

CIS 3490 Assignment 3 - String Matching Algorithm

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March 5, 2020

1 Patterns

Here are the patterns I will be using to analyze the efficiency of each algorithm.

1. University
2. carry
3. gender
4. computer
5. name
6. item
7. activity
8. campus
9. grow
10. mark

Performance Ratio

$$\text{Performance Ratio} = \frac{\text{Number of Shifts}}{\text{Runtime}}$$

2 Results

2.1 P21

1. 21,818.85
2. 37,961.69
3. 32,121.30
4. 26,512.77
5. 40,735.80
6. 41,757.93
7. 27,381.75

8. 33,740.51
9. 42,286.44
10. 45,761.27

Average is 27,405.20 shifts per millisecond

2.2 P22

1. 28,968.8
2. 39,987.11
3. 35,448.55
4. 33,556.53
5. 38,683
6. 40,838.17
7. 27,952.82
8. 37,252
9. 44,900.3
10. 42,877.90

Average is 37,046.51 shifts per millisecond

2.3 P23

1. 112,110.03
2. 114,140.39
3. 100,454.38
4. 120,366.1
5. 100,519.07
6. 156,592.55
7. 118,993.84
8. 114,586.66
9. 103,875.73
10. 124,446.73

Average is 116,608.548 shifts per millisecond

3 Conclusion

From the analysis, we can see that algorithms which take advantage of precomputed tables perform much better than naive methods.