Running time:

BGL

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Brain | Drain | Spell | Logram | AEL | MoLFI | LenMa |
| 2K | 0.05s | 0.19s | 0.39s | 0.04s | 0.13 | 3.37 |  |
| 10K | 0.28s | 3.49s | 3.60s | 0.15s | 3.40 | 5.61 |  |
| 100K | 2.1s | 10.37s | 11.10s | 1.4s | 7.93 | 15.93 |  |
| 500K | 12.5s | 38.52s | 41.35s | 7.82s | 26.85 | 51.53 |  |
| 1M | 26.1s | 82.59s | 85.24s | 15.68s | 66.58 | 110.98 |  |

Brain

2K 0.05s

10K 0.28s

100K 2.1s

500K 12.5s

1M 26.1s

Drain

2K 0.19s

10K 3.49s

100K 10.37s

500K 38.52s

1M 82.59s

Spell

2K 0.39s

10K 3.60s

100K 11.10s

500K 41.35s

1M 85.24s

Logram

2K 0.04s

10K 0.15s

100K 1.4s

500K 7.82s

1M 15.68s

HDFS

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Brain | Drain | Spell | Logram | AEL | MoLFI | LenMa |
| 2K | 0.08 | 0.19 | 0.20s | 0.09s | 0.13 | 1.9 |  |
| 10K | 0.44 | 8.34 | 8.27s | 0.3s | 8.43 | 10.14 |  |
| 100K | 4.32 | 16.29 | 17.07s | 3.0s | 14.02 | 23.57 |  |
| 500K | 21.93 | 52.77 | 58.14s | 15.49s | 41.34 | 79.59 |  |
| 1M | 44.57 | 97.84 | 105.56s | 38.44 | 78.97 | 150.40 |  |

Brain

2K 0.08s

10K 0.44s

100K 4.32s

500K 21.93s

1M 44.57s

Drain

2K 0.19s

10K 8.34s

100K 16.29s

500K 52.77s

1M 97.84s

Spell

2K 0.20s

10K 8.27s

100K 17.07s

500K 58.14s

1M 105.56s

Logram

2K 0.09s

10K 0.3s

100K 3.0s

500K 15.49s

1M 38.44

Android

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Brain | Drain | Spell | Logram | AEL | MoLFI | LenMa |
| 2K | 0.14s | 0.26s | 0.32s | 0.10s | 0.19 | 16.57 |  |
| 10K | 0.60s | 2.01s | 2.85s | 0.81s | 1.51 | 61.75 |  |
| 100K | 6.39s | 20.21s | Too long | 5.4s | 13.16 | Too long |  |
| 500K | 33.65s | 102.44s | Too long | 34.7s | 64.79 | Too long |  |
| 1M | 49.03s | 306.33s | Too long | 57.29 | 133.07 | Too long |  |

Brain

2K 0.14s

10K 0.60s

100K 6.39s

500K 33.65s

1M 49.03s

Drain

2K 0.26s

10K 2.01s

100K 20.21s

500K 102.44s

1M 306.33s

Spell

2K 0.32s

10K 2.85s

100K 27.07s

500K 208.14s

1M 605.56s

Logram

2K 0.10s

10K 0.81s

100K 5.4s

500K 34.7s

1M 57.29

Spark

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Brain | Drain | Spell | Logram | AEL | MoLFI | LenMa |
| 2K | 0.10s | 0.20s | 0.21s | 0.07s | 0.15 | 12.67 |  |
| 10K | 2.14s | 2.29s | 2.42s | 0.71s | 4.43 | Too long |  |
| 100K | 7.84s | 11.52s | 12.95s | 5.1s | 29.77 | Too long |  |
| 500K | 34.19s | 51.15s | 56.19s | 19.4s | Too long | Too long |  |
| 1M | 64.87s | 99.17s | 102.89s | 40.2s | Too long | Too long |  |

Brain

2K 0.10s

10K 2.14s

100K 7.84s

500K 34.19s

1M 64.87s

Drain

2K 0.20s

10K 2.29s

100K 11.52s

500K 51.15s

1M 99.17s

Spell

2K 0.21s

10K 2.42s

100K 12.95s

500K 56.19s

1M 102.89s

Logram

2K 0.07s

10K 0.71s

100K 5.1s

500K 19.4s

1M 40.2s

Windwos

Brain

2K 0.10s

10K 2.14s

100K 7.84s

500K 34.19s

1M 64.87s

Drain

2K 0.20s

10K 2.29s

100K 11.52s

500K 51.15s

1M 99.17s

Spell

2K 0.21s

10K 2.42s

100K 12.95s

500K 56.19s

1M 102.89s

Logram

2K 0.07s

10K 0.71s

100K 5.1s

500K 19.4s

1M 40.2s

Average 1M 46.14 224.81 146.48

Sensity anaylsis

2 0.768

3 0.898

4 0.960

5 0.973

6 0.972

7 0.960

8 0.919

9 0.920

10 0.921

0.1

0.979, 0.977, 0.977, 0.965, 0.955, 0.951, 0.950

Down tree

0.99

0.885

0.9605

0.9975

0.9835

0.99

0.869

0.9645

0.999

0.931

0.7705

1.0

1.0

1.0

0.9235

0.929

Up tree

0.99

0.9975

0.808

0.081

0.9945

0.861

0.829

0.659

0.9945

0.1865

0.9605

0.4265

1.0

0.431

0.85

0.7175

The accuracy of choosing the right root node.

1.0

1.0

0.997

0.999

1.0

1.0

0.999

1.0

0.996

1.0

0.989

1.0

1.0

1.0

0.984

0.982

Runing time with Size:

Brain

1GB : 182 seconds HDFS

Logram 231 seconds

Logram 148.93seconds 500M HDFS

Dictionary num

HDFS 1M 501 346

BGL 1M dou 73303 tr 41507

Android 77895 60695