HW\_3

knitr::opts\_chunk$set(echo = TRUE)  
library(tidyverse)

## Loading tidyverse: ggplot2  
## Loading tidyverse: tibble  
## Loading tidyverse: tidyr  
## Loading tidyverse: readr  
## Loading tidyverse: purrr  
## Loading tidyverse: dplyr

## Conflicts with tidy packages ----------------------------------------------

## filter(): dplyr, stats  
## lag(): dplyr, stats

library(jsonlite)

##   
## Attaching package: 'jsonlite'

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

**Загрузка данных из формата JSON**

df <- fromJSON("spells.json", flatten = T)  
df <- as\_data\_frame(df[[2]])

**Сортировка заклинаний с группировкой по типу**

df <- df %>%   
 group\_by(type) %>%   
 arrange(incantation, .by\_group = T)

**Таблица с обобщающей информацией по типам заклинаний**

sp\_stat <- df %>%   
 group\_by(type) %>%   
 summarise(n\_spells = n(),  
 first\_spell = first(incantation),  
 last\_spell = last(incantation),  
 shortest\_spell = min(nchar(incantation)),  
 longest\_spell = max(nchar(incantation)),  
 avg\_spell = mean(nchar(incantation)),  
 compound\_spell = sum(grepl(" ", incantation)))

**Удаление и присоединение новых столбцов**

sp\_stat <- sp\_stat %>%   
 select(-first\_spell, -last\_spell)  
   
df %>%   
 group\_by(type) %>%   
 summarise(longest\_spell = incantation[which.max(nchar(incantation))],  
 shortest\_spell = incantation[which.min(nchar(incantation))]) %>%   
 cbind(sp\_stat)

## type longest\_spell shortest\_spell type n\_spells shortest\_spell  
## 1 Charm Wingardium Leviosa Accio Charm 20 5  
## 2 Curse Locomotor Mortis Crucio Curse 7 6  
## 3 Jinx Flipendo Flipendo Jinx 1 8  
## 4 Spell Peskipiksi Pesternomi Nox Spell 63 3  
## longest\_spell avg\_spell compound\_spell  
## 1 18 9.550000 3  
## 2 16 10.857143 2  
## 3 8 8.000000 0  
## 4 21 9.984127 14