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#Batch : L-10

#Roll. No. : 33235


#install packages

install.packages("tm")

install.packages("wordcloud")

install.packages("RColorBrewer")

install.packages("corpus")


#Load packages

#text mining library used to highlight most frequently used words in a paragraph of text

library("tm")

library("wordcloud") #Analyse and visualize words as word cloud


text <- readLines(file.choose())

text


#Corpus is a format which is used by tm to clean text. It is a collection of docs with large structure of text

#VectorSource : creating a vector of character vectors

docs<- Corpus(VectorSource(text))


#Transform text by cleaning

docs <- tm_map(docs,tolower) #tm is case sensitive

docs <- tm_map(docs,removeNumbers) #remove numbers

docs <- tm_map(docs,removePunctuation) #remove Punctuations

docs <- tm_map(docs,removeWords,stopwords("english")) #Remove all stop words

docs <- tm_map(docs,stripWhitespace) #Remove whitespaces

docs <- tm_map(docs,stripWhitespace) #Remove whitespaces
```

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toSpace <- content_transformer(function(x,pattern) gsub(pattern, " ",x))
docs <- tm_map(docs, toSpace, "\\W") #match any non word charcter

#Build document matrix
tdm <- TermDocumentMatrix(docs) #table with frequency of all words
m <- as.matrix(tdm) #convert to matrix

sorted_doc <- sort(rowSums(m),decreasing = TRUE)

#convert text data to dataframe
d <- data.frame(word=names(sorted_doc),freq=sorted_doc)
head(d,10)

wordcloud(words=d$word,freq = d$freq)
```
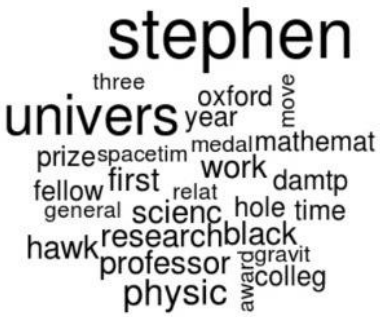
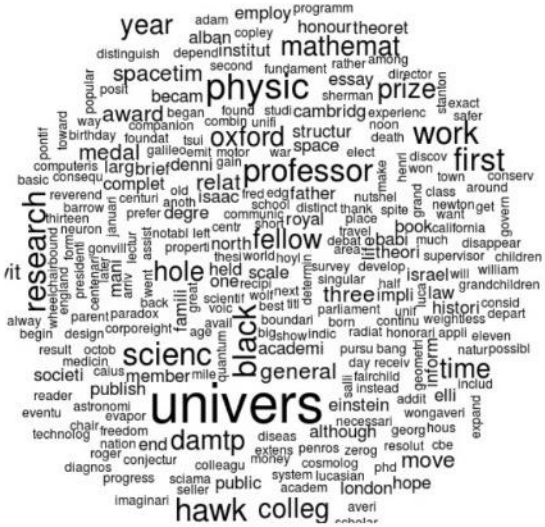
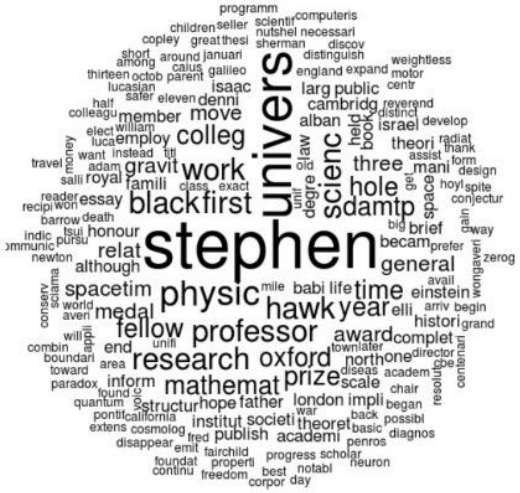




```
wordcloud(words=d$word,freq = d$freq,min.freq = 1)
```



wordcloud(words=d$word,freq = d$freq,min.freq = 1,max.words = 200)

wordcloud(words=d$word,freq = d$freq,min.freq = 1,max.words = 200,random.order = FALSE)



wordcloud(words=d$word,freq = d$freq,min.freq = 1,max.words = 200,random.order = FALSE,rot.per = 0.35)

wordcloud(words=d$word, freq = d$freq , min.freq = 1, max.words = 200, random.order = FALSE,rot.per=0.35, colors=brewer.pal(8,"Dark2"))


stephen
univers
physic
research
black
hole
scienc
first
hawk
professor
work
oxford
fellow
mathemat
general
relat
medal
degre
prize
colleg
damtp
year
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spacetim
award
london
isaac
histori
although
essay
israel
member
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scale
three
structur
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societi
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gravit
north
alban
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royal
space
complet
institut
einstein
employ
impli
becam
cosmolog
paradox
supervisor
california
zerog
presidenti
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conserv
elect
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imaginari
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reverend
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children
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england
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radiat
wheelchairbound
weightless
began
fairchild
way
disappear
centenari
companion
system
make
unifi
thirteen
distinguish
caius
parliament
stanton
pursu
spite
penros
eleven
phd
distinct
natur
bang
neuron
grandchildren
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luca
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