

Advent of Code day 5

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source

import and sort the rules

```
tmp <- readLines('input.txt')
rule = "\\d+\\|\\d+"
primo <- c()
dopo <- c()
pages <- c()
for (ii in 1:length(tmp)){
  dib <- str_extract(tmp[ii], rule )
  dab <- str_split(dib, "\\|")
  primo<- c(primo, as.numeric(dab[[1]][1]))
  dopo <- c(dopo, as.numeric(dab[[1]][2]))
  pages <- c(pages, str_extract(tmp[ii], "\\d+\\|\\d+"))
}

# organise the rules
dob <- data.frame(primo, dopo)
idx <- !is.na(primo)
dob <- dob[idx,]
rules <- dob[order(dob[,1], dob[,2]),]

# Now get pages to print
pages <- pages[!is.na(pages)]
# print(pages)
```

apply the rules to the pages to print

```
vol <- length(pages)
out <- numeric(vol) +1
mark <- c()

for(vv in 1:vol){
  dat <- pages[vv]
  pps <- as.array(as.numeric(unlist(str_split(dat, ","))))
  # are there rules that say the initial page should precede subsequent ones
  nop <- length(pps)
  mark <- c(mark,pps[floor(nop/2)+1])

  for(ii in 1:(nop-1)){
    bar <- rules[rules[,1]==pps[ii],]
    if(sum(bar[,2]==pps[ii+1],)==0){
      out[vv] = 0
    }
  }
}
```

```

        break
    }
}

sum(out * mark)

```

```
## [1] 4637
```

Now to deal with the incorrect orders

```

vol <- length(pages)
out <- numeric(vol)
mark <- numeric(vol)

for(vv in 1:vol){
  dat <- pages[vv]
  pps <- as.array(as.numeric(unlist(str_split(dat, ","))))
  # are there rules that say the initial page should precede subsequent ones
  nop <- length(pps)
  for(kk in 1:nop){
    for(ii in 1:(nop-1)){
      bar <- rules[rules[,1]==pps[ii],]
      if(sum(bar[,2]==pps[ii+1],)==0){
        dum <- pps[ii]
        pps[ii] <- pps[ii+1]
        pps[ii+1] <- dum
        mark[vv] <- pps[floor(nop/2)+1]
        out[vv] = 1
      }
    }
  }
}

sum(mark)

```

```
## [1] 6370
```