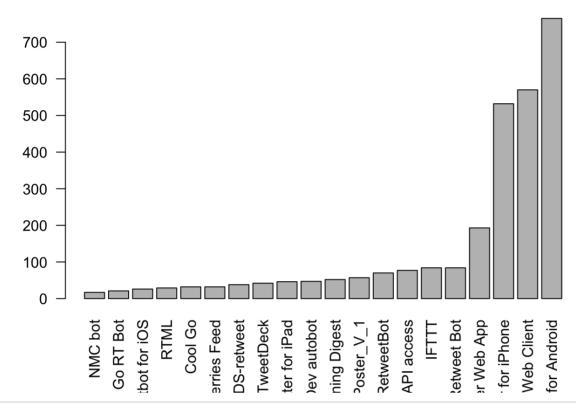
Week7_lab

Frank Shen 2019/3/4

```
string = c("bach", "back", "beech", "beach", "black")
grep("be(a|e)ch", string, value = TRUE)
## [1] "beech" "beach"
grep("be[ae]ch", string, value = TRUE)
## [1] "beech" "beach"
grep("b(e+|a+)ch", string, value = TRUE)
## [1] "bach" "beech"
grep("b[ae]e?ch", string, value = TRUE)
## [1] "bach" "beech"
library(twitteR)
library(dplyr)
##
## Attaching package: 'dplyr'
## The following objects are masked from 'package:twitteR':
##
##
       id, location
## The following objects are masked from 'package:stats':
##
##
       filter, lag
## The following objects are masked from 'package:base':
##
##
       intersect, setdiff, setequal, union
##Question1
dsTweets = load("Tweets_Lab7.Rdata")
dsTweetsDF = twListToDF(Tweets2Use)
dsTweetsDF = dsTweetsDF[1:3200 ,]
temp = gsub("</a>", "", dsTweetsDF$statusSource, perl = TRUE)
platform = gsub("<.*>", "", temp, perl = TRUE)
barplot(tail(sort(table(platform)), 20),las = 2, main = "Twitter client popularity for #data
Science")
```

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Twitter client popularity for #data Science



```
##Question 2
load("NewUserLab7.Rdata")
Userlab = twListToDF(UserTweets)
Userlab = Userlab[1:500 ,]
sentence = Userlab$text
sentence = gsub("(RT|via)((?:\b\\W*@\\w+)+)", " ", sentence)
sentence = gsub("@\\w+", " ", sentence)
sentence = gsub("(?!')[[:punct:]]", "", sentence, perl = T)
sentence = gsub("[[:cntrl:]]", "", sentence)
sentence = gsub("[[:digit:]]", "", sentence)
sentence = iconv(sentence, "ASCII", "UTF-8", sub = "")
sentence = tolower(sentence)
sentence = gsub("http\\w+", "", sentence)
sentence = gsub("[ \t]{2,}", " ", sentence)
sentence = gsub("^\s+|\s+$", "", sentence)
word.list = strsplit(sentence, " ")
words = unlist(word.list)
library(tm)
```

```
## Loading required package: NLP
```

```
words = words[!words %in% tm::stopwords(kind = "english")]
library(wordcloud)
```

```
## Loading required package: RColorBrewer
```

```
wordcloud(names(table(words)), table(words), colors = rainbow(8), min.freq = 10)
```



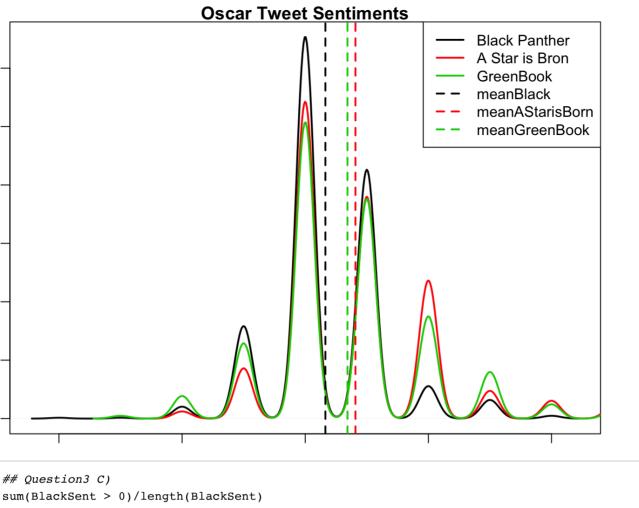
```
library(tm)
pos = scan("positive-words.txt", what = "character", comment.char = ";")
neg = scan("negative-words.txt", what = "character", comment.char = ";")
length(pos)

## [1] 2006

## [1] 4783
```

```
neg = c(neg, "wtf")
getSentimentScore = function(tweet text, pos, neg) {
sentence = gsub("(RT|via)((?:\b\\W*@\w+)+)", "", tweet text)
sentence = gsub("@\\w+", "", sentence)
sentence = gsub("[[:punct:]]", "", sentence)
sentence = gsub("[[:cntrl:]]", "", sentence)
sentence = gsub("[[:digit:]]", "", sentence)
sentence = gsub("http\\w+", "", sentence)
sentence = gsub("^{\st}|\st, "", sentence)
sentence = iconv(sentence, "ASCII", "UTF-8", sub = "")
sentence = tolower(sentence)
word.list = strsplit(sentence, " ")
score = numeric(length(word.list))
for (i in 1:length(word.list)) {
 pos.matches = match(word.list[[i]], pos)
 neg.matches = match(word.list[[i]], neg)
 pos.matches = !is.na(pos.matches)
 neq.matches = !is.na(neq.matches)
 score[i] = sum(pos.matches) - sum(neg.matches)
return(score)
}
##Question3 a)
load("SentimentTweets.Rdata")
BlackDF = twListToDF(T1)
BlackDF = BlackDF[1:2000,]
StarDF = twListToDF(T2)
StarDF = StarDF[1:2000,]
GreenDF = twListToDF(T3)
GreenDF = GreenDF[1:2000,]
##Question3 b)
BlackSent = getSentimentScore(BlackDF$text, pos, neg)
StarSent = getSentimentScore(StarDF$text, pos, neg)
GreenSent = getSentimentScore(GreenDF$text, pos, neg)
par(mfrow = c(1, 1))
par(mar = c(1, 1, 1, 1))
plot(density(BlackSent), col = 1, main = "Oscar Tweet Sentiments", xlab = "Sentiment Score",
lwd = 2)
lines(density(StarSent), col = 2, lwd = 2)
lines(density(GreenSent), col = 3, lwd = 2)
abline(v = mean(BlackSent), col = 1, lwd = 2, lty = 2)
abline(v = mean(StarSent), col = 2, lwd = 2, lty = 2)
abline(v = mean(GreenSent), col = 3, lwd = 2, lty = 2)
legend("topright", c("Black Panther", "A Star is Bron", "GreenBook", "meanBlack", "meanAStar
isBorn", "meanGreenBook"), col = c(1:3, 1:3), lwd = 2, lty = c(1, 1, 1, 2, 2, 2)
```

2019/3/10



[1] 0.383

sum(StarSent > 0)/length(StarSent)

[1] 0.527

sum(GreenSent > 0)/length(GreenSent)

[1] 0.497

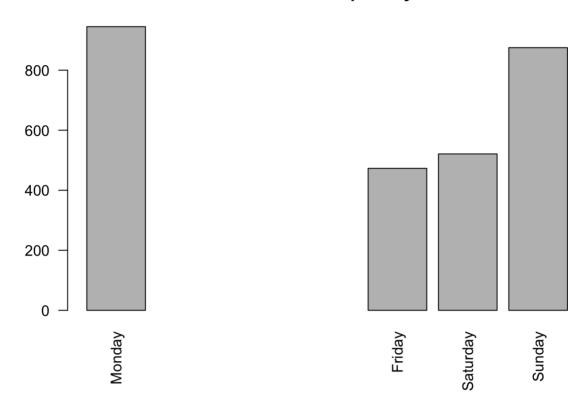
```
##Star has highest propotion
PosStarText = StarDF$text[StarSent > 0]
sentence2 = gsub("(RT|via)((?: \b\\w*@\\w+)+)", " ", PosStarText)
sentence3 = gsub("@\\w+", " ", sentence2)
sentence4 = gsub("(?!')[[:punct:]]", "", sentence3, perl = T)
sentence5 = gsub("[[:cntrl:]]", "", sentence4)
sentence6 = gsub("[[:digit:]]", "", sentence5)
sentence7 = iconv(sentence6, "ASCII", "UTF-8", sub = "")
sentence8 = tolower(sentence7)
sentence9 = gsub("http\\w+", "", sentence8)
sentence10 = gsub("[ \t]{2,}", " ", sentence9)
sentence11 = gsub("^{\s+}|\s+$", "", sentence10)
word.list = strsplit(sentence11, " ")
words = unlist(word.list)
words = words[!words %in% tm::stopwords(kind = "english")]
freq = table(words)
library(wordcloud)
wordcloud(names(freq), freq, min.freq = 5, colors = rainbow(8), random.order = FALSE)
```

```
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```

```
##Question3 D)
par(mar = c(5,4,4,2))
textAll = rbind(BlackDF, StarDF, GreenDF)
sentAll = c(BlackSent, StarSent, GreenSent)
postext = textAll[sentAll > 0 , ]
barplot(table(weekdays(postext[,"created"]))[c("Monday", "Tuesday", "Wednesday", "Thursday",
"Friday", "Saturday", "Sunday")], las = 2, main = "Positive text per day")
```

Positive text per day



##This data might misleading us because we didn't get the days from Tuesdays to Thursdays. Thus, we can not know that which day has the most of says about these movies