

2018-04: Repose Record

```
library(tidyverse)
```

```
-- Attaching packages ----- tidyverse 1.3.2 --
v ggplot2 3.3.6      v purrr   0.3.4
v tibble  3.1.8      v dplyr  1.0.10
v tidyr   1.2.0      v stringr 1.4.1
v readr   2.1.2      v forcats 0.5.2
-- Conflicts ----- tidyverse_conflicts() --
x dplyr::filter() masks stats::filter()
x dplyr::lag()     masks stats::lag()
```

```
library(data.table)
```

Attaching package: 'data.table'

The following objects are masked from 'package:dplyr':

between, first, last

The following object is masked from 'package:purrr':

transpose

```
library(stringi)
```

```
dt <- readLines("input.txt")
dt <- data.table(do.call(rbind, stri_match_all_regex(dt, "\\[[0-9]{4}-[0-9]{2}-[0-9]{2} [
colnames(dt) <- c("input", "time", "action")
dt$guard <- as.numeric(do.call(rbind, stri_match_all_regex(dt$action, "[0-9]{3,4}")))
dt$time <- as.POSIXct(dt$time)
```

```

dt$action <- ifelse(dt$action == "falls asleep", "asleep", "awake")
dt <- dt[order(time)] |>
  fill(guard) |>
  select(-input) |>
  mutate(minute = minute(time), day = as.Date(time)) |>
  filter(hour(time) == 0)

```

Part 1

```

data.table("day" =
  rep(seq.Date(as.Date(min(dt$time)),
    as.Date(max(dt$time)),
    by = "day"),
    each = 60),
  "minute" = 0:59) |>
left_join(dt, by = c("day", "minute")) |>
select(-time) |>
arrange(day, minute) |>
fill(action, guard) |>
filter(action == "asleep") |>
dcast(guard ~ minute, value.var = "action", fun.aggregate = length) -> saved
saved %>%
  mutate(total = rowSums(.) - guard) |>
  filter(total == max(total)) |>
  select(-total) |>
  as.vector() |>
  unlist() -> vec

unnname(vec["guard"] * as.numeric(names(which.max(vec[-1]))))

```

[1] 146622

Part 2

```

saved |>
  pivot_longer(cols = matches("[0-9]{1,2}"), names_to = "minute", values_to = "times") |>
  filter(times == max(times)) |>

```

```
mutate(value = guard * as.numeric(minute)) |>  
pull(value)
```

```
[1] 31848
```