixuvd
+ Idrlueqxdtfmttcxufnvgtousviwuq
+ Wvhrfwlczatmavjwjvnbkhjvhhebzj
+ Kplmjesaeplohwrqwurxrjopibtmxy
+ Ciyiccfxtdwbzcehfpgvhtzjlaiwvx
+ Nqmewvkcbxvwdiefvnmtcawegmxbmp
```

+ Zivmzgsuqxdebvpvukhwxvsfioaffj + Bwxbrpbdplpgrbozsbgzjfzbzrulom

+ Yzkdjtkolpvjnbhepxvittydccqmoi
+ Vxpzaetskcrlhyvlkigqcjncjwbhvk
+ Zsryhrcfcgjvpvkyfyoslcysyqchnj
+ Szajgpkhnygwmtpnflxcjadasmuvtk
+ Augppboslorsttopxmaezwjmnrgvft
+ Czrdomjcskjvdrcrooqkcdfldurbdo

```
+ Djllrbmptcjsdhwidxebliqgyvthpr
+ Bpcnsockrjbjcyiueouqepjnqlmsgx
+ Mhcbtksbyqhzavniajytdkucckgqno
+ Aqxuxlakbhmywjbxfqjxhhqbxgchwj
+ Drbeeyqqwqloojxzfeohblcfiyghfb
+ Zyijvunfptpewrstlaitxorbwracpf
+ Ejnwihcakpxzbmxksuqlsilqhuvebv
+ Tvahswrkqtiqpzrzuvyizxpadmteud
+ Omafizhizhfakeredufgkavmdlkixk
+ Cnqokukawignzuvcdvpjrxdggfrovr
+ Ggcduflbuslobwkkgxtaskrbaisxlp
+ Pguobwphlszsruxuqxeqtagmukjetw
+ Gqxzeqeqajzbvwgushwmtwtolnnozh
+ Fboqxpbbyenoeptdxaqvygfauozzbt
+ Wbcmbrcnljlnllktnddgomwfyczzwi
```

```
Output data [4096 B / 1232657 B]
Top N:
Requests:
1.-2. Ogrjohfsbmafqvihfasbwfkylhdera, 25x
1.-2. Yerdylhnmztddmmxctqevxfjkhikdi, 25x
3.-4. Bcgcecgrtfbpgufxrkzzyvihefific, 22x
3.-4. Ynhdxgiinlncbpqenyvsgytwfffnlz, 22x
5.-9. Otgvbzwartsvhmziqkkzixafweyzzk, 21x
5.-9. Vzdijxgwtlktwgsvsgbttfhxigukjn, 21x
5.-9. Vaevzvgojqezofgqtjqerzwizjwmgg, 21x
5.-9. Wodosdmonswtuslpsrrswrfdkupbvk, 21x
5.-9. Dilwodigsfhhytbvbuzwpxmgkshxeh, 21x
10.-15. Gosutnvlvunisrxauirjcvnxmolycl, 20x
10.-15. Arsdebqtkokhqzgqibnhnzrktdmsbu, 20x
10.-15. Qikhnnzvmsuvhballsgrsccgzoleea, 20x
10.-15. Ujszngxmrblouptixxpdumygjotarx, 20x
10.-15. Vaupdgbjidvsrztyrlvgjtggwecvyt, 20x
10.-15. Auynkohvajfakvmbrtyvmuqpsplqma, 20x
16.-31. Lhiwuzqdzktejzfcgbywhejaiyqehu, 19x
16.-31. Eywrbzwjakwrpvvrvsncwxgpbxtfbc, 19x
16.-31. Gqxzeqeqajzbvwgushwmtwtolnnozh, 19x
16.-31. Vuuunqniwqnhpamavyswjdcthjmzlc, 19x
16.-31. Tpdkoruocqhybgrraizezphebbbpon, 19x
16.-31. Ktfrikpafuxkbdvqqvczrpdxqiilgj, 19x
16.-31. Etyvxwtjwisblbmyfdjjeonrxfajjj, 19x
16.-31. Uaiakkcvypvsevxdknkykksrzgaele, 19x
16.-31. Yycsimrwxjhumlqtnrnitilctlsabq, 19x
16.-31. Vwfrsecfmreptojeuckqsnungsfuam, 19x
16.-31. Qbpmlmrfrjxmxivcitobvneoawlcva, 19x
16.-31. Lrtlmyzunesemhfogmmtzzyzchibrz, 19x
16.-31. Auvxhrbcnupnhwezlizevahkxfduox, 19x
16.-31. Mbabavaskltlilekgztzpltzwiaoow, 19x
16.-31. Umjbemjsjstqbosqoxjkmzbfjgyiqj, 19x
16.-31. Kwksyuoavmlpayelpouuoafqjagsbo, 19x
Top sellers: sold 623 items
Top sellers: sold 623 items
1.-2. Ogrjohfsbmafqvihfasbwfkylhdera, 25x
1.-2. Yerdylhnmztddmmxctqevxfjkhikdi, 25x
3.-4. Bcgcecgrtfbpgufxrkzzyvihefific, 22x
3.-4. Ynhdxgiinlncbpqenyvsgytwfffnlz, 22x
5.-9. Otgvbzwartsvhmziqkkzixafweyzzk, 21x
5.-9. Vzdijxgwtlktwgsvsqbttfhxiqukjn, 21x
5.-9. Vaevzvgojqezofgqtjqerzwizjwmgg, 21x
5.-9. Wodosdmonswtuslpsrrswrfdkupbvk, 21x
5.-9. Dilwodigsfhhytbvbuzwpxmgkshxeh, 21x
10.-15. Gosutnvlvunisrxauirjcvnxmolycl, 20x
10.-15. Arsdebqtkokhqzgqibnhnzrktdmsbu, 20x
10.-15. Qikhnnzvmsuvhballsgrsccgzoleea, 20x
10.-15. Ujszngxmrblouptixxpdumygjotarx, 20x
10.-15. Vaupdqbjidvsrztyrlvgjtqgwecvyt, 20x
10.-15. Auynkohvajfakvmbrtyvmuq
<skipping 1228561 B>
-21. Cyuezhhxbvtkoaulitfilxfmxodovx, 36x
```

19.-21. Vzcbxgwpnwarhzbeedaygdigimjknb, 36x 19.-21. Dxmlhzjabphhfmonwsergtmlelpgwh, 36x 22.-31. Hjpahlrwhdfkullaygdplhwqslslzu, 35x

```
22.-31. Tyyxqlcyldstwmfggxwwkcdrsxntqv, 35x
22.-31. Wodosdmonswtuslpsrrswrfdkupbvk, 35x
22.-31. Otgvbzwartsvhmziqkkzixafweyzzk, 35x
22.-31. Bcgcecgrtfbpgufxrkzzyvihefific, 35x
22.-31. Xavygxxartmncjjqdrcyojctqlaqqx, 35x
22.-31. Jhkqftqppxjacitfeoklmqtnwsmwux, 35x
22.-31. Oesfmkrjltsugdrwdqifxvnecsmlqk, 35x
22.-31. Gjuppbcwibfvxmwnwkzbfkxvruryua, 35x
22.-31. Ocyakbonhnhjfzurtkuvwneeuejuaz, 35x
Top sellers: sold 1164 items
Top sellers: sold 1165 items
1. Yerdylhnmztddmmxctqevxfjkhikdi, 46x
2. Vaevzvgojqezofgqtjqerzwizjwmgg, 45x
3. Psucvqdgznjeucxrsmctutowfenepf, 43x
4. Ggcduflbuslobwkkgxtaskrbaisxlp, 41x
5.-9. Vaupdqbjidvsrztyrlvgjtqgwecvyt, 39x
5.-9. Wwjhkybliedzxdocpuqzytxfmigirz, 39x
5.-9. Fpxevrakgomhgquiedlvysfmcwkcrg, 39x
5.-9. Cxxptvjycmdwuqsedltioapclrzzon, 39x
5.-9. Auvxhrbcnupnhwezlizevahkxfduox, 39x
10.-13. Fcrrywribrdzbxcmcgnutavofhunfd, 38x
10.-13. Sybhprchnvwaxfcbjpjdzlsqpozztu, 38x
10.-13. Lrtlmyzunesemhfogmmtzzyzchibrz, 38x
10.-13. Nqmewvkcbxvwdiefvnmtcawegmxbmp, 38x
14.-18. Uaiakkcvypvsevxdknkykksrzgaele, 37x
14.-18. Ynhdxgiinlncbpqenyvsgytwfffnlz, 37x
14.-18. Grrrcwkyqtrhsdhxkgdwjrxvgbquru, 37x
14.-18. Zarypbxbobifguwkmbjtfmidvtwwmn, 37x
14.-18. Ogrjohfsbmafqvihfasbwfkylhdera, 37x
19.-21. Cyuezhhxbvtkoaulitfilxfmxodovx, 36x
19.-21. Vzcbxqwpnwarhzbeedaygdiqimjknb, 36x
19.-21. Dxmlhzjabphhfmonwsergtmlelpgwh, 36x
22.-31. Hjpahlrwhdfkullaygdplhwgslslzu, 35x
22.-31. Tyyxqlcyldstwmfqqxwwkcdrsxntqv, 35x
22.-31. Wodosdmonswtuslpsrrswrfdkupbvk, 35x
22.-31. Otgybzwartsvhmzigkkzixafweyzzk, 35x
22.-31. Bcgcecgrtfbpgufxrkzzyvihefific, 35x
22.-31. Xavygxxartmncjjqdrcyojctqlaqqx, 35x
22.-31. Jhkqftqppxjacitfeoklmqtnwsmwux, 35x
22.-31. Oesfmkrjltsugdrwdqifxvnecsmlqk, 35x
22.-31. Gjuppbcwibfvxmwnwkzbfkxvruryua, 35x
22.-31. Ocyakbonhnhjfzurtkuvwneeuejuaz, 35x
Top sellers: sold 1165 items
Top sellers: sold 1166 items
Top sellers: sold 1166 items
```

# Reference [4096 B / 1248253 B]

# Top N:

```
Requests:
1.-2. Ogrjohfsbmafqvihfasbwfkylhdera, 25x
1.-2. Yerdylhnmztddmmxctqevxfjkhikdi, 25x
3.-4. Ynhdxgiinlncbpqenyvsgytwfffnlz, 22x
3.-4. Bcgcecgrtfbpgufxrkzzyvihefific, 22x
5.-10. Dilwodigsfhhytbvbuzwpxmgkshxeh, 21x
5.-10. Vzdijxgwtlktwgsvsqbttfhxiqukjn, 21x
5.-10. Wodosdmonswtuslpsrrswrfdkupbvk, 21x
5.-10. Otgvbzwartsvhmziqkkzixafweyzzk, 21x
5.-10. Hrwosrvlcosihmozjqgiddwtncjyzi, 21x
5.-10. Vaevzvgojqezofgqtjqerzwizjwmgg, 21x
11.-17. Auynkohvajfakvmbrtyvmuqpsplqma, 20x
11.-17. Arsdebqtkokhqzgqibnhnzrktdmsbu, 20x
11.-17. Xtnosdbuhuisyqklkdmdringzndyha, 20x
11.-17. Qikhnnzvmsuvhballsgrsccgzoleea, 20x
11.-17. Ujszngxmrblouptixxpdumygjotarx, 20x
11.-17. Vaupdqbjidvsrztyrlvgjtqgwecvyt, 20x
11.-17. Gosutnvlvunisrxauirjcvnxmolycl, 20x
18.-34. Lhiwuzqdzktejzfcgbywhejaiyqehu, 19x
18.-34. Eywrbzwjakwrpvvrvsncwxgpbxtfbc, 19x
18.-34. Yycsimrwxjhumlqtnrnitilctlsabq, 19x
18.-34. Auvxhrbcnupnhwezlizevahkxfduox, 19x
18.-34. Mbabavaskltlilekqztzpltzwiaoow, 19x
18.-34. Vwfrsecfmreptojeuckgsnungsfuam, 19x
18.-34. Vuuunqniwqnhpamavyswjdcthjmzlc, 19x
18.-34. Ktfrikpafuxkbdvqqvczrpdxqiilgj, 19x
18.-34. Ubrqrdiezpoulqpxpsqzeecloojdcn, 19x
18.-34. Obpmlmrfrjxmxivcitobvneoawlcva, 19x
18.-34. Umjbemjsjstqbosqoxjkmzbfjgyiqj, 19x
```

18.-34. Tpdkoruocqhybgrraizezphebbbpon, 19x

```
18.-34. Uaiakkcvypvsevxdknkykksrzgaele, 19x
18.-34. Gqxzeqeqajzbvwgushwmtwtolnnozh, 19x
18.-34. Kwksyuoavmlpayelpouuoafqjagsbo, 19x
18.-34. Etyvxwtjwisblbmyfdjjeonrxfajjj, 19x
18.-34. Lrtlmyzunesemhfogmmtzzyzchibrz, 19x
Top sellers: sold 683 items
Top sellers: sold 683 items
1.-2. Yerdylhnmztddmmxctqevxfjkhikdi, 25x
1.-2. Ogrjohfsbmafqvihfasbwfkylhdera, 25x
3.-4. Ynhdxgiinlncbpqenyvsgytwfffnlz, 22x
3.-4. Bcgcecgrtfbpgufxrkzzyvihefific, 22x
5.-10. Vaevzvgojqezofgqtjqerzwizjwmgg, 21x
5.-10. Vzdijxgwtlktwgsvsqbttfhxiqukjn, 21x
5.-10. Dilwodigsfhhytbvbuzwpxmgkshxeh, 21x
5.-10. Otgvbzwartsvhmziqkkzixafweyzzk, 21x
5.-10. Hrwosrvlcosihmozjqgiddwtncjyzi, 21x
5.-10. Wodosdmonswtuslpsrrswrfdkupbvk, 21x
11.-17. Auynkohvajfakvmbrtyvmuqpsplqma, 20x
11.-17. Arsdebqtkokhqzg
<skipping 1244157 B>
-21. Vzcbxqwpnwarhzbeedaygdiqimjknb, 36x
22.-32. Hjpahlrwhdfkullaygdplhwqslslzu, 35x
22.-32. Gjuppbcwibfvxmwnwkzbfkxvruryua, 35x
22.-32. Xavygxxartmncjjqdrcyojctqlaqqx, 35x
22.-32. Otgvbzwartsvhmziqkkzixafweyzzk, 35x
22.-32. Jhkqftqppxjacitfeoklmqtnwsmwux, 35x
22.-32. Ocyakbonhnhjfzurtkuvwneeuejuaz, 35x
22.-32. Wodosdmonswtuslpsrrswrfdkupbvk, 35x
22.-32. Hrwosrvlcosihmozjągiddwtncjyzi, 35x
22.-32. Oesfmkrjltsugdrwdqifxvnecsmlqk, 35x
22.-32. Tyyxglcyldstwmfggxwwkcdrsxntgv, 35x
22.-32. Bcgcecqrtfbpqufxrkzzyvihefific, 35x
Top sellers: sold 1199 items
Top sellers: sold 1200 items
1. Yerdylhnmztddmmxctgevxfjkhikdi, 46x
2. Vaevzvgojqezofgqtjqerzwizjwmgg, 45x
3. Psucvqdgznjeucxrsmctutowfenepf, 43x
4. Ggcduflbuslobwkkgxtaskrbaisxlp, 41x
5.-9. Cxxptvjycmdwuqsedltioapclrzzon, 39x
5.-9. Vaupdqbjidvsrztyrlvgjtqgwecvyt, 39x
5.-9. Auvxhrbcnupnhwezlizevahkxfduox, 39x
5.-9. Wwjhkybliedzxdocpuqzytxfmigirz, 39x
5.-9. Fpxevrakgomhgquiedlvysfmcwkcrg, 39x
10.-13. Lrtlmyzunesemhfogmmtzzyzchibrz, 38x
10.-13. Fcrrywribrdzbxcmcgnutavofhunfd, 38x
10.-13. Sybhprchnvwaxfcbjpjdzlsqpozztu, 38x
10.-13. Nqmewvkcbxvwdiefvnmtcawegmxbmp, 38x
14.-18. Zarypbxbobifguwkmbjtfmidvtwwmn, 37x
14.-18. Ynhdxgiinlncbpqenyvsgytwfffnlz, 37x
14.-18. Ogrjohfsbmafqvihfasbwfkylhdera, 37x
14.-18. Uaiakkcvypvsevxdknkykksrzgaele, 37x
14.-18. Grrrcwkyqtrhsdhxkgdwjrxvgbquru, 37x
19.-21. Cyuezhhxbvtkoaulitfilxfmxodovx, 36x
19.-21. Dxmlhzjabphhfmonwsergtmlelpgwh, 36x
19.-21. Vzcbxqwpnwarhzbeedaygdiqimjknb, 36x
22.-32. Jhkqftqppxjacitfeoklmqtnwsmwux, 35x
22.-32. Ocyakbonhnhjfzurtkuvwneeuejuaz, 35x
22.-32. Oesfmkrjltsugdrwdgifxvnecsmlgk, 35x
22.-32. Hjpahlrwhdfkullaygdplhwqslslzu, 35x
22.-32. Gjuppbcwibfvxmwnwkzbfkxvruryua, 35x
22.-32. Wodosdmonswtuslpsrrswrfdkupbvk, 35x
22.-32. Xavygxxartmncjjqdrcyojctqlaqqx, 35x
22.-32. Otgvbzwartsvhmziqkkzixafweyzzk, 35x
22.-32. Hrwosrvlcosihmozjągiddwtncjyzi, 35x
22.-32. Tyyxqlcyldstwmfggxwwkcdrsxntqv, 35x
22.-32. Bcgcecgrtfbpgufxrkzzyvihefific, 35x
Top sellers: sold 1200 items
Top sellers: sold 1201 items
Top sellers: sold 1201 items
```

- Failed (invalid output)
- Test 'Speed test I': Abnormal program termination (Time limit exceeded)
  - Program was killed after: 2.004 s (limit: 2.000 s)
  - Bonus test failed, evaluation: No bonus awarded
  - Time limit exceeded
- Test 'Speed test II': Not tested
  - Bonus test failed, evaluation: No bonus awarded
- Overall ratio: 50.00 % (= 1.00 \* 1.00 \* 1.00 \* 0.50)

Advices used: 1

Penalty due to advices: None (1 <= 2 limit)</li>

Total percent: 50.00 %

Total points: 0.50 \* 5.00 = 2.50

Total Average Maximum Function name

Functions: 2 -- -- -- SW metrics:

Lines of code: 120  $60.00 \pm 51.00$  111 main

Cyclomatic complexity: 31 15.50  $\pm$  12.50 28 main

11 2021-11-26 15:46:28 <u>Download</u>

**Submission status:** Evaluated **Evaluation:** 1.8750

# • Evaluator: computer

- Program compiled
- Test 'Basic test with example data': success
  - result: 100.00 %, required: 100.00 %
  - Max. run time: 0.007 s (limit: 2.000 s)
  - Total run time: 0.018 s
  - Peak mem usage: 5496 KiB (limit: 5996 KiB)
  - Mandatory test success, evaluation: 100.00 %
- Test 'Borderline test': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 0.925 s (limit: 3.000 s)
  - Total run time: 0.976 s
  - Optional test success, evaluation: 100.00 %
- Test 'Invalid input test': success
  - result: 75.00 %, required: 50.00 %
  - Max. run time: 0.006 s (limit: 1.000 s)
  - Total run time: 0.044 s
  - Optional test success, evaluation: 75.00 %
  - Failed (invalid output)
  - Failed (invalid output)
- Test 'Random test': success
  - result: 100.00 %, required: 50.00 %
  - Max. run time: 0.438 s (limit: 2.000 s)
  - Total run time: 3.293 s
  - Optional test success, evaluation: 100.00 %
- Test 'Random test + mem debugger': Abnormal program termination (Segmentation fault/Bus error/Memory limit exceeded/Stack limit exceeded)
  - Max. run time: 0.030 s (limit: 2.000 s)
  - Total run time: 0.030 s
  - Optional test failed, evaluation: 50.00 %
  - Seggmentation fault
- Test 'Speed test I': Not tested
  - Bonus test failed, evaluation: No bonus awarded
- o Test 'Speed test II': Not tested
  - Bonus test failed, evaluation: No bonus awarded
- Overall ratio: 37.50 % (= 1.00 \* 1.00 \* 0.75 \* 1.00 \* 0.50)
- Advices used: 1
- Penalty due to advices: None (1 <= 2 limit)</li>
- Total percent: 37.50 %
- Total points: 0.38 \* 5.00 = 1.88

Total Average Maximum Function name

Cyclomatic complexity: **31 15.50** ± **12.50 28** main

 10
 2021-11-26 15:44:39
 Download

 Submission status:
 Evaluated

 Evaluation:
 0.3125

# · Evaluator: computer

- Program compiled
- Test 'Basic test with example data': success
  - result: 100.00 %, required: 100.00 %
  - Max. run time: 0.006 s (limit: 2.000 s)
  - Total run time: 0.016 s
  - Peak mem usage: 5496 KiB (limit: 5996 KiB)
  - Mandatory test success, evaluation: 100.00 %

- Test 'Borderline test': Abnormal program termination (Segmentation fault/Bus error/Memory limit exceeded/Stack limit
  - Max. run time: 0.006 s (limit: 3.000 s)
  - Total run time: 0.017 s
  - Optional test failed, evaluation: 50.00 %
  - Seggmentation fault
- Test 'Invalid input test': Not tested
  - Optional test failed, evaluation: 50.00 %
- Test 'Random test': Not tested
  - Optional test failed, evaluation: 50.00 %
- Test 'Random test + mem debugger': Not tested
  - Optional test failed, evaluation: 50.00 %
- Test 'Speed test I': Not tested
  - Bonus test failed, evaluation: No bonus awarded
- Test 'Speed test II': Not tested
  - Bonus test failed, evaluation: No bonus awarded
- Overall ratio: 6.25 % (= 1.00 \* 0.50 \* 0.50 \* 0.50 \* 0.50)

**Functions:** 

- Advices used: 1
- Penalty due to advices: None (1 <= 2 limit)
- Total percent: 6.25 %
- Total points: 0.06 \* 5.00 = 0.31

Total Average Maximum Function name

SW metrics: Lines of code: 119  $59.50 \pm 50.50$ **110** main Cyclomatic complexity:  $31\ 15.50 \pm 12.50$ 28 main

2021-11-26 15:41:20 **Download** Submission status: Evaluated **Evaluation:** 0.3125

# Evaluator: computer

- Program compiled
- Test 'Basic test with example data': success
  - result: 100.00 %, required: 100.00 %
  - Max. run time: 0.007 s (limit: 2.000 s)
  - Total run time: 0.017 s
  - Peak mem usage: 5496 KiB (limit: 5996 KiB)
  - Mandatory test success, evaluation: 100.00 %
- Test 'Borderline test': Abnormal program termination (Segmentation fault/Bus error/Memory limit exceeded/Stack limit exceeded)
  - Max. run time: 0.005 s (limit: 3.000 s)
  - Total run time: 0.014 s
  - Optional test failed, evaluation: 50.00 %
  - Seggmentation fault
- Test 'Invalid input test': Not tested
  - Optional test failed, evaluation: 50.00 %
- Test 'Random test': Not tested
  - Optional test failed, evaluation: 50.00 %
- Test 'Random test + mem debugger': Not tested
  - Optional test failed, evaluation: 50.00 %
- Test 'Speed test I': Not tested
  - Bonus test failed, evaluation: No bonus awarded
- Test 'Speed test II': Not tested
  - Bonus test failed, evaluation: No bonus awarded
- Overall ratio: 6.25 % (= 1.00 \* 0.50 \* 0.50 \* 0.50 \* 0.50)

**Functions:** 

- Advices used: 1
- Penalty due to advices: None ( $1 \le 2$  limit)
- Total percent: 6.25 %
- Total points: 0.06 \* 5.00 = 0.31

Total Maximum Function name Average

SW metrics: Lines of code: 119  $59.50 \pm 50.50$ **110** main

Cyclomatic complexity:  $31\ 15.50 \pm 12.50$ 28 main

8	2021-11-26 14:18:22	Download
Submission status:	Evaluated	
<b>Evaluation:</b>	0.0000	

-- --

# **Evaluator: computer**

Program compiled

- Test 'Basic test with example data': failed
  - result: 33.33 %, required: 100.00 %
  - Max. run time: 0.006 s (limit: 2.000 s)
  - Total run time: 0.016 s
  - Peak mem usage: 5496 KiB (limit: 5996 KiB)
  - Mandatory test failed, evaluation: 0.00 %
  - Failed (invalid output)
  - Failed (invalid output)
- Overall ratio: 0.00 %
- Advices used: 1
- Penalty due to advices: None (1 <= 2 limit)
- Total percent: 0.00 %
- Total points: 0.00 \* 5.00 = 0.00

Total Maximum Function name Average

Functions: SW metrics:

Lines of code: 119  $59.50 \pm 50.50$ **110** main Cyclomatic complexity:  $31\ 15.50 \pm 12.50$ 28 main

7 2021-11-26 14:03:45 **Download** 

**Submission status: Evaluated Evaluation:** 0.0000

# Evaluator: computer

- Program compiled
- Test 'Basic test with example data': Abnormal program termination (Segmentation fault/Bus error/Memory limit exceeded/Stack limit exceeded)
  - Max. run time: 0.007 s (limit: 2.000 s)
  - Total run time: 0.007 s
  - Mandatory test failed, evaluation: 0.00 %
  - Seggmentation fault
- Overall ratio: 0.00 %
- Advices used: 1
- Penalty due to advices: None (1 <= 2 limit)
- Total percent: 0.00 %
- Total points: 0.00 \* 5.00 = 0.00

Total Average Maximum Function name

2 **Functions:** SW metrics:

Lines of code: 119  $59.50 \pm 50.50$ **110** main Cyclomatic complexity: 29  $14.50 \pm 11.50$ 26 main

6 2021-11-26 14:00:06 **Download** 

**Submission status: Evaluated Evaluation:** 0.0000

# **Evaluator: computer**

- Compile in 'basic' mode failed.
- Advices used: 1
- Penalty due to advices: None (1 <= 2 limit)
- Total percent: 0.00 %
- Total points: 0.00 \* 5.00 = 0.00

5	2021-11-26 13:57:23	Download
Submission status:	Evaluated	
Evaluation:	0.0000	

# Evaluator: computer

- Program compiled
- Test 'Basic test with example data': Abnormal program termination (Segmentation fault/Bus error/Memory limit exceeded/Stack limit exceeded)
  - Max. run time: 0.006 s (limit: 2.000 s)
  - Total run time: 0.006 s
  - Mandatory test failed, evaluation: 0.00 %
  - Seggmentation fault
- o Overall ratio: 0.00 %
- Advices used: 1
- Penalty due to advices: None (1 <= 2 limit)
- Total percent: 0.00 %

• Total points: 0.00 \* 5.00 = 0.00

Total Average Maximum Function name

Functions: 2 -- -- -
Lines of code: 115 57.50 ± 48.50 106 main

Cyclomatic complexity: 28 14.00 ± 11.00 25 main

4 2021-11-26 13:55:10 Download

Submission status: Evaluated

\_ .

**Evaluation:** 

Evaluator: computerProgram compiled

- Test 'Basic test with example data': Abnormal program termination (Segmentation fault/Bus error/Memory limit exceeded/Stack limit exceeded)
  - Max. run time: 0.006 s (limit: 2.000 s)

0.0000

- Total run time: 0.006 s
- Mandatory test failed, evaluation: 0.00 %

Functions:

- Seggmentation fault
- Overall ratio: 0.00 %
- · Advices used: 1
- Penalty due to advices: None (1 <= 2 limit)
- Total percent: 0.00 %
- Total points: 0.00 \* 5.00 = 0.00

Total Average Maximum Function name

-- --

SW metrics: Lines of code: 115 57.50 ± 48.50 106 main

Cyclomatic complexity: 26  $13.00 \pm 10.00$  23 main

3 2021-11-26 13:47:17 <u>Download</u>

2

Submission status:EvaluatedEvaluation:0.0000

# • Evaluator: computer

- Program compiled
- Test 'Basic test with example data': failed
  - result: 33.33 %, required: 100.00 %
  - Max. run time: 0.005 s (limit: 2.000 s)
  - Total run time: 0.015 s
  - Peak mem usage: 5496 KiB (limit: 5996 KiB)
  - Mandatory test failed, evaluation: 0.00 %
  - Failed (invalid output)
  - ☐ Failed (invalid output)
- Overall ratio: 0.00 %
- Total percent: 0.00 %
- Total points: 0.00 \* 5.00 = 0.00

Total Average Maximum Function name

Cyclomatic complexity: 26 13.00  $\pm$  10.00 23 main

 2
 2021-11-26 13:36:08
 Download

 Submission status:
 Evaluated

 Evaluation:
 0.0000

# · Evaluator: computer

- Program compiled
- Test 'Basic test with example data': failed
  - result: 33.33 %, required: 100.00 %
  - Max. run time: 0.006 s (limit: 2.000 s)
  - Total run time: 0.016 s
  - Peak mem usage: 5496 KiB (limit: 5996 KiB)
  - Mandatory test failed, evaluation: 0.00 %
  - Failed (invalid output)
- Failed (invalid output)Overall ratio: 0.00 %

Total percent: 0.00 %

Total points: 0.00 \* 5.00 = 0.00

Total Maximum Function name Average

Functions: 2 SW metrics:

Lines of code: 114 57.00  $\pm$  48.00 **105** main Cyclomatic complexity:  $26\ 13.00 \pm 10.00$ 23 main

1 2021-11-26 13:32:48 **Download** 

**Submission status: Evaluated Evaluation:** 0.0000

• Evaluator: computer

• Compile in 'pedantic' mode failed (10 % penalty).

• Test 'Basic test with example data': failed

• result: 33.33 %, required: 100.00 %

■ Max. run time: 0.007 s (limit: 2.000 s)

■ Total run time: 0.018 s

Peak mem usage: 5496 KiB (limit: 5996 KiB)

Mandatory test failed, evaluation: 0.00 %

Failed (invalid output)

Failed (invalid output)

Overall ratio: 0.00 %

• Total percent: 0.00 %

• Total points: 0.00 \* 5.00 = 0.00

Total Average Maximum Function name

Functions: 2 -- --SW metrics:

Lines of code: 119  $59.50 \pm 50.50$ **110** main Cyclomatic complexity:  $26 \ 13.00 \pm 10.00$ 23 main