

Final Project

Benliro, Conlu, and Duero BSIT 2-B

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```
library(rvest)
```

```
## Warning: package 'rvest' was built under R version 4.3.2
```

```
library(tinytex)
```

```
## Warning: package 'tinytex' was built under R version 4.3.2
```

```
# Function to extract reviews from a given URL
reviews_airline<- function(url) {
  # Read the HTML page
  page <- read_html(url)

  # Extract review information
  title_airline <- page %>% html_nodes(".review-title.span") %>%
    html_text()

  text_airline <- page %>% html_nodes(".text_content") %>%
    html_text()

  # Ensure both vectors have the same length

  # Create a data frame
  airline_reviewsdf<- data.frame(
    Review_Title = title_airline[1:10],
    Text_Review = text_airline[1:10]
  )

  return(airline_reviewsdf)
}
```

```
# Specify the base URL
airline_url<- "https://www.airlinequality.com/airline-reviews/pegasus-airlines/page/"

# Initialize an empty data frame to store all reviews
all_airline_reviewsdf <- data.frame()

# Loop through pages 1 to 37
for (page_number in 1:37) {
  # Construct the URL for the current page
```

```

url <- paste0(airline_url, page_number, "/")

# Extract reviews from the current page
airline_page<- reviews_airline(url)

# Combine the reviews with the existing data frame
all_airline_reviewsdf<- rbind(all_airline_reviewsdf, airline_page)
}

# View the combined data frame
View(all_airline_reviewsdf)

pegasus_airline_review <- all_airline_reviewsdf[1:300, ]
View(pegasus_airline_review)

pegasus_airline_review<-pegasus_airline_review[-1]
View(pegasus_airline_review)
write.csv(pegasus_airline_review,file="pegasusDataset.csv", row.names=FALSE)

```

```

#CLEANING
library(ggplot2)
library(tm)

```

```
## Warning: package 'tm' was built under R version 4.3.2
```

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

```
##
## Attaching package: 'NLP'
```

```
## The following object is masked from 'package:ggplot2':
##
##      annotate
```

```
library(wordcloud)
```

```
## Warning: package 'wordcloud' was built under R version 4.3.2
```

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

```
library(syuzhet)
```

```
## Warning: package 'syuzhet' was built under R version 4.3.2
```

```

library(RColorBrewer)
library(stringr)

clean1<-str_replace_all(pegasus_airline_review$Text_Review, " Trip Verified |", "")
head(clean1)

```

```
## [1] "| Firstly, they are always late due to their operations issues which makes you miss your transfe
## [2] "| I have always used Pegasus to travel to Turkey and Iran. I am also a member of their BolPoint
## [3] "| Due to the war going on at present, and already over a month ago, my flight that was suppose
## [4] "| I had the option of EasyJet, SunExpress or Pegasus for this route. All similarly priced. So g
## [5] "| Worst experience ever. I have never written reviews for airlines before, but my experience ha
## [6] "| They have delayed 1 hour, then another 30 minutes and another 30 minutes later. they landed
```

```
clean1<-gsub("Not Verified ", "", clean1)
head(clean1)
```

```
## [1] "| Firstly, they are always late due to their operations issues which makes you miss your transfe
## [2] "| I have always used Pegasus to travel to Turkey and Iran. I am also a member of their BolPoint
## [3] "| Due to the war going on at present, and already over a month ago, my flight that was suppose
## [4] "| I had the option of EasyJet, SunExpress or Pegasus for this route. All similarly priced. So g
## [5] "| Worst experience ever. I have never written reviews for airlines before, but my experience ha
## [6] "| They have delayed 1 hour, then another 30 minutes and another 30 minutes later. they landed
```

```
clean1<- gsub("\\|", "", clean1)
head(clean1)
```

```
## [1] " Firstly, they are always late due to their operations issues which makes you miss your transfe
## [2] " I have always used Pegasus to travel to Turkey and Iran. I am also a member of their BolPoint
## [3] " Due to the war going on at present, and already over a month ago, my flight that was supposed
## [4] " I had the option of EasyJet, SunExpress or Pegasus for this route. All similarly priced. So gl
## [5] " Worst experience ever. I have never written reviews for airlines before, but my experience has
## [6] " They have delayed 1 hour, then another 30 minutes and another 30 minutes later. they landed
```

```
clean1<-gsub("\r\n", "", clean1)
head(clean1)
```

```
## [1] " Firstly, they are always late due to their operations issues which makes you miss your transfe
## [2] " I have always used Pegasus to travel to Turkey and Iran. I am also a member of their BolPoint
## [3] " Due to the war going on at present, and already over a month ago, my flight that was supposed
## [4] " I had the option of EasyJet, SunExpress or Pegasus for this route. All similarly priced. So gl
## [5] " Worst experience ever. I have never written reviews for airlines before, but my experience has
## [6] " They have delayed 1 hour, then another 30 minutes and another 30 minutes later. they landed
```

```
clean1<-gsub("\r\n\r\n", "", clean1)
head(clean1)
```

```
## [1] " Firstly, they are always late due to their operations issues which makes you miss your transfe
## [2] " I have always used Pegasus to travel to Turkey and Iran. I am also a member of their BolPoint
## [3] " Due to the war going on at present, and already over a month ago, my flight that was supposed
## [4] " I had the option of EasyJet, SunExpress or Pegasus for this route. All similarly priced. So gl
## [5] " Worst experience ever. I have never written reviews for airlines before, but my experience has
## [6] " They have delayed 1 hour, then another 30 minutes and another 30 minutes later. they landed
```

```
#cleaning the punctuations and digits
clean1=gsub("[[:punct:]]", "", clean1)
clean1=gsub("[[:digit:]]", "", clean1)
head(clean1)
```

```
## [1] " Firstly they are always late due to their operations issues which makes you miss your transfer
## [2] " I have always used Pegasus to travel to Turkey and Iran I am also a member of their BolPoint
## [3] " Due to the war going on at present and already over a month ago my flight that was supposed to
## [4] " I had the option of EasyJet SunExpress or Pegasus for this route All similarly priced So glad
## [5] " Worst experience ever I have never written reviews for airlines before but my experience has b
## [6] " They have delayed hour then another minutes and another minutes later they landed just m
```

```
#spaces
clean1<-str_replace_all(clean1, " ", " ")
tail(clean1)
```

```
## [1] "Have yet to have a flight without issue whether it be delays with boarding procedures constant
## [2] "Flew with Pegasus as part of a package holiday to Bodrum I was a little apprehensive as I am no
## [3] "My trip from Antalya to Amsterdam via Istanbul with Pegasus was very bad and disappointing The
## [4] "Before departure was a nightmare Not sure Pegasus has all the responsibility Flight Izmir Anka
## [5] "We flew on a number of internal flights with Pegasus during our trip to Turkey as well as an in
## [6] "ATHSAWTZX on B ATHSAW seat pitch was ok not great but on domestic flight SAWTZX the seat pitch v
```

```
#create a Corpus object
wordCorpus<-Corpus(VectorSource(clean1))
wordCorpus[[1]]$content
```

```
## [1] " Firstly they are always late due to their operations issues which makes you miss your transfer
```

```
wordCorpus<-tm_map(wordCorpus, removePunctuation)
```

```
## Warning in tm_map.SimpleCorpus(wordCorpus, removePunctuation): transformation
## drops documents
```

```
wordCorpus[[1]]$content
```

```
## [1] " Firstly they are always late due to their operations issues which makes you miss your transfer
```

```
wordCorpus<-tm_map(wordCorpus, removeNumbers)
```

```
## Warning in tm_map.SimpleCorpus(wordCorpus, removeNumbers): transformation drops
## documents
```

```
wordCorpus[[1]]$content
```

```
## [1] " Firstly they are always late due to their operations issues which makes you miss your transfer
```

```
wordCorpus<-tm_map(wordCorpus, removeWords, stopwords("english"))
```

```
## Warning in tm_map.SimpleCorpus(wordCorpus, removeWords, stopwords("english")):
## transformation drops documents
```

```
wordCorpus[[1]]$content
```

```
## [1] " Firstly always late due operations issues makes miss transfer If flying make sure
```

```
wordCorpus<-tm_map(wordCorpus, removeWords, stopwords("SMART"))
```

```
## Warning in tm_map.SimpleCorpus(wordCorpus, removeWords, stopwords("SMART")):  
## transformation drops documents
```

```
wordCorpus$content[1:20]
```

```
## [1] " Firstly late due operations issues makes miss transfer If flying make hours  
## [2] " I Pegasus travel Turkey Iran I member BolPoint I experience problem exception  
## [3] " Due war present month ago flight supposed leave Tel Aviv October Manchester  
## [4] " I option EasyJet SunExpress Pegasus route All similarly priced So glad I chose Pegasus  
## [5] " Worst experience I written reviews airlines experience bad I First flight  
## [6] " They delayed hour minutes minutes landed minutes flight responsibility  
## [7] " The pram son arrived damaged flight Ankara Manchester UK unrepairable mechanism sha  
## [8] " A delay return flight hours absolutely poorly handled reason booth rude personel  
## [9] " Our flight delayed times We stuck airport hours notification Avoid Pegasus Airlines  
## [10] " Worst airline horrible experience Its time I flights airline late They dont  
## [11] " Pegasus favorite lowcost airlines Never disappointed Outstanding cabin crew Satisfacto  
## [12] " Terrible experience airline Arrived check counter check super unprofessional  
## [13] " We flight London Dubai change flight Istanbul The flight departed late minutes The  
## [14] " I complaining flights delays I find Pegasus customer service low dont  
## [15] " Horrible This airline operate flight delay This flight past weeks delayed In  
## [16] " Worst airline All flights I flights total late hour No food comfort service Its  
## [17] " Departure Germany Turkey hour delayed plane Turkey minutes delayed We asked fli  
## [18] " Even low budget airline crew entering plane crew member simple stood entrance  
## [19] " Worst travel experience life They lost bag local hour flight attitude give damn  
## [20] " Pegasus budget airline main objective transport people lowest cost They removing v
```

```
##Manual removing of words
```

```
wordCorpus[[1]]$content
```

```
## [1] " Firstly late due operations issues makes miss transfer If flying make hours v
```

```
wordCorpus<-tm_map(wordCorpus, removeWords, c("unprofessiona","personel","Im","justifiable" , "BolPoint"
```

```
## Warning in tm_map.SimpleCorpus(wordCorpus, removeWords, c("unprofessiona", :  
## transformation drops documents
```

```
head(wordCorpus$content)
```

```
## [1] " Firstly late due operations issues makes miss transfer If flying make hours v  
## [2] " I Pegasus travel Turkey Iran I member I experience problem exception year Lon  
## [3] " Due war present month ago flight supposed leave Tel Aviv October Manchester  
## [4] " I option EasyJet SunExpress Pegasus route All similarly priced So glad I chose Pegasus T  
## [5] " Worst experience I written reviews airlines experience bad I First flight  
## [6] " They delayed hour minutes minutes landed minutes flight responsibility
```

```
#removing whitespaces
wordCorpus<-tm_map(wordCorpus, stripWhitespace)
```

```
## Warning in tm_map.SimpleCorpus(wordCorpus, stripWhitespace): transformation
## drops documents
```

```
wordCorpus$content[1:10]
```

```
## [1] " Firstly late due operations issues makes miss transfer If flying make hours wait Gokce matter
## [2] " I Pegasus travel Turkey Iran I member I experience problem exception year Long delay ways In
## [3] " Due war present month ago flight supposed leave Tel Aviv October Manchester cancelled In end
## [4] " I option EasyJet SunExpress Pegasus route All similarly priced So glad I chose Pegasus The cr
## [5] " Worst experience I written reviews airlines experience bad I First flight hours delayed I wai
## [6] " They delayed hour minutes minutes landed minutes flight responsibility excuses representati
## [7] " The pram son arrived damaged flight Ankara Manchester UK unrepairable mechanism shattered bro
## [8] " A delay return flight hours absolutely poorly handled reason booth rude give contact informat
## [9] " Our flight delayed times We stuck airport hours notification Avoid Pegasus Airlines cost First
## [10] " Worst airline horrible experience Its time I flights airline late They dont offer water The s
```

```
#Displaying the cleaned data
wordCorpus$content[1:300]
```

```
## [1] " Firstly late due operations issues makes miss transfer If flying make hours wait Gokce matter
## [2] " I Pegasus travel Turkey Iran I member I experience problem exception year Long delay ways In
## [3] " Due war present month ago flight supposed leave Tel Aviv October Manchester cancelled In end
## [4] " I option EasyJet SunExpress Pegasus route All similarly priced So glad I chose Pegasus The c
## [5] " Worst experience I written reviews airlines experience bad I First flight hours delayed I wa
## [6] " They delayed hour minutes minutes landed minutes flight responsibility excuses representat
## [7] " The pram son arrived damaged flight Ankara Manchester UK unrepairable mechanism shattered bro
## [8] " A delay return flight hours absolutely poorly handled reason booth rude give contact informat
## [9] " Our flight delayed times We stuck airport hours notification Avoid Pegasus Airlines cost First
## [10] " Worst airline horrible experience Its time I flights airline late They dont offer water The s
## [11] " Pegasus favorite lowcost airlines Never disappointed Outstanding cabin crew Satisfactory food
## [12] " Terrible experience airline Arrived check counter check super unprofessional Had run lot tro
## [13] " We flight London Dubai change flight Istanbul The flight departed late minutes The staff mad
## [14] " I complaining flights delays I find Pegasus customer service low dont understand basic Engli
## [15] " Horrible This airline operate flight delay This flight past weeks delayed Insufficient rude s
## [16] " Worst airline All flights I flights total late hour No food comfort service Its taking bus T
## [17] " Departure Germany Turkey hour delayed plane Turkey minutes delayed We asked flight Istanbul
## [18] " Even low budget airline crew entering plane crew member simple stood entrance arms crossed S
## [19] " Worst travel experience life They lost bag local hour flight attitude give blamed check proce
## [20] " Pegasus budget airline main objective transport people lowest cost They removing unnecessary
## [21] " We flying Amsterdam Istanbul June We connecting flight Pegasus Airlines Istanbul As reached
## [22] " In short timing notifying delays time boarding time supposed fly hours ago delay happened An
## [23] " I fly Pegasus work reasons primarily route Ankara Amman Jordan This night flight PC delayed
## [24] " Never Tiny uncomfortable seats completely full flight forced gatecheck small carryon ticket s
## [25] " Our flight arrived airport hours flight They moved flight hours wait airport doesnt flights
## [26] " The staff unhelpful irresponsible slow First flight Istanbul delayed times Then May I wanted
## [27] " It bad experience Our flight delayed Muscat Istanbul flight Pegasus staff dont care running
## [28] " We checked flight March fly Turkey Georgia There issues staff notify bags slightly limit Our
## [29] " I company flights times troubles My flights delayed till hours unappreciated I transit Their
## [30] " Pegasus Airlines lost bag I filed report destination airport multiple mails calls care I app
```

[31] " I booked flight back home Sunday work Monday After checkin dropping bag I informed flight
 ## [32] " I Pegasus team Istanbul service hard work provide difficult time Turkey suffered earthquake
 ## [33] " Pegasus Airlines worst nightmare Never choice Its impolite crew members dont greet customers
 ## [34] " Worst airline I lost connection flight Istanbul Doha Manchester Wasted day information delay
 ## [35] " It flight years flying I world changed hard include food drinks ticket price anymore As Russ
 ## [36] " Pegasus lost luggage couldnt find weeks offered ridiculous compensation Euros pay transfer
 ## [37] " Shocking experience The worst uncomfortable cramped seats I water running sink lavatories su
 ## [38] " My wife I tickets Pegasus Budapest Istanbul January flight PC In morning day departure recei
 ## [39] " This worst experience life company travel years A trip half day transformed full days Travel
 ## [40] " Worst flight Ive abysmal start vacation I dont point budget airline absolutely humiliate trea
 ## [41] " Pros Low cost Airline Normally hassle free Cons I booked flight Munich Dammam Istanbul paid
 ## [42] " I flight Casablanca Moscow stopover Istanbul After reading reviews I afraid I hrs security c
 ## [43] " Awful staff great prices routes I fly airline direct flight London Ankara One staff grabbed p
 ## [44] " The worst airline I The staff rude doesnt speak doesnt English The cabin dirty None flights
 ## [45] " Today unfortunate fly Pegasus Airlines Our flight meant departure Helsinki And wasnt announc
 ## [46] " I previously review indicating luggage damaged I couldnt find review amend The airline pay d
 ## [47] " This worst airline I traveling international changed gate minute I running back fourth find
 ## [48] " The worst airline world weeks ago I flying luggage lost I luggage medications life chronical
 ## [49] " Just lovely flight Manchester Dalaman Crew service faultless Only thing night flight captain
 ## [50] " Punctual takeoff landing Perfect ground service cabin crew Seating major problem short haul
 ## [51] " We honeymoon husband I arrived counter tickets issued previously booked paid tickets months
 ## [52] " The dates times departure changed times direct return tickets As result daytime flights nigh
 ## [53] " After reading reviews I suspicious book Pegasus Istanbul Anyhow business contacts Asian side
 ## [54] " Very bad service board You feel market flight flight selling product Just test asked tap gla
 ## [55] " Pegasus buggy outdated payment system We register pay pet small dog The register call pay ph
 ## [56] " I bought tickets Pegasus Airlines early March Russian airlines stopped flying abroad In days
 ## [57] " I strongly advise buying airline Initially offered voucher open date money covid In I applic
 ## [58] " London Istanbul The horrible disgusting service Ive received The staff extremely unprofession
 ## [59] " I bag purse gate told I plane Furthermore stated disrespectful manner I pay board flight I e
 ## [60] " The departure time flight time plane decided wait latecomers We waited hour departure lounge
 ## [61] " Would recommend No service management catastrophic Goecken Airport Istanbul Very long queues
 ## [62] " Checkin seamless kiosk The baggage tag printed kiosk Then head baggage drop area The flight
 ## [63] " Had nice flights today Needed Bucharest Stansted Was cheaper trip Istanbul direct flight I h
 ## [64] " Avoid costs Flight cancelled No SMS email inform No reason counter staff All customers help
 ## [65] " We paid seat leg space But staff check counter cancelled seat supervisor equally rude After
 ## [66] " Worst airline I driven tears airline disappointed lots passengers I vowed The flight meant l
 ## [67] " I safely company absolute worst forward facing staff airport We witnessed people tears refus
 ## [68] " I flight Manchester Erbil Gökçen airport SAW My flight delayed hours Manchester airport fligh
 ## [69] " Had delay hours Completely understandable weather conditions made happen But irony hours row
 ## [70] " Worst experience Pegasus Airlines book airline Its worth price paid My flight delayed hours
 ## [71] " Last time airline My airplane late hours reached Istanbul understand wait hours flight No ca
 ## [72] " We arrived airport hours check husband kids age We queued minutes slow check informed PCR tes
 ## [73] " Takeoff landing ontime issue European low budget airlines Service good prices cheap infligh
 ## [74] " I highly recommend Pegasus Airlines As I flying back Beirut Istanbul women airlines stopped
 ## [75] " Smooth checkin punctual takeoff landing smiling crew Booked row adequate leg space Middle sea
 ## [76] " My flight cancelled Istanbul Amman due lack information documents needed enter Amman negativ
 ## [77] " Avoid flying Pegasus Airlines Flight delayed departure minutes due late arrival pilot announ
 ## [78] " Ground staff comprehension skills low I approval destination country mentions exempted quarar
 ## [79] " Preflight fine average expect budget airline Upon arriving Istanbul I found luggage wasnt Be
 ## [80] " Such disastrous airline poorest communication management system I supposed fly Doha Tiblisi
 ## [81] " Using services Pegasus Airlines risk I make days ago Istanbul I transit I permitted board fl
 ## [82] " Worst airline recommended responsible worst experience My luggage arrive Dusseldorf Barcelon
 ## [83] " They told I enter plane pet I confirmed airline prior flight vet papers I It website I pet p
 ## [84] " Got check open Tickets bought Turkish Residency card matching HED code For mins staff reject

[85] " Was back Istanbul Berlin denied boarding minute group passengers The reason present PCR test
 ## [86] " Flight Istanbul Amsterdam Flight number WZJB PC I surgery I pay water Netherlands card Of pr
 ## [87] " Worst airline I paid extra baggage back check service told charge extra wont count sum weigh
 ## [88] " Bought tickets Pegasus airlines Istanbul special offer Free This meant I change travels date
 ## [89] " Flight Antalya late due technical error I asked plane timing flight sitting rows decent comp
 ## [90] " Had bad experience customer service guy understand I ended giving charged seats I shouldnt ch
 ## [91] " I bought ticket Krasnodar Istanbul arrived airport flight simply exist airline warn flight T
 ## [92] " We booked ticket London Istanbul holiday July late February But COVID pandemic plans ruined V
 ## [93] " On March I purchased ticket fly Istanbul Turkey website There indication Turkey close border
 ## [94] " Due coronavirus flight cancelled Understandable Flight tickets reimbursed Understandable Two
 ## [95] " There online checkin website English Mobile application wont download Once completed issue s
 ## [96] " Sharjah Beirut Istanbul booked March Worst airline website Trying contact Pegasus Airlines d
 ## [97] " Doha Berlin Istanbul I flown Pegasus airlines times times Bag damaged I strong bag bag damag
 ## [98] " Due bad weather plane land Krasnodar airport plane rerouted Trabzon The problem stayed insid
 ## [99] " They cancelled flight return back Istanbul due airport problems leaving flight airline catch
 ## [100] " Very incompetent staff My flight Antalya Amsterdam connecting Reykjavik Icelandair The check
 ## [101] " Istanbul Stansted I wouldnt fly Pegasus Airlines BA I made book flight mins late gate closed
 ## [102] " Istanbul Kuwait I arrived airport hours half flight make plane I surprised arrived pegasus c
 ## [103] " Dubai Istanbul Worse company At check extra luggages I booked paid werent updated system wai
 ## [104] " Istanbul Ras Al Khaimah Never chose company Pay dont Pegasus They cancel flight send email a
 ## [105] " Me friend trip Antalya Stockholm October perfect I traveled dog cabin The staff excellent A s
 ## [106] " Istanbul Ankara Very capable smiling helpful diligent cabin crew Seat pitch good seating com
 ## [107] " Gazipasa Istanbul Let began cheap flight half hours Pegasus good option However consideration
 ## [108] " Istanbul Athens We PNRS luggages PNR means registered luggage charged extra explaining situat
 ## [109] " I disappointed flight staff overcharged luggage I paid extra luggage app I told I paid extra
 ## [110] " Tel Aviv Stansted Istanbul The flight TLVSAWSTN good As expect low cost company The service a
 ## [111] " Ive travelling wife Dubai Istanbul back I surprised price ticket checked reviews airline I a
 ## [112] " Dubai Tirana It time time I travel airline All souvenir Dubai baggage broken You blanket AC m
 ## [113] " Istanbul Rome The staff Istanbul boarding gate grabbed carryon luggage started weighing I su
 ## [114] " Dammam Copenhagen Istanbul This boring When wanted check baggage overweight bagage told pay l
 ## [115] " Dubai Istanbul Never life I faced rude staff place I preparing check returning flight Dubai
 ## [116] " Istanbul Sharja The worst airline Workers rude seat comfortable AC low people sweating You k
 ## [117] " Istanbul Dubai Worst airline world Extremely rude Paid luggage nut system Paid seats regular
 ## [118] " Istanbul Beirut Crew friendly plane delayed hours explanation Turbulence bad"
 ## [119] " Beirut Istanbul We left morning We stayed hours flight Istanbul offer free drink snack All d
 ## [120] " Trabzon Izmir Pegasus Airlines I rush online checkin But I give bag baggage check I late gro
 ## [121] " Amsterdam Doha Istanbul I traveled seat DF family It exit seats Seats narrow terrible flight
 ## [122] " The worst From Budapest Beirut Istanbul allowed kgs hand bag I carry bags I bag They made pay
 ## [123] " Izmir Trabzon Pegasus Airlines Flight fast good Most importantly time There treat airline fo
 ## [124] " First time flying Pegasus Airlines Very impressed I flew SHJSAWSTN outbound return route Airp
 ## [125] " Sharjah Amsterdam AnkaraIstanbul We passed registration handed luggage Pegasus employees han
 ## [126] " Stansted Athens Istanbul Decided give airline fare lastminute booking hour connection compar
 ## [127] " Amsterdam Beirut Istanbul Terrible customer service experience I flight transfer My bag kilo
 ## [128] " Istanbul Stansted Worst customer service Flight delayed hrs proper explanation aircraft clear
 ## [129] " Muscat Vienna Istanbul This worst airline I The flight delayed I missed connection cared The
 ## [130] " Dubai Istanbul Awful seats Not comfortable hours trip Dubai Istanbul No entertainment chairs
 ## [131] " Tel Aviv Budapest Istanbul Excellent staff service Our flight delayed due technical issues s
 ## [132] " On October I flew Beirut Marseille Istanbul Pegasus Airlines On transit stop I visit busines
 ## [133] " I flew Pegasus Beirut Istanbul week rude flight attendants It dirty aircraft dirty bathrooms
 ## [134] " Gatwick Dalaman I booked flight months travelling independently Turkey Pegasus price flight
 ## [135] " I recently flew Pegasus North Cyprus Turkey Taking advantage pre flight menu I ordered Mushr
 ## [136] " SAWSXF Boarding huge mess They announced people zone A board I zone B I waited called zone B
 ## [137] " Istanbul London It terrible experience I waiting queue check queue long I wait hour I finally
 ## [138] " Brussels Beirut Istanbul I avoid min delay broken seat customers terrible caused extra delay

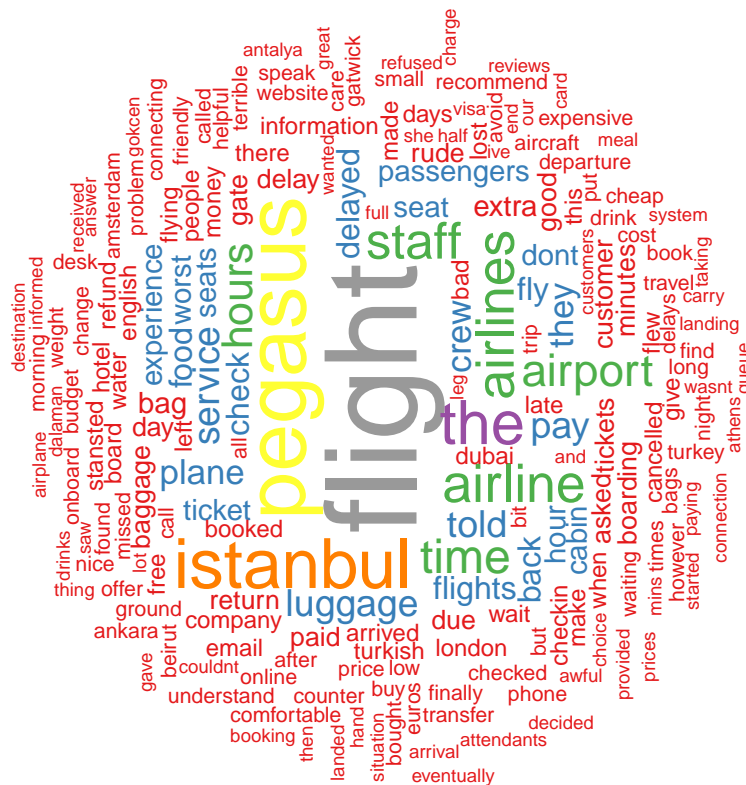
[139] " Dubai Stansted Istanbul Budget airline cramped uncomfortable flight entertainment neck pillow
 ## [140] " London Izmir You expect low company beats Took back issues flight late information communica
 ## [141] " Amman Antalya It terrible experience broke check bag expensive good quality bag And employee
 ## [142] " Stansted Dubai Istanbul Pegasus airline worst airline I encountered Although ticket wasnt exp
 ## [143] " Frankfurt Sharm El Sheikh return Istanbul The ground crew crew friendly professional The che
 ## [144] " Istanbul Zurich I approx flight Pegasus Airlines years delayed normal I understand people bu
 ## [145] " Istanbul Budapest This absolute worst airline flown I standing ticket check line line check
 ## [146] " Istanbul Athens If afford pay bit travel awful airline I check queue hours flight Athens hus
 ## [147] " Bishkek Vienna Istanbul My worst flight delayed slow chaotic No free food drinks hrs long fl
 ## [148] " Flew Pegasus Airlines Doha Stansted Sabihah Gokcen Not bad budget airline Both flights fairl
 ## [149] " Doha Amsterdam Istanbul Pegasus worst customer service airline Constant delays horribly uncon
 ## [150] " Bodrum Tehran Istanbul Me friend worst experience Pegasus Istanbul Gokcen Airport SAW staff
 ## [151] " The worst airline I travelled Flight delayed half hr explanation On boarding flight transpir
 ## [152] " Ercan Riyadh Istanbul Pegasus cheap airline expected I worse I expected First I wanted chang
 ## [153] " Madrid Athens Istanbul Awful experience Missed connecting flight Athens spending hours trans
 ## [154] " I returned holiday Pegasus flight Istanbul Stansted April My baggage arrive I spent weeks to
 ## [155] " I nervous fly Pegasus reviews hand luggage I ended pretty good trip flying The flight time c
 ## [156] " Bahrain Copenhagen Istanbul Cabin crew rude seats extremely uncomfortable recline space tigh
 ## [157] " Was due return leg flight Ankara Amman pm Flight delayed Then plane towed Then pm general hul
 ## [158] " Tehran Stansted Istanbul This airline seat small reclining Which make tired Food free The pe
 ## [159] " Berlin Istanbul Horrible airline importance customer happiness Super narrow seating small sp
 ## [160] " Samara Istambul The departure cancelled hour departure front desk defined Any compensation On
 ## [161] " Tel Aviv Istanbul The flight delayed departure apparent reason update online When I board pla
 ## [162] " Antalya Ankara Pegasus Airlines nightmare Just boarding time flight delayed hour Then hour p
 ## [163] " Stansted Istanbul The flight busy spaces overhead lockers put cabin baggage staff gate stewar
 ## [164] " Istanbul Gokcen London supposed depart The pilot announced minutes delay due disembarking lug
 ## [165] " Dubai Istanbul return Pegasus Airlines Worst flight seats small comfortable Aircraft No scre
 ## [166] " Beirut Amsterdam Istambul I bought ticket December option change return paying extra amount
 ## [167] " Dubai Athens Istanbul The worst experience life We waited hrs flight crew attendant simply t
 ## [168] " Faultless service Pegasus sectors Athens Bodrum Istanbul Brand planes time ANEO An extremely
 ## [169] " Stansted Abu Dhabi Istanbul If dirt cheap flight comfort airline That side Tried checkin hou
 ## [170] " Antalya Kuwait Istanbul Bad experience Pegasus Missed transfer flight airline staff assist p
 ## [171] " Athens Ankara Istanbul The reason I purchased ticket time suppose direct flight Months email
 ## [172] " Contrary postings happy I Pegasus Airlines Modern airplane Next Gen TCAIS Baghdad Berlin Ista
 ## [173] " Flew Pegasus Düsseldorf Istanbul The flight nightmare The cabin crew unfriendly smiling They
 ## [174] " This time I fly Pegasus Flew Barcelona Dubai Istanbul After carryons approved Barcelona Pega
 ## [175] " Brussels Charleroi Istanbul I travelled times airline years lastest experience pushed time w
 ## [176] " Beirut Paris Istanbul My time Pegasus Airlines Let begin helpful office Beirut I asked tick
 ## [177] " Istanbul Doha Pegasus Airlines The price good purchasing ticket online breeze I understand an
 ## [178] " Istanbul Gokcen London Gatwick I reluctant buy return ticket Istanbul Pegasus Airlines readi
 ## [179] " I connected flight ticket Amsterdam Zaporizhya Istanbul SAW The flight Amsterdam Istanbul fi
 ## [180] " This budget airline mind I problems Pegasus Airlines I paid USD London Gatwick IstanbulSGokce
 ## [181] " Antalya Frankfurt Istanbul SAW Pegasus Airlines The seat annoying accepted cheap flight tick
 ## [182] " Stansted Ercan Istanbul Pegasus Airlines First crew helpful spoke English The Pegasus Cafe bo
 ## [183] " London Stansted Gazipasa Istanbul Pegasus Airlines Appalled lack updates poor customer servi
 ## [184] " I fly Ankara Istanbul regularly week due job I fly Pegasus Airlines time due low fares I sat
 ## [185] " Dubai Dusseldorf Istanbul I disappointed company The flight supposed leave delayed times Ever
 ## [186] " London Gatwick Dalaman Pegasus Airlines Awful service received onboard staff rude unhelpful wa
 ## [187] " Manchester Dalaman problems They weigh hand luggage Only delay mins missed slot Cabin crew lin
 ## [188] " Do order online extras ticket make printscreens online orders print ticket detailsreceipt Al
 ## [189] " London Gatwick Istanbul Appalling service regard customer service Original flight delayed tal
 ## [190] " Istanbul Amman Ankara They interest helping customer case I purchase ticket times mistake rea
 ## [191] " Erbil Ankara I heard good things Pegasus Airlines I chose One things I purchase additional lug
 ## [192] " Cologne Tehran Istanbul This time husband I flew Pegasus Airlines fly anymore The customer s

[193] " My flight Bodrum Manchester cancelled Pegasus I found cancellation transfer company Contactin
 ## [194] " Checkin lines smoothly woman counter newer helpful order Zurich Strict cabin baggage Flight c
 ## [195] " Istanbul Prague Pegasus Airlines Checked online doesnt matter special lines bag drop The che
 ## [196] "London Gatwick Istanbul I arrived Gatwick Pegasus Airlines Istanbul flight I flown Istanbul d
 ## [197] " London Bodrum Istanbul Pegasus Airlines There passengers booking travelling friends making t
 ## [198] "Copenhagen Tel Aviv Istanbul First delayed missed connecting flight wait hours Istanbul The p
 ## [199] " Tel Aviv Dubai Istanbul I flew Pegasus flights days All awful The worst thing ridiculous lim
 ## [200] "Athens Dubai Istanbul Pegasus Airlines Worst flight experience The cabin crew rudest Ive exper
 ## [201] " We booked trip Stockholm Istanbul Amsterdam KLM checked weight allowed hand baggage accessory
 ## [202] " In September I short Istanbul Dalaman round trip Granted flight short I feel numb narrow sea
 ## [203] " Gatwick Sharm el Sheikh Istanbul Gokcen In time flying I experienced appalling catalogue ever
 ## [204] "Stansted Hurghada Istanbul Pegasus Avoid costs Staff rude They waiting hour Tarmac Istanbul a
 ## [205] "The worst flight life I flying Pegasus Airlines Zurich Athens Istanbul minutes delayed depart
 ## [206] "Oslo Istanbul Pegasus Airlines I bought advantage package checkedin luggage choice meal seat s
 ## [207] "Pegasus Airlines worst airline Ive flown Our flight Ercan Frankfurt cancelled contacted travel
 ## [208] "London Gatwick Bodrum Istanbul We ground Despite checking online printing boarding passes che
 ## [209] "Pegasus Airlines Madrid Dubai I recommend airline We arrive airport Madrid hours early line ch
 ## [210] "Geneva Istanbul Gokcen Pegasus Airlines worth choice dont Very tight seats barely space eat C
 ## [211] "Been years I fly Pegasus I give star opened direct link CPH AYT avoid Istanbul airports Tried
 ## [212] "Everything related flight Pegasus bad First Düsseldorf Airport minute delay Furthermore Istanbul
 ## [213] "Barcelona Istanbul Pegasus Airlines smoothly Cabin staff nice aircraft modern ground staff sm
 ## [214] "Very nice flight Dubai Stansted Istanbul Pagasus Airlines The staff Istanbul helpful arrivals
 ## [215] "Dubai Marseille Istanbul Pegasus Airlines worst airline I I booked paid breakfast I The organ
 ## [216] "We made mistake fly Berlin Schönefeld Dalaman Istanbul Pegasus Airlines The flight Berlin Ista
 ## [217] "Madrid Tbilisi Pegasus Airlines flying I checked reviews I started fear decision experience g
 ## [218] "Being expat Lebanon I back France I Pegasus rates attractive But truth worth hazards bear Onc
 ## [219] "Hassle free flight Paris Orly Istanbul Gokcen Check process easy pleased assigned exit row sea
 ## [220] "The Pegasus Airlines operators respond unable rebook return flight Sadly time facing trouble
 ## [221] "In October I booked Pegasus Airlines Oslo Antalya Istanbul return trip February March On Dec
 ## [222] "I absolutely appalled I treated Pegasus Airlines I flew Geneva lot customers missed flights P
 ## [223] "Pegasus Airlines service level low The reason choose landing Stansted house There price differ
 ## [224] "Stansted Dubai Istanbul If endure endless flight delays apology uncomfortable cramped seats r
 ## [225] "Moscow London Gatwick Istanbul I things Pegasus Airlines negative I frequent flyer Pegasus wor
 ## [226] "Stansted Dubai Istanbul Pegasus Airlines Worst airline I flown Flight Istanbul left minutes l
 ## [227] "Amsterdam Tel Aviv Istanbul I writing review I waiting line lost found My bad experience Pega
 ## [228] "Gatwick Istanbul return Pegasus Airlines The service outbound neutral good bad The plane exAi
 ## [229] "Copenhagen Krasnodar Istanbul My flight Pegasus Airlines alright due weather conditions theyv
 ## [230] "Istanbul Kuwait Pegasus Airlines They checked Handbags checkin counter provided tags accepted
 ## [231] "I booked flight Berlin SXF Sarajevo Istanbul SAW sadly due weather conditions Sarajevo plane
 ## [232] "Stansted Dalaman Istanbul Awful airline delayed Stansted bothered long As result miss connect
 ## [233] "At checkin counter attendant told I wanted airplane fine Right boarding airplane gate staff ch
 ## [234] "London Gatwick Kuwait Istanbul Pegasus Airlines A awful experience Long delays flights rude s
 ## [235] "Morning Pegasus Airlines flight Tel Aviv Istanbul Checkin process Ben Gurion airport smooth F
 ## [236] "I book flight Pegasus minute fly Hurghada Istanbul November What I reviews bad I choice purcha
 ## [237] "I flying Pegasus shorthaul routes cheap compared Turkish Airlines Since flights hour long I m
 ## [238] " hrs service Paris Orly Dalaman Istanbul delayed hr min Bad service terrible time food provide
 ## [239] "I expecting awful Pegasus Airlines turned nice experience I pre booked seat A euros comfortab
 ## [240] "One worst experiences The cabin staff hr mins serve middle plane working end All hear complain
 ## [241] "Prague Antalya Istanbul Pegasus Airlines For pre checkin select middle seats rear aircraft fr
 ## [242] "One hour departure Bishkek Delhi passangers informed flight Moscow technical problems departur
 ## [243] "Frankfurt Istanbul Pegasus Airlines A disorganized airline ground staff couldnt check visa re
 ## [244] "We Pegasus Airlines flight Bucharest Istanbul London They mins delay due technical issues hr
 ## [245] "Pegasus Airlines hit miss airline I Pegasus regularly inconsistent service offer The fares rea
 ## [246] "I return flight Stansted Ercan North Cyprus Istanbul October My return trip London October un

[247] "Dont fly Pegasus You saving money cost end We made reservation online email confirmation conf
 ## [248] "Having read reviews airline I booked tickets I bit concerned However delay Stansted flight fl
 ## [249] "Pegasus Airlines called days flights date flight flying option cancel flight schedule But dep
 ## [250] "Heard bad things prior flying Pegasus experience flying Beirut Stansted Gokcen great Both fli
 ## [251] "An Pegasus Airlines flight flight attendants friendly attentive We pleasantly welcomed onboard
 ## [252] "Pegasus Airlines flight Cologne Istanbul connecting flight delayed minutes Istanbul Dubai del
 ## [253] "Beware Pegasus Airlines On I purchased flight tickets Pegasus internet site The confirmed eTi
 ## [254] "Izmir Cappadocia Istanbul Pegasus Airlines worst service received airline We airline cancels
 ## [255] "Pegasus Airlines customer service My flight delayed hours Upon checking luggage agent mention
 ## [256] "Pegasus Airlines airport staff pure inept I sitting Istanbul SAW airport waiting flight Dalam
 ## [257] "We flew Pegasus Airlines Manchester Dalaman return We booked flights Travel Republic package
 ## [258] "Kayseri Zurich Gökçen Checkin Kayseri bit chaotic Transfer Gökçen Istanbul Both flights time
 ## [259] "I scheduled fly Cologne CGN Baku GYD My flight due leave delayed hours Causing miss connecting
 ## [260] "Our Pegasus Airlines flight Gatwick Dalaman offered bit leg room flights staff exceptionally
 ## [261] "I paid meals preflight Pegasus Airlines flight My details apparently passed children partner
 ## [262] "Pegasus cheapest worst airline fly Turkey There They answer complaints I flown times single t
 ## [263] "We supposed fly Pegasus Airlines Izmir Brussels Charleroi Istanbul Our flight leave Izmir arr
 ## [264] "London Sharm el Sheik return Istanbul direction Our Pegasus Airlines flights delayed ways hour
 ## [265] "Probably worst experiences I airline extremely poor customer service flights delayed cancelled
 ## [266] "I budget airline budget bad customer service I flew Gatwick Istanbul week return flight back
 ## [267] "What cattle market Awfully cramped terrible food drinks Service poor Announcements English gu
 ## [268] "Value money Seats comfortable low budget airlines I Gets AB comfortably Staff friendly attent
 ## [269] "Delays flight Check good London terrible Antalya Istanbul Staff competent hours flight delays
 ## [270] "Because long queue front international Checkin counters Pegasus Airlines missed Flight Istanbul
 ## [271] "If expect warm friendly service airline I smile flights I I boarding passenger flight attendan
 ## [272] "I flights booked Pegasus business vacation flights delayed minutes hour hour half Pegasus Air
 ## [273] "Incompetence main theme Plenty wasted time employees staring documents clue A family divided
 ## [274] "The staff welcoming ignoring passengers boarding goodbye left plane made effort There infligh
 ## [275] "Quite nightmare Tel Aviv London Istanbul Pegasus Our initial flight delayed hours staff gate
 ## [276] "Terrible hours delay plane When asked food water staff dont buy brochure When asked theyre le
 ## [277] "Ercan London Stansted Istanbul Gokcen Pegasus ground staff Ercan helpful My return flight mor
 ## [278] "My journey began London Stansted Kayseri Istanbul SAW Everything planned flight departed hour
 ## [279] "We landed Pegasus flight Istanbul Dubai On flight delayed cares The seats plane terrible On b
 ## [280] "Recently flew Munich TelAviv back It short flight pleasant enjoyable The staff board polite h
 ## [281] "No magazine film hectic staff I children We plane plane There food left feed children We call
 ## [282] "Currently sat tarmac Gatwick hour mins departure time boarded time pushed back hour ago Delay
 ## [283] "Flight delayed Madrid Istanbul Flight hot stuffy Seats small leg space narrow Prices food iter
 ## [284] "The flight delayed hours London information Passengers left information whatsoever Arriving I
 ## [285] "This airline reliable They cancelled original flight hours departure I reshcheduled flight dela
 ## [286] "Flew day airline Both times hour delay No refreshments flight lot commercials flight informat
 ## [287] "Good flight paid select seats ensuring seats wanted I bags checked fine end destination hour
 ## [288] "First time Ill fly airline cabin crew unfriendly unenthusiastic On flight hrs mins crew serve
 ## [289] "First time I flown I travelled wife toddler We thought boarded plane empty handed put hand l
 ## [290] "We flew Istanbul Gokcen airport Dalaman Izmir Sobeha Gokcen return Our experience generally p
 ## [291] "We flew Newcastle Dalaman May returned June I bit anxious reading reviews The surprise newish
 ## [292] "Arrived Stansted airport told UK flight Istanbul delayed quarters hour I miss connecting fligh
 ## [293] "We flew London Stanstead Istanbul eventually heading Dubai hr mins stop Istanbul The flight L
 ## [294] "Had return flight April IstanbulKayseri experience Pegasus I LCC I opportunity fly New aircra
 ## [295] "Have flight issue delays boarding procedures constant delays due late arrivals equipment fail
 ## [296] "Flew Pegasus part package holiday Bodrum I apprehensive I flyer heard airline Plane modern tr
 ## [297] "My trip Antalya Amsterdam Istanbul Pegasus bad disappointing The expected transfer time hour
 ## [298] "Before departure nightmare Not Pegasus responsibility Flight Izmir Ankara Plane gate At sched
 ## [299] "We flew number internal flights Pegasus trip Turkey international flights Istanbul Athens inc
 ## [300] "ATHSAWTZX B ATHSAW seat pitch great domestic flight SAWTZX seat pitch tight Friendly staff cal

```
#plotting Wordcloud
set.seed(1234)
wordcloud(words=wordCorpus, min.freq = 1, max.words = 200, random.order = FALSE, rot.per = 0.50, colors
```

```
## Warning in brewer.pal(10, "Set1"): n too large, allowed maximum for palette Set1 is 9
## Returning the palette you asked for with that many colors
```



```
pega_airlines<-data.frame(text=sapply(wordCorpus, as.character), stringsAsFactors = FALSE)
write.csv(pega_airlines, file="cleanPegasusDataset.csv", row.names = FALSE)
```

```
#Using "syuzhet" package
pega_sentiments<-get_sentiment(pega_airlines$text, method="syuzhet")

pega_finaldf<-cbind(pega_airlines, pega_sentiments)
```

```
#encodeSentiments function
encodeSentiment <- function(x) {
  if(x <= -0.5){
    "1) Very negative"
  }else if(x > -0.5 & x < 0){
    "2) Negative"
  }else if(x > 0 & x < 0.5){
    "4) Positive"
  }
}
```

```

}else if(x >= 0.5){
  "5) Very positive"
}else {
  "3) Neutral"
}
}

```

```

#positive and negative sentiments
pega_finaldf$pega_Sentiment<-sapply(pega_finaldf$pega_sentiments,encodeSentiment)

```

```

#plotting the (very negative to very positive)
library(dplyr)

```

```

##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union

```

```

count_sentiment<-pega_finaldf%>%
  count(pega_Sentiment)

count_sentiment

```

```

##      pega_Sentiment    n
## 1 1) Very negative 153
## 2      2) Negative   17
## 3      3) Neutral    2
## 4      4) Positive   19
## 5 5) Very positive 109

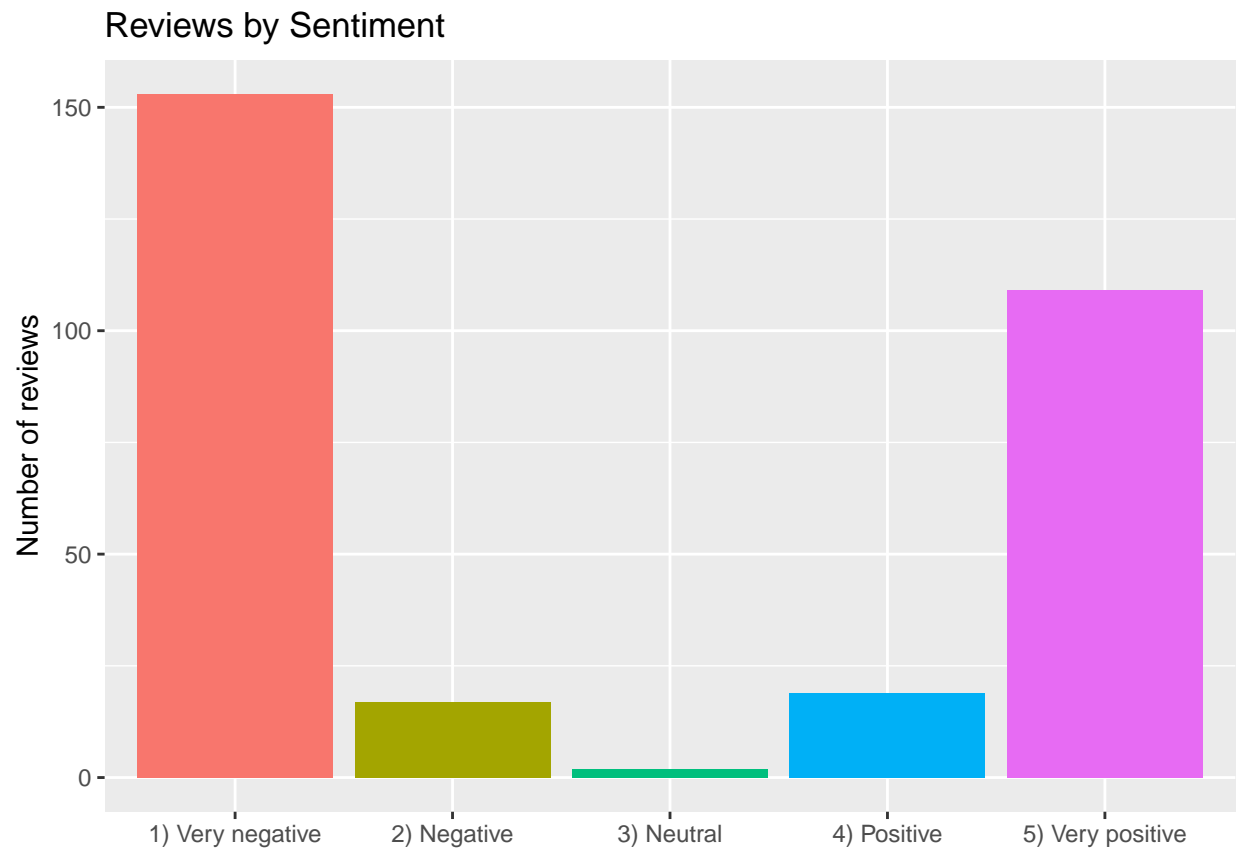
```

#We collected a total of 300 reviews categorized by sentiments. The bar plot illustrates five distinct .

```

ggplot(pega_finaldf, aes(pega_Sentiment, fill=pega_Sentiment))+geom_bar()+
  theme(legend.position = "none", axis.title.x = element_blank())+
  ylab("Number of reviews")+ggtitle("Reviews by Sentiment")

```



#In summary, our analysis leads us to the conclusion that the majority of reviews for the mentioned air

```
#changing columnnames
colnames(pega_finaldf)<-c("Reviews", "Reviews' Score", "Sentiments")
View(pega_finaldf)
write.csv(pega_finaldf, file="sentimentsPegasusDataset.csv", row.names = FALSE)
```