Challenge 1

Course: 36650

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1. For the largest input file (movies.txt), it takes 9.854s to return matches for typical queries, 9.836890299s for loading the data and building the trie and 0.001872044s for finding the matches.
2. The larger the number of word is, the longer it takes to load the data and find the matches. The complexity of my algorithm should be O(m), where m is the length of the word. Below are the table and the graph.

|  |  |  |  |
| --- | --- | --- | --- |
| text file | input size | loading data(s) | finding matches(s) |
| wiktionary | 10000 | 0.044624036 | 0.000133994 |
| movies | 229447 | 9.836890299 | 0.001872044 |
| baby names | 31109 | 0.161775751 | 0.000430898 |
| part of wiktionary | 105 | 0.00478995 | 0.0001347 |
| part of wiktionary | 54 | 0.000474975 | 9.24E-05 |
| part of wiktionary | 4660 | 0.019976812 | 0.000136815 |
| part of movies | 152334 | 5.877052672 | 0.001002138 |

1. trie.py:26(add) and trie.py:7(\_\_init\_\_) seem to be the slowest parts of my code. trie.py:26(add) calls 229447 times and costs 5.233s in total while trie.py:7(\_\_init\_\_) calss 4166730 times and costs 4.167s in total. Maybe find a better and simpler method to build the TrieTree.add function.

Appendix

$ py /c/Users/xdlh9/Desktop/driver\_script.py "the" /c/Users/xdlh9/Desktop/wiktionary.txt 5

The time for loading the data and building the tree is 0.04462403620953631

The time for finding the matches is 0.00013399446673376114

Suggestions are [(5627187200, 'the'), (334039800, 'they'), (282026500, 'their'), (250991700, 'them'), (196120000, 'there')]

$ py /c/Users/xdlh9/Desktop/driver\_script.py "A" /c/Users/xdlh9/Desktop/movies.txt 5

The time for loading the data and building the tree is 9.259962312293146

The time for finding the matches is 0.003263470499001997

Suggestions are [(760507625, 'Avatar (2009)'), (334185206, 'Alice in Wonderland (2010/I)'), (219613391, 'Alvin and the Chipmunks: The Squeakquel (2009)'), (217326336, 'Alvin and the Chipmunks (2007)'), (217042825, 'Aladdin (1992)')]

$ py /c/Users/xdlh9/Desktop/driver\_script.py "Ch" /c/Users/xdlh9/Desktop/baby-names.txt 5

The time for loading the data and building the tree is 0.16177575109187858

The time for finding the matches is 0.00043089799565435016

Suggestions are [(11796, 'Christopher'), (9668, 'Christian'), (9610, 'Chloe'), (7423, 'Charlotte'), (6887, 'Charles')]

$ py /c/Users/xdlh9/Desktop/driver\_script.py "the" /c/Users/xdlh9/Desktop/simple1.txt 5

The time for loading the data and building the tree is 0.004789949568714126

The time for finding the matches is 0.00013469970076919902

Suggestions are [(5627187200, 'the'), (334039800, 'they'), (282026500, 'their'), (250991700, 'them'), (196120000, 'there')]

$ py /c/Users/xdlh9/Desktop/driver\_script.py "the" /c/Users/xdlh9/Desktop/simple2.txt 5

The time for loading the data and building the tree is 0.00047497512286939986

The time for finding the matches is 9.23856586427489e-05

Suggestions are [(5627187200, 'the'), (334039800, 'they'), (282026500, 'their'), (250991700, 'them'), (196120000, 'there')]

$ py /c/Users/xdlh9/Desktop/driver\_script.py "the" /c/Users/xdlh9/Desktop/simple3.txt 5

The time for loading the data and building the tree is 0.019976811904914706

The time for finding the matches is 0.00013681540287552307

[(5627187200, 'the'), (334039800, 'they'), (282026500, 'their'), (250991700, 'them'), (196120000, 'there')]

$ py /c/Users/xdlh9/Desktop/driver\_script.py "A" /c/Users/xdlh9/Desktop/simple4.txt 5

The time for loading the data and building the tree is 5.877052671814405

The time for finding the matches is 0.001002137564361405

Suggestions are [(760507625, 'Avatar (2009)'), (334185206, 'Alice in Wonderland (2010/I)'), (219613391, 'Alvin and the Chipmunks: The Squeakquel (2009)'), (217326336, 'Alvin and the Chipmunks (2007)'), (217042825, 'Aladdin (1992)')]

$ py -m cProfile -s time /c/Users/xdlh9/Desktop/driver\_script.py "A" /c/Users/xdlh9/Desktop/movies.txt 5

The time for loading the data and building the tree is 9.836890298730085

The time for finding the matches is 0.001872043747077612

Suggestions are [(760507625, 'Avatar (2009)'), (334185206, 'Alice in Wonderland (2010/I)'), (219613391, 'Alvin and the Chipmunks: The Squeakquel (2009)'), (217326336, 'Alvin and the Chipmunks (2007)'), (217042825, 'Aladdin (1992)')]

5094627 function calls (5094511 primitive calls) in 9.854 seconds

Ordered by: internal time

ncalls tottime percall cumtime percall filename:lineno(function)

229447 5.233 0.000 9.401 0.000 trie.py:26(add)

4166730 4.167 0.000 4.167 0.000 trie.py:7(\_\_init\_\_)

1 0.170 0.170 9.826 9.826 autocomplete.py:11(readterms)

1 0.092 0.092 0.092 0.092 {method 'readlines' of '\_io.\_IOBase' objects}

458895 0.087 0.000 0.087 0.000 {method 'split' of 'str' objects}

1 0.053 0.053 9.454 9.454 trie.py:20(\_\_init\_\_)

229447 0.023 0.000 0.023 0.000 {method 'strip' of 'str' objects}

1 0.011 0.011 9.854 9.854 driver\_script.py:3(<module>)

65 0.006 0.000 0.006 0.000 {built-in method nt.stat}

1 0.002 0.002 0.002 0.002 {built-in method \_imp.create\_dynamic}

11 0.001 0.000 0.001 0.000 <frozen importlib.\_bootstrap\_external>:830(get\_data)

11 0.001 0.000 0.001 0.000 {built-in method marshal.loads}

118 0.001 0.000 0.001 0.000 {built-in method builtins.hasattr}

1 0.000 0.000 0.002 0.002 autocomplete.py:37(autocomplete)

28 0.000 0.000 0.000 0.000 {built-in method builtins.\_\_build\_class\_\_}

41 0.000 0.000 0.006 0.000 <frozen importlib.\_bootstrap\_external>:1233(find\_spec)

295 0.000 0.000 0.001 0.000 queue.py:115(put)

13/1 0.000 0.000 9.854 9.854 {built-in method builtins.exec}

11 0.000 0.000 0.000 0.000 {method 'read' of '\_io.FileIO' objects}

5 0.000 0.000 0.000 0.000 {built-in method \_imp.create\_builtin}

399 0.000 0.000 0.000 0.000 threading.py:334(notify)

103 0.000 0.000 0.000 0.000 queue.py:147(get)

1 0.000 0.000 0.000 0.000 {built-in method io.open}

202 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:57(\_path\_join)

22 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:263(cache\_from\_source)

17 0.000 0.000 0.007 0.000 <frozen importlib.\_bootstrap>:861(\_find\_spec)

1 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:1067(\_path\_hooks)

1 0.000 0.000 0.002 0.002 tokenize.py:21(<module>)

202 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:59(<listcomp>)

17/2 0.000 0.000 0.016 0.008 <frozen importlib.\_bootstrap>:958(\_find\_and\_load)

11 0.000 0.000 0.003 0.000 <frozen importlib.\_bootstrap\_external>:743(get\_code)

1 0.000 0.000 0.000 0.000 {built-in method nt.listdir}

12 0.000 0.000 0.006 0.001 <frozen importlib.\_bootstrap\_external>:1117(\_get\_spec)

104 0.000 0.000 0.000 0.000 {built-in method builtins.getattr}

11 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:430(\_validate\_bytecode\_header)

5/2 0.000 0.000 0.000 0.000 sre\_parse.py:469(\_parse)

399 0.000 0.000 0.000 0.000 threading.py:254(\_is\_owned)

295 0.000 0.000 0.000 0.000 {built-in method \_heapq.heappush}

399 0.000 0.000 0.000 0.000 threading.py:242(\_\_exit\_\_)

399 0.000 0.000 0.000 0.000 threading.py:239(\_\_enter\_\_)

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:493(\_init\_module\_attrs)

318 0.000 0.000 0.000 0.000 {method 'join' of 'str' objects}

17/2 0.000 0.000 0.015 0.007 <frozen importlib.\_bootstrap>:641(\_load\_unlocked)

295 0.000 0.000 0.000 0.000 queue.py:226(\_put)

25 0.000 0.000 0.000 0.000 {built-in method builtins.min}

221 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:208(\_verbose\_message)

57 0.000 0.000 0.000 0.000 enum.py:801(\_\_and\_\_)

400 0.000 0.000 0.000 0.000 {method 'acquire' of '\_thread.lock' objects}

11/2 0.000 0.000 0.000 0.000 sre\_compile.py:64(\_compile)

426 0.000 0.000 0.000 0.000 {method 'rstrip' of 'str' objects}

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:159(\_get\_module\_lock)

1 0.000 0.000 0.006 0.006 random.py:38(<module>)

37 0.000 0.000 0.000 0.000 {built-in method \_thread.allocate\_lock}

22 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:63(\_path\_split)

12 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:524(spec\_from\_file\_location)

126 0.000 0.000 0.000 0.000 enum.py:515(\_\_new\_\_)

3 0.000 0.000 0.000 0.000 tokenize.py:137(\_all\_string\_prefixes)

103 0.000 0.000 0.000 0.000 {built-in method \_heapq.heappop}

103 0.000 0.000 0.000 0.000 queue.py:90(empty)

3 0.000 0.000 0.000 0.000 {built-in method builtins.print}

206 0.000 0.000 0.000 0.000 queue.py:223(\_qsize)

399 0.000 0.000 0.000 0.000 {method '\_\_enter\_\_' of '\_thread.lock' objects}

479/473 0.000 0.000 0.000 0.000 {built-in method builtins.len}

246 0.000 0.000 0.000 0.000 {built-in method builtins.isinstance}

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:77(acquire)

65 0.000 0.000 0.006 0.000 <frozen importlib.\_bootstrap\_external>:75(\_path\_stat)

126 0.000 0.000 0.000 0.000 enum.py:265(\_\_call\_\_)

51 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:1080(\_path\_importer\_cache)

17 0.000 0.000 0.003 0.000 <frozen importlib.\_bootstrap>:553(module\_from\_spec)

11/2 0.000 0.000 0.015 0.007 <frozen importlib.\_bootstrap\_external>:672(exec\_module)

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:102(release)

17/2 0.000 0.000 0.016 0.008 <frozen importlib.\_bootstrap>:931(\_find\_and\_load\_unlocked)

22 0.000 0.000 0.000 0.000 {method 'rsplit' of 'str' objects}

6 0.000 0.000 0.000 0.000 sre\_compile.py:250(\_optimize\_charset)

1 0.000 0.000 0.005 0.005 threading.py:1(<module>)

11 0.000 0.000 0.001 0.000 <frozen importlib.\_bootstrap\_external>:485(\_compile\_bytecode)

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:146(\_\_enter\_\_)

295 0.000 0.000 0.000 0.000 {method 'random' of '\_random.Random' objects}

1 0.000 0.000 0.000 0.000 \_\_init\_\_.py:359(namedtuple)

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:304(\_\_exit\_\_)

17/8 0.000 0.000 0.000 0.000 sre\_parse.py:173(getwidth)

1 0.000 0.000 0.003 0.003 hashlib.py:54(<module>)

17 0.000 0.000 0.000 0.000 {built-in method \_imp.is\_builtin}

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:57(\_\_init\_\_)

399 0.000 0.000 0.000 0.000 {method '\_\_exit\_\_' of '\_thread.lock' objects}

12 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:1228(\_get\_spec)

1 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:1281(\_fill\_cache)

12 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:361(\_get\_cached)

195 0.000 0.000 0.000 0.000 {method 'add' of 'set' objects}

97 0.000 0.000 0.000 0.000 {method 'rpartition' of 'str' objects}

27 0.000 0.000 0.000 0.000 {method 'format' of 'str' objects}

23 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:389(cached)

103 0.000 0.000 0.000 0.000 queue.py:229(\_get)

54 0.000 0.000 0.000 0.000 sre\_parse.py:232(\_\_next)

4 0.000 0.000 0.000 0.000 threading.py:215(\_\_init\_\_)

1 0.000 0.000 0.000 0.000 token.py:74(<dictcomp>)

41 0.000 0.000 0.000 0.000 sre\_parse.py:163(\_\_getitem\_\_)

41 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:37(\_relax\_case)

31 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:989(\_handle\_fromlist)

13 0.000 0.000 0.001 0.000 <frozen importlib.\_bootstrap\_external>:85(\_path\_is\_mode\_type)

23/2 0.000 0.000 0.014 0.007 <frozen importlib.\_bootstrap>:197(\_call\_with\_frames\_removed)

173 0.000 0.000 0.000 0.000 {method 'append' of 'list' objects}

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:297(\_\_enter\_\_)

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:355(\_\_init\_\_)

2 0.000 0.000 0.001 0.000 re.py:286(\_compile)

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:153(\_\_exit\_\_)

14 0.000 0.000 0.001 0.000 hashlib.py:116(\_\_get\_openssl\_constructor)

11 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:35(\_new\_module)

5 0.000 0.000 0.001 0.000 <frozen importlib.\_bootstrap>:419(spec\_from\_loader)

11 0.000 0.000 0.001 0.000 <frozen importlib.\_bootstrap\_external>:840(path\_stats)

1 0.000 0.000 0.000 0.000 token.py:1(<module>)

41 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:838(\_\_exit\_\_)

17 0.000 0.000 0.000 0.000 {built-in method builtins.any}

68 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:307(<genexpr>)

12 0.000 0.000 0.006 0.001 <frozen importlib.\_bootstrap\_external>:1149(find\_spec)

4/2 0.000 0.000 0.000 0.000 sre\_parse.py:407(\_parse\_sub)

17 0.000 0.000 0.001 0.000 <frozen importlib.\_bootstrap>:698(find\_spec)

41 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:834(\_\_enter\_\_)

2 0.000 0.000 0.001 0.000 sre\_compile.py:557(compile)

24 0.000 0.000 0.000 0.000 tokenize.py:148(<listcomp>)

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:402(parent)

6 0.000 0.000 0.000 0.000 sre\_compile.py:223(\_compile\_charset)

22 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:52(\_r\_long)

11 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:393(\_check\_name\_wrapper)

3 0.000 0.000 0.000 0.000 sre\_compile.py:378(<listcomp>)

66 0.000 0.000 0.000 0.000 {method 'startswith' of 'str' objects}

2 0.000 0.000 0.000 0.000 sre\_parse.py:845(parse)

58 0.000 0.000 0.000 0.000 {built-in method \_imp.release\_lock}

10 0.000 0.000 0.000 0.000 {built-in method nt.getcwd}

2 0.000 0.000 0.000 0.000 sre\_parse.py:223(\_\_init\_\_)

1 0.000 0.000 0.004 0.004 traceback.py:1(<module>)

8 0.000 0.000 0.001 0.000 hashlib.py:73(\_\_get\_builtin\_constructor)

22 0.000 0.000 0.000 0.000 {built-in method from\_bytes}

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:142(\_\_init\_\_)

1 0.000 0.000 0.000 0.000 queue.py:27(\_\_init\_\_)

47 0.000 0.000 0.000 0.000 sre\_parse.py:253(get)

1 0.000 0.000 0.000 0.000 random.py:71(Random)

1 0.000 0.000 0.007 0.007 queue.py:1(<module>)

1 0.000 0.000 0.000 0.000 random.py:96(seed)

12 0.000 0.000 0.001 0.000 <frozen importlib.\_bootstrap\_external>:94(\_path\_isfile)

11 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:800(\_\_init\_\_)

13 0.000 0.000 0.000 0.000 {method 'endswith' of 'str' objects}

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:293(\_\_init\_\_)

3 0.000 0.000 0.000 0.000 sre\_compile.py:376(\_mk\_bitmap)

5 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:719(create\_module)

2 0.000 0.000 0.000 0.000 sre\_compile.py:482(\_compile\_info)

17 0.000 0.000 0.000 0.000 sre\_parse.py:285(tell)

1 0.000 0.000 0.000 0.000 threading.py:738(Thread)

1 0.000 0.000 0.000 0.000 <string>:5(TokenInfo)

1 0.000 0.000 0.000 0.000 {function Random.seed at 0x000001FD13B202F0}

1 0.000 0.000 0.000 0.000 {built-in method math.exp}

1 0.000 0.000 0.003 0.003 linecache.py:6(<module>)

34 0.000 0.000 0.000 0.000 {built-in method nt.fspath}

5 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:218(\_requires\_builtin\_wrapper)

6 0.000 0.000 0.000 0.000 enum.py:795(\_\_or\_\_)

1 0.000 0.000 0.000 0.000 threading.py:757(\_\_init\_\_)

20 0.000 0.000 0.000 0.000 tokenize.py:112(group)

1 0.000 0.000 0.000 0.000 bisect.py:1(<module>)

35 0.000 0.000 0.000 0.000 {built-in method \_thread.get\_ident}

11 0.000 0.000 0.000 0.000 {built-in method \_imp.\_fix\_co\_filename}

1 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:1196(\_\_init\_\_)

5 0.000 0.000 0.000 0.000 sre\_compile.py:388(\_simple)

1 0.000 0.000 0.000 0.000 <string>:1(<module>)

8 0.000 0.000 0.000 0.000 {method 'extend' of 'list' objects}

12 0.000 0.000 0.000 0.000 {built-in method \_imp.is\_frozen}

1 0.000 0.000 0.000 0.000 trie.py:6(Node)

1 0.000 0.000 0.014 0.014 autocomplete.py:3(<module>)

8 0.000 0.000 0.000 0.000 sre\_parse.py:294(\_class\_escape)

20 0.000 0.000 0.000 0.000 sre\_parse.py:171(append)

1 0.000 0.000 0.000 0.000 random.py:663(SystemRandom)

28 0.000 0.000 0.000 0.000 {method 'find' of 'bytearray' objects}

20 0.000 0.000 0.000 0.000 {method 'get' of 'dict' objects}

41 0.000 0.000 0.000 0.000 {built-in method \_imp.acquire\_lock}

12 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:771(find\_spec)

2 0.000 0.000 0.000 0.000 sre\_compile.py:542(\_code)

11 0.000 0.000 0.000 0.000 sre\_parse.py:111(\_\_init\_\_)

36 0.000 0.000 0.000 0.000 sre\_parse.py:248(match)

1 0.000 0.000 0.002 0.002 <frozen importlib.\_bootstrap\_external>:919(create\_module)

1 0.000 0.000 0.000 0.000 {built-in method \_locale.\_getdefaultlocale}

4 0.000 0.000 0.000 0.000 {built-in method time.clock}

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:173(cb)

17 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:410(has\_location)

18 0.000 0.000 0.000 0.000 sre\_parse.py:159(\_\_len\_\_)

1 0.000 0.000 0.000 0.000 threading.py:1190(\_\_init\_\_)

1 0.000 0.000 0.000 0.000 {method 'union' of 'set' objects}

5 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:727(exec\_module)

1 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:1310(<setcomp>)

1 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:1322(path\_hook\_for\_FileFinder)

1 0.000 0.000 0.000 0.000 queue.py:21(Queue)

2 0.000 0.000 0.000 0.000 {built-in method \_sre.compile}

1 0.000 0.000 0.000 0.000 \_weakrefset.py:36(\_\_init\_\_)

2 0.000 0.000 0.000 0.000 sre\_parse.py:829(fix\_flags)

1 0.000 0.000 0.000 0.000 threading.py:566(Barrier)

1 0.000 0.000 0.000 0.000 threading.py:893(\_set\_tstate\_lock)

1 0.000 0.000 0.000 0.000 {built-in method \_thread.\_set\_sentinel}

33 0.000 0.000 0.000 0.000 {method 'lower' of 'str' objects}

11 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:825(get\_filename)

1 0.000 0.000 0.000 0.000 \_bootlocale.py:11(getpreferredencoding)

1 0.000 0.000 0.000 0.000 {built-in method builtins.repr}

1 0.000 0.000 0.000 0.000 {built-in method math.sqrt}

1 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:927(exec\_module)

6 0.000 0.000 0.000 0.000 \_\_init\_\_.py:422(<genexpr>)

6 0.000 0.000 0.000 0.000 \_\_init\_\_.py:424(<genexpr>)

1 0.000 0.000 0.000 0.000 trie.py:43(search)

2 0.000 0.000 0.000 0.000 sre\_parse.py:76(\_\_init\_\_)

1 0.000 0.000 0.000 0.000 threading.py:87(\_RLock)

1 0.000 0.000 0.000 0.000 threading.py:203(Condition)

1 0.000 0.000 0.000 0.000 threading.py:498(\_\_init\_\_)

1 0.000 0.000 0.000 0.000 threading.py:512(set)

1 0.000 0.000 0.000 0.000 traceback.py:223(FrameSummary)

1 0.000 0.000 0.000 0.000 random.py:87(\_\_init\_\_)

1 0.000 0.000 0.000 0.000 {built-in method \_hashlib.openssl\_md5}

3 0.000 0.000 0.000 0.000 {method 'translate' of 'bytearray' objects}

17 0.000 0.000 0.000 0.000 {method 'partition' of 'str' objects}

8 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:1202(<genexpr>)

1 0.000 0.000 0.000 0.000 \_weakrefset.py:81(add)

2 0.000 0.000 0.001 0.000 re.py:231(compile)

6 0.000 0.000 0.000 0.000 sre\_parse.py:81(groups)

2 0.000 0.000 0.000 0.000 {method 'setter' of 'property' objects}

2 0.000 0.000 0.000 0.000 {method 'replace' of 'str' objects}

36 0.000 0.000 0.000 0.000 {method 'upper' of 'str' objects}

15 0.000 0.000 0.000 0.000 {built-in method builtins.ord}

5 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap>:744(is\_package)

11 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:669(create\_module)

1 0.000 0.000 0.000 0.000 trie.py:6(<module>)

5 0.000 0.000 0.000 0.000 sre\_parse.py:167(\_\_setitem\_\_)

1 0.000 0.000 0.000 0.000 queue.py:214(PriorityQueue)

1 0.000 0.000 0.000 0.000 traceback.py:310(StackSummary)

1 0.000 0.000 0.000 0.000 traceback.py:426(TracebackException)

2 0.000 0.000 0.000 0.000 tokenize.py:114(maybe)

4 0.000 0.000 0.000 0.000 {method 'items' of 'dict' objects}

5 0.000 0.000 0.000 0.000 {built-in method \_imp.exec\_builtin}

2 0.000 0.000 0.000 0.000 {built-in method math.log}

1 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:99(\_path\_isdir)

1 0.000 0.000 0.000 0.000 <frozen importlib.\_bootstrap\_external>:908(\_\_init\_\_)

1 0.000 0.000 0.000 0.000 sre\_compile.py:414(\_get\_literal\_prefix)

4 0.000 0.000 0.000 0.000 sre\_compile.py:539(isstring)

1 0.000 0.000 0.000 0.000 sre\_parse.py:84(opengroup)

1 0.000 0.000 0.000 0.000 sre\_parse.py:96(closegroup)

1 0.000 0.000 0.000 0.000 threading.py:357(notify\_all)

1 0.000 0.000 0.000 0.000 threading.py:369(Semaphore)

1 0.000 0.000 0.000 0.000 threading.py:487(Event)

1 0.000 0.000 0.000 0.000 tokenize.py:99(TokenInfo)

1 0.000 0.000 0.000 0.000 tokenize.py:113(any)

6 0.000 0.000 0.000 0.000 {method 'isidentifier' of 'str' objects}

15 0.000 0.000 0.000 0.000 {built-in method builtins.globals}

1 0.000 0.000 0.000 0.000 {built-in method \_imp.exec\_dynamic}

1 0.000 0.000 0.000 0.000 trie.py:19(TrieTree)

1 0.000 0.000 0.000 0.000 sre\_compile.py:441(\_get\_charset\_prefix)

1 0.000 0.000 0.000 0.000 threading.py:1158(Timer)

1 0.000 0.000 0.000 0.000 tokenize.py:222(Untokenizer)

1 0.000 0.000 0.000 0.000 {built-in method \_hashlib.openssl\_sha384}

1 0.000 0.000 0.000 0.000 {method 'values' of 'dict' objects}

6 0.000 0.000 0.000 0.000 {method '\_\_contains\_\_' of 'frozenset' objects}

2 0.000 0.000 0.000 0.000 {built-in method builtins.max}

1 0.000 0.000 0.000 0.000 {built-in method sys.\_getframe}

1 0.000 0.000 0.000 0.000 queue.py:13(Empty)

1 0.000 0.000 0.000 0.000 queue.py:17(Full)

1 0.000 0.000 0.000 0.000 queue.py:220(\_init)

1 0.000 0.000 0.000 0.000 queue.py:233(LifoQueue)

1 0.000 0.000 0.000 0.000 threading.py:449(BoundedSemaphore)

1 0.000 0.000 0.000 0.000 threading.py:720(BrokenBarrierError)

1 0.000 0.000 0.000 0.000 threading.py:890(\_set\_ident)

1 0.000 0.000 0.000 0.000 threading.py:1188(\_MainThread)

1 0.000 0.000 0.000 0.000 threading.py:1207(\_DummyThread)

1 0.000 0.000 0.000 0.000 tokenize.py:217(TokenError)

1 0.000 0.000 0.000 0.000 tokenize.py:219(StopTokenizing)

1 0.000 0.000 0.000 0.000 {built-in method \_hashlib.openssl\_sha1}

1 0.000 0.000 0.000 0.000 {built-in method \_hashlib.openssl\_sha224}

1 0.000 0.000 0.000 0.000 {built-in method \_hashlib.openssl\_sha256}

1 0.000 0.000 0.000 0.000 {built-in method \_hashlib.openssl\_sha512}

1 0.000 0.000 0.000 0.000 {method 'disable' of '\_lsprof.Profiler' objects}