

Lazy vs. non lazy

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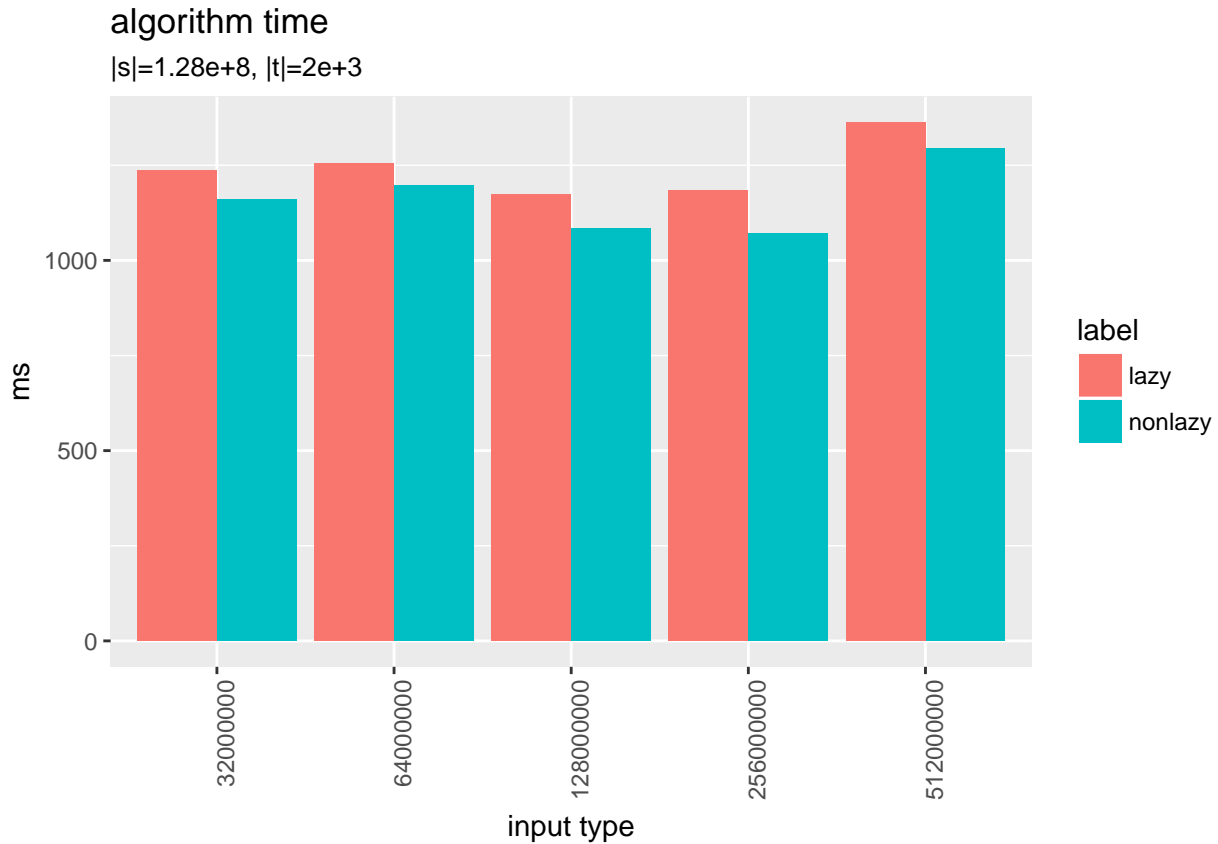
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1 Double vs. single rank

2 Lazy vs non-lazy

2.1 Run time



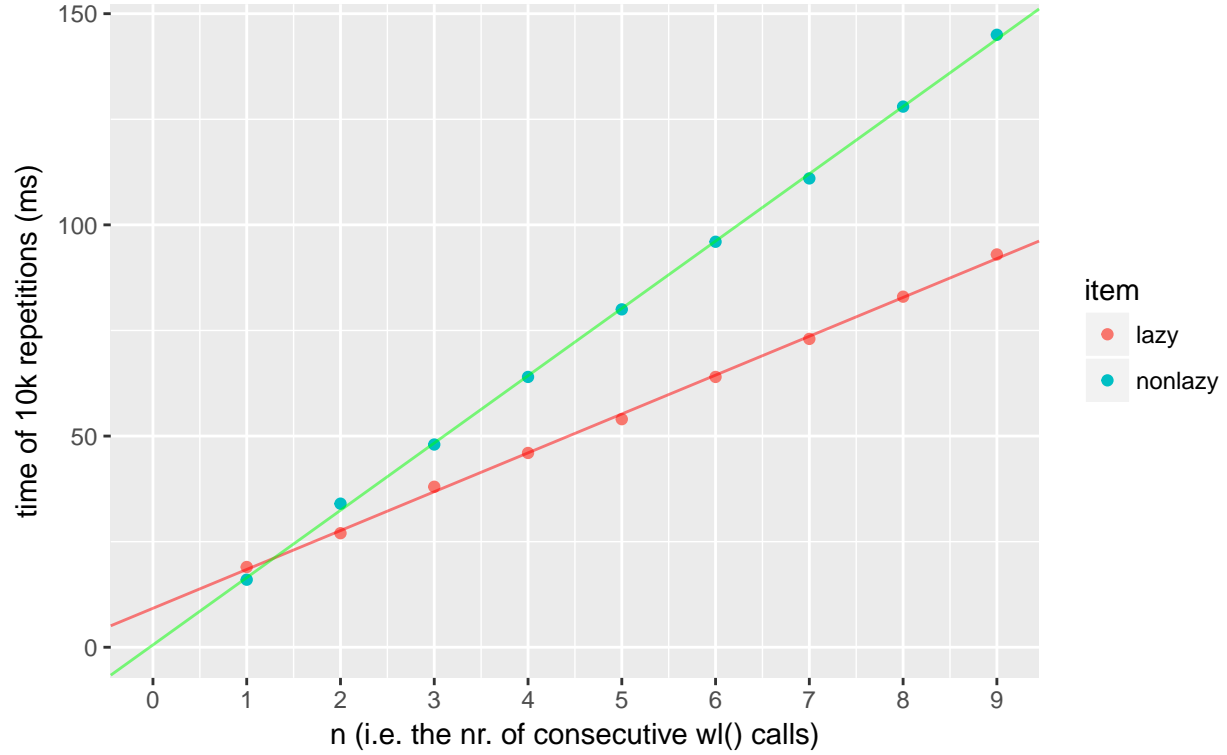
2.2 Sandbox timing

Measure the time of 10k repetitions of

- (1) n consecutive `lazy_wl()` calls followed by a `lazy_wl_followup()` and
- (2) n consecutive `wl()` calls

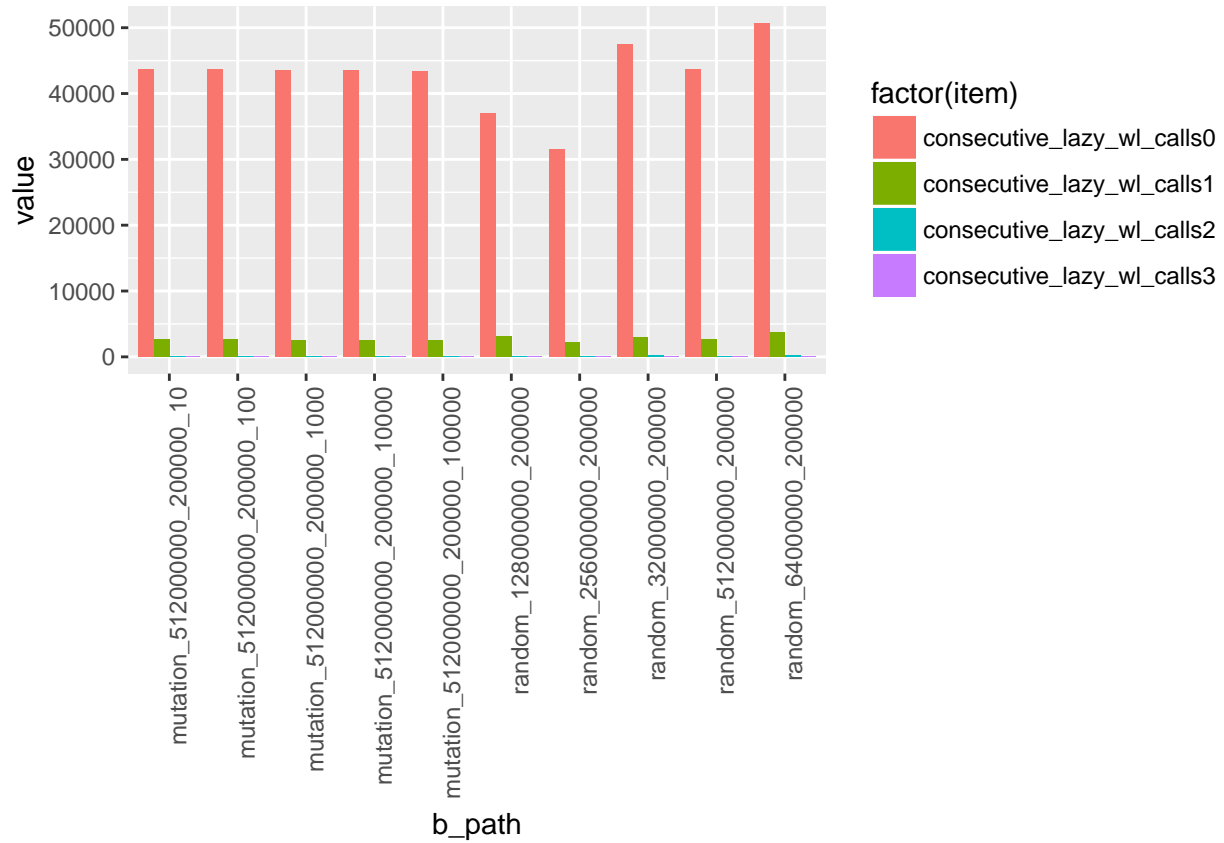
runtime of `lazy_wl()` vs. `wl()` calls on input size 1.28^8

lazy: $9.22 + 9.2000 \cdot n$; nonlazy: $0.56 + 15.9333 \cdot n$



2.3 Input properties

For various types (“mutation_XXXX” means s and t are random identical strings with mutations inserted every XXXX characters) of inputs run the MS algorithm and count the number of consecutive `lazy_wl()` calls of length k for $k = 0, 1, 2, 3$.



Using the linear fits above, this is the expected total time the `wl()` or `lazy_wl()` calls should take (in ms).

```
## # A tibble: 10 × 4
##           b_path      lazy_t nonlazy_t diff_ms
##           <chr>      <dbl>      <dbl>    <dbl>
## 1 mutation_512000000_200000_10 88.14617 81.14290 7.003273
## 2 mutation_512000000_200000_100 88.28988 81.26228 7.027593
## 3 mutation_512000000_200000_1000 87.70322 80.67022 7.033007
## 4 mutation_512000000_200000_10000 87.55585 80.53369 7.022160
## 5 mutation_512000000_200000_100000 87.40388 80.39074 7.013140
## 6 random_128000000_200000 77.58776 72.13446 5.453300
## 7 random_256000000_200000 64.53955 59.64030 4.899253
## 8 random_320000000_200000 96.36021 88.79362 7.566587
## 9 random_512000000_200000 88.24567 81.21810 7.027573
## 10 random_640000000_200000 104.27172 96.44919 7.822533
```

