AdventCode_1201

JessicaK

2023-12-03

Day 1: Trebuchet?!

The newly-improved calibration document consists of lines of text; each line originally contained a specific calibration value that the Elves now need to recover. On each line, the calibration value can be found by combining the first digit and the last digit (in that order) to form a single two-digit number.

For example:

- 1abc2
- pqr3stu8vwx
- a1b2c3d4e5f
- treb7uchet

In this example, the calibration values of these four lines are 12, 38, 15, and 77. Adding these together produces 142.

Consider your entire calibration document. What is the sum of all of the calibration values?

```
read.table("dec01_input.txt") -> dec01_input
head(dec01_input)
```

Read in dataset

```
##                                        V1
## 1              gtlbhbjgkrb5sixfivefivetwosix
## 2          ninesixrgxccvrqscbskgzxh6cpvpxsqnb6
## 3                          dxxzrlzkksfsffp4
## 4            sbzvmddhnjtwollnjv33d2lbcscstqt
## 5                                   88xpnfpb
## 6 ninevct4cpdvqfxmspbz9xrvxfvbpzthreesfnncrqn
```

```
library(tidyverse)
```

String manipulation On each line, the calibration value can be found by combining the first digit and the last digit (in that order) to form a single two-digit number.

Pull first and last digit

```
dec01_input$num <- as.numeric(gsub("\\D", "", dec01_input$V1))
dec01_input$first <- substr(dec01_input$num, start = 1, stop = 1)
dec01_input$last <- substr(dec01_input$num, nchar(dec01_input$num), nchar(dec01_input$num))
```

Now combine two numbers

```r
dec01_input$cali <- as.numeric(paste0(dec01_input$first,dec01_input$last))
sum(dec01_input$cali)
```

```
## [1] 54634
```

Part 2

ELVES ARE EVIL

Your calculation isn't quite right. It looks like some of the digits are actually spelled out with letters: one, two, three, four, five, six, seven, eight, and nine also count as valid "digits".

Equipped with this new information, you now need to find the real first and last digit on each line. For example:

- two1nine
- eightwothree
- abcone2threexyz
- xtwone3four
- 4nineeightseven2
- zoneight234
- 7pqrstsixteen

Use the same dataset We need a function

```r
spell_to_numeric = data.frame(line = dec01_input$V1) |>
  extract(line, "first", "(\\d|one|two|three|four|five|six|seven|eight|nine|zero)", remove = F) |>
  extract(line, "last", ".*(\\d|one|two|three|four|five|six|seven|eight|nine|zero)", remove = F) |>
  select(line, first, last) |>
  mutate(first = case_when(first == "one" ~ "1",
                           first == "two" ~ "2",
                           first == "three" ~ "3",
                           first == "four" ~ "4",
                           first == "five" ~ "5",
                           first == "six" ~ "6",
                           first == "seven" ~ "7",
                           first == "eight" ~ "8",
                           first == "nine" ~ "9",
                           first == "zero" ~ "0",
                           T ~ first),
         last = case_when(last == "one" ~ "1",
                           last == "two" ~ "2",
                           last == "three" ~ "3",
                           last == "four" ~ "4",
                           last == "five" ~ "5",
                           last == "six" ~ "6",
                           last == "seven" ~ "7",
                           last == "eight" ~ "8",
                           last == "nine" ~ "9",
                           last == "zero" ~ "0",
                           T ~ last),
         combined = as.integer(paste0(first, last))) |>
  summarise(spell_to_numeric = sum(combined)) |>
  pull(spell_to_numeric)
```

```r
sprintf("%i", spell_to_numeric)
```

```
## [1] "53855"
```