# BIRTHDATE - 08/01/1999

# QUESTION-1

# MAPPER

In [1]:
```
import string
# Opening the file1.txt file
txt_file = open("file1.txt", "r",encoding='utf-8')

# Creating an empty list to store the words
list_ = []

# Iterating over the lines in the file
for i in txt_file:

    # Removing the punctuation in the sentence
    i = i.translate(str.maketrans('','',string.punctuation))

    # Converting the sentence to lowercase
    i = i.lower()

    # Splitting the line into words
    words = i.split()

    # Removing empty strings from the list
    words = list(filter(lambda word: word, words))

    # Adding each word to the list of tuples, with a count of 1
    for word in words:
        list_.append((word, 1))

# Closing the file
txt_file.close()

# Sorting the list of tuples
sorted_list = sorted(list_, key=lambda x: x[0])
```

# REDUCER

In [2]:
```
# Initialize variables
current_word = None
count = 0
word = None

# Open text file to store output
with open('output1.txt', 'w') as output1:

    # Iterate over the sorted list of tuples
    for i in sorted_list:
```

```
        # Get the current word and count from the tuple
        word, count = i

        # If the current word is the same as the previous word, increment the count
        if current_word == word:
            word_count += count

        # Otherwise, if there is a previous word, print it and its count to the console
        else:
            if current_word:
                print(f'{current_word}\t{word_count}')
                output1.write(f'{current_word}\t{word_count}\n')

            # Set the current word and count to the new word and count
            word_count = count
            current_word = word

    # If there is a current word, print it and its count to the console and to the outp
    if current_word:
        print(f'{current_word}\t{word_count}')
        output1.write(f'{current_word}\t{word_count}\n')

# Close the output file
output1.close()
```

```
10      1
2       1
3       1
4       1
5       1
6       1
7       1
8       1
9       1
a       75
abandoning      1
able    1
about   6
absence 1
across  3
act     1
activity        1
after   1
again   5
against 1
age     1
ago     1
agreed  1
ajar    1
all     15
allow   1
allowed 1
almost  3
alone   2
already 1
although        1
always  2
am      3
amid    1
```

```
amounted        1
amused  1
an      4
and     76
announced       1
another 3
any     7
anymore 1
anyone  1
anything        2
anywhere        1
apart   1
apparently      1
appeared        1
are     4
around  3
arrested        1
arrived 1
as      20
ask     2
assumed 1
at      20
attempt 1
attempts        1
august  1
awoke   1
back    11
bad     3
bald    1
bar     2
barked  1
be      14
because 3
become  1
beds    1
been    15
before  4
being   4
believe 1
believed        1
belonged        1
better  1
bewilderment    1
beyond  1
bicycles        1
big     1
birthday        1
black   2
blast   1
blessing        1
boarded 1
bodies  3
bore    1
bottle  3
boy     5
boys    4
boy”    1
brandishing     1
breath  1
breathed        2
```

```
broke   1
broken  2
brow    1
bryce   4
building        1
buildup 1
buried  1
but     7
buy     1
by      4
called  3
came    2
can     3
cannot  1
care    2
cared   1
case    1
casting 1
caught  1
causes  1
cavernous       1
century 1
chair   2
changed 1
checking        1
churchyard      1
clear   2
climb   1
clink   1
cloak   1
closely 1
closer  4
cloud   1
clumsy  1
code    1
cold    6
come    1
comfortable     1
completely      1
concern 1
concerned       1
concluded       1
contend 1
continued       2
cook    3
corner  1
cottage 3
could   10
country 1
courage 1
cowardice       1
crackling       1
creep   2
cried   1
criminals       1
croakily        1
crowds  1
cup     3
cuppa   1
curiosity       2
```

```
damp    1
dare    1
dark    3
darkhaired      1
day     1
daybreak        1
days    3
dead    3
deaf    1
death   1
deaths  2
decay   1
decency 1
deeply  1
derelict        1
desert  1
details 1
determined      3
devotion        3
did     6
didn’t  1
didn’t” 1
difference      1
difficult       1
dingy   1
dinner  1
discuss 2
disguise        1
dislike 1
disrepair       1
distinctly      1
do      4
doctors 2
done    2
don’t   2
door    12
dot     2
dot”    1
doublechecking  1
doubt   1
doubted 1
down    3
downstairs      1
dragged 1
dramatically    1
drawing 1
dressed 1
drinks  1
drop    1
dug     1
dull    1
dust    1
duty    1
e       9
each    2
eagerly 1
ear     5
ears    1
earwax  1
ease    1
```

```
easily  1
edged   1
effective       1
effectively     1
either  2
elderly 1
else    3
embroidered     1
end     1
enough  1
enough” 1
entered 2
entrance        1
even    2
ever    5
every   3
everyone’s      1
everything      1
examined        1
exchanged       1
excited 1
excitement      1
explained       1
explore 1
expressions     1
eyes    1
face    2
fact    2
fall    1
family  3
far     3
fast    1
fearful 1
feeding 2
feel    2
feeling 1
feet    2
fell    1
fervently       1
fetch   1
few     4
fifty   1
filling 1
find    2
fine    2
finelooking     1
finger  2
fire    13
firesides       1
firmly  1
first   1
flickering      2
flinch  1
floor   2
flower  1
followed        1
following       1
fool    1
foolish 1
footsteps       1
```

```
for     24
forced  3
forcing 1
fourth  1
frank   35
frank’s 3
frightened      1
from    11
front   2
frustrated      1
full    1
fully   1
funny   1
furrowed        1
further 1
g       9
gap     1
garden  2
gardener        1
gardener’s      1
gardening       1
get     1
glimmering      1
glimpse 1
gnarled 1
go      3
goblet  9
going   2
gold    1
gone    1
good    1
gossip  1
got     1
grandest        1
grandparents    1
grasping        1
grate   1
graves  1
great   2
greatly”        1
groped  1
grounds 3
grownup 1
grunted 1
habit   1
had     44
hairs   1
half    1
hall    2
hands   1
hanged  2
hanging 1
hangleton       5
hangletons      1
happened        1
hard    4
hardly  1
harmed  1
harry   12
has     2
```

```
have    6
he      35
head    1
health  2
healthy 1
hear    3
heard   3
heavy   1
her     3
here    3
here”   1
he’d    1
hidden  1
highpitched     1
hill    2
him     14
himself 2
his     28
hiss    1
hissed  1
hold    1
hook    1
horrible        1
hotwater        1
hours   1
house   19
house”  1
how     3
however 2
hundred 1
hungry” 1
hurried 1
i       24
ice     1
icy     1
idea    1
identities      1
identity        1
if      8
ill disguised   1
impressive      1
in      36
inclined        1
incoherently    1
inhabitants     2
innocent        1
inserted        1
intently        1
into    13
intruders       1
invented        1
is      14
it      21
its     5
it”     1
ivy     2
i’m     2
i’ve    2
jk      9
journey 1
```

```
judging 1
just    2
keep    1
kept    2
kettle  2
key     4
kid     1
killed  2
kitchen 3
knee    1
knew    2
know    2
knowing 1
knows   1
landing 1
landlord        1
large   1
largest 1
last    1
lawns   1
lay     1
leave   4
leaving 1
leg     4
lest    1
let     2
lie     1
life    1
light   2
lighter 1
lights  1
like    3
liked   1
likes   1
limped  2
limping 1
listened        2
listening       2
lit     1
little  10
lived   4
lock    1
long    4
longer  1
look    3
looked  1
looking 1
looks   1
lord    6
lordship        2
lord”   3
lost    1
loud    1
made    2
magic   1
magic”  1
maid    2
make    1
makes   1
man     9
```

```
manor   1
many    5
man’s   1
may     1
me      11
meant   1
meddler 1
menace  1
merely  2
me”     3
midst   1
might   2
miles   1
milk    2
ministry        1
missing 1
mistrusted      1
mix     1
moderately      1
moment  1
months  1
more    11
morning 2
most    2
moving  1
mr      1
mrs     1
much    2
muffled 1
muggles 1
mullioned       1
murdered        1
murderer        2
murders 1
my      8
myself  1
nagini” 2
narrow  1
nasty   2
natural 1
near    1
nearing 1
neck    1
need    2
needed  1
neighboring     1
neither 2
nerve   1
nervously       1
never   2
nevertheless    1
new     1
next    2
night   6
no      10
nobody  5
nodding 1
noise   1
noiselessly     1
noises  1
```

```
none    2
nor     2
nostrils        1
not     9
note    2
nothing 5
notice  1
now     5
now”    1
nursing 1
objects 1
obsessed        1
obsession       1
odd     1
odder   1
odd”    1
of      67
off     1
offered 2
old     7
older   1
on      17
once    9
one     2
only    3
open    1
opened  1
or      5
other   1
out     6
over    5
overhead        1
overlooking     1
over”   2
owing   2
owned   1
owner   1
owners  1
p       9
paining 1
pale    1
parents 1
part    1
partly  1
passage 1
patch   1
pause   3
pay     1
people  5
perfect 1
perhaps 2
person  2
picked  2
place   4
places  1
plainly 2
plan    3
poisoned        1
police  8
potter  11
```

```
pottering       1
potter” 1
pouring 1
pretending      1
pricked 1
proceed 1
proof   1
propped 1
protected       1
protection      1
protracted      1
pub     2
punish  1
pushing 1
put     4
quality 1
questioning     1
quickly 1
quidditch       2
quiet   1
quietly 1
quite   2
reached 2
read    1
reason  1
reasons 1
reasons”        1
refilling       1
regained        1
regretting      1
relieved        1
remained        1
remember        2
remembered      1
removing        1
repeating       1
report  3
retire  1
returned        2
revolt  1
rewarded        1
rich    1
riddle  13
riddles 9
riddles’        5
right   3
rising  1
roaring 1
rob     1
rode    1
roof    1
room    3
rotated 1
roused  1
rowling 9
rude    1
run     1
rundown 1
rush    2
rusty   1
```

```
sad     1
said    18
same    2
saw     4
say     2
say”    1
scarce  1
scraping        1
screaming       1
second  6
seconds 1
secret  1
security        1
see     4
seem    1
seemed  1
seen    3
seethed 1
sense”  1
serious 1
set     2
seventyseventh 1
several 2
she     2
sherry  1
shocked 1
shone   1
short   1
shot    1
should  1
shudder 1
side    2
sight   1
sign    1
signs   1
silence”        1
silent  2
since   3
sink    1
sleeping        1
slice   1
slight  1
sliver  1
small   1
smell   1
smooth  1
snobbish        1
so      10
softly  2
some    2
something       6
son     1
soon    1
sorts   1
sound   2
sounded 1
sounding        1
spare   1
sparse  1
speak   1
```

```
spies   1
spoke   4
spreading       1
sputtering      1
squeakily       1
stabbed 1
stairs  1
stand   1
standing        1
started 4
starting        1
station 1
stay    1
stayed  2
step    1
stick   5
stiff   1
stiffer 1
stiffness       1
still   9
stone   1
stones  1
stood   2
stopped 2
story   1
strange 1
strangely       1
stranger        1
strangled       1
stronger        2
stubbornly      1
substitute      1
such    1
sudden  1
suddenly        1
suffocated      1
suggestion      1
suitable        1
summer’s        1
summoned        1
suppress        1
sure    3
surface 1
surprise        1
surprised       1
surrounding     1
survive 1
suspicion       1
taken   1
tale    1
task    1
team    1
teenage 1
telephone       1
tell    2
temper” 1
tend    1
terror  1
than    4
that    25
```

```
that’s  1
the     209
their   11
them    4
then    9
then”   2
there   11
these   3
they    12
thick   1
thing   1
things  2
things” 1
think   2
thirteen        1
this    6
thoroughly      1
though  5
thought 3
three   3
through 2
throwing        1
tightened       1
tiles   1
times   2
timid   1
tired   1
to      62
told    1
tom     1
tone    1
too     1
took    1
topics  1
tormented       1
touch   1
toward  2
town    1
trade   1
true    1
truth   1
try     1
trying  1
tumbling        1
turned  4
twice   1
two     2
unchecked       1
under   1
understand      1
unmistakable    1
unoccupied      1
unpopular       1
until   2
unusual 1
up      7
upon    3
upper   1
upstairs        1
use     4
```

```
using   1
version 1
very    10
vigorously      1
village 8
villagers       4
voice   13
voices  1
volunteer       1
wait    1
waited  1
wait”   1
walking 3
wall    1
wanted  1
war     2
was     35
wasted  1
watch   1
way     1
we      7
wealthy 2
wearing 1
wearisome       1
weather 1
weeds   2
week”   1
well    2
went    1
were    12
what    4
when    9
where   2
which   4
while   3
whisper 1
who     5
whoever 1
whole   2
why     1
wide    1
will    7
wind    1
windows 6
wish    1
witch   1
with    8
within  1
without 2
wizard  2
wizards 1
wizard” 1
woke    1
woman   2
wonder  1
word    2
words   2
worked  1
working 1
world   4
```

```
wormtail        9
wormtail”       3
worse   2
would   6
wouldn’t        1
wrong   2
wwwztcprepcom   16
years   4
yelling 1
yet     1
you     22
your    2
–       9
—       17
—”      6
’s      1
“       1
“a      1
“ah     1
“always 1
“and    2
“because        1
“but    1
“certainly      1
“creepy”        1
“do     1
“forgive        1
“frank” 1
“he     1
“horrible       1
“i      9
“it     1
“later” 1
“laying 1
“liar”  1
“lying  1
“ministry       1
“move   1
“muggles”       1
“my     4
“never” 1
“no     1
“perhaps        1
“quidditch”     1
“she    1
“tax    1
“that   1
“the    3
“there  1
“there’s        1
“told   1
“unfriendly     1
“war    1
“where  1
“who    1
“without        1
“wizards”       1
“wormtail       1
“you    1
“your   2
```

```
…       1
…”      6
```

# QUESTION - 2

In [14]:
```
pip install pyenchant
```

```
Collecting pyenchant
  Downloading pyenchant-3.2.2-py3-none-win_amd64.whl (11.9 MB)
Installing collected packages: pyenchant
Successfully installed pyenchant-3.2.2
Note: you may need to restart the kernel to use updated packages.
```

# MAPPER

In [5]:
```
import enchant
import string

# Create a dictionary object for the English language
dictionary = enchant.Dict("en_US")

# Open a text file 'file2.txt' for reading with UTF-8 encoding
txt_file = open("file2.txt", "r", encoding='utf-8')

list_ = []  # Create an empty list to store words and their counts

# Iterate through each line in the text file
for line in txt_file:
    # Remove punctuation from the line
    line = line.translate(str.maketrans('', '', string.punctuation))

    # Split the line into words
    words = line.split()

    # Iterate through each word in the list of words
    for word in words:
        if word:
            # Check if the word is an English word using the Enchant library
            if not dictionary.check(word):
                # If the word is not an English word, add it to the list with a count o
                list_.append((word, 1))

# Close the text file
txt_file.close()

# Sort the list of non-English words and their counts in alphabetical order
sort_list = sorted(list_, key=lambda x: x[0])
```

# REDUCER

In [6]:
```
current_word = None          # Initialize the current_word to None
word_count = 0               # Initialize word_count to 0
word = None
```

```
# Open a text file 'output2.txt' for writing the output
with open('output2.txt', 'w') as output2:
    for i in sort_list:         # Iterate through the sorted list of non-English words a
        word, count = i        # Extract the word and its count from the tuple

        if current_word == word:
            # If the current word is the same as the previous one, increment the word_c
            word_count += count
        else:
            if current_word:
                # If there's a change in the word, print the word and its count
                print('%s\t%s' % (current_word, word_count))
                # Write the word and its count to the 'output2.txt' file
                output2.write(f'{current_word} \t {word_count} \n')
            word_count = count
            current_word = word

    # After the loop, handle the last word and its count
    if current_word == word:
        print('%s\t%s' % (current_word, word_count))
        output2.write(f'{current_word} \t {word_count} \n')

# Close the 'output2.txt' file
output2.close()
```

```
AllPurpose      1
AntiBurglar     1
Apparating      1
Bagman’s        1
Barty   2
Christmas”      1
Dad”    1
Disapparated    1
Dobby’s 2
Dobby”  1
Firebolts       1
Gladrags        1
Harry”  1
Hermione        4
Hermione’s      1
Hogsmeade       1
JK      9
Krum    2
Malfoy  1
MrWeasley       1
Omnioculars     3
Potter” 3
QUIDDITCH       1
Skower’s        1
Viktor  1
Weasley 7
Weasleys        1
Weasley’s       1
Weatherby”      2
Winky   9
Wizardwear      1
YouKnowWho      1
about”  1
am”     1
```

```
batlike 1
bother” 1
busy”   1
commentating”   1
details”        1
each”   1
end”    1
enough” 2
free”   1
fun”    1
goblin” 1
go”     2
halfhidden      1
halfoctave      1
heights”        1
he”     1
him”    2
houseelf        3
houseelf”       2
it”     2
kids’ll 1
knew”   1
know”   2
lantern lit     1
later”  1
match’  1
mind”   1
not”    1
now”    1
paid”   1
pairs”  1
playbyplay      1
pretence        1
purpleandgilt   1
saleswizard     1
seats”  1
show”   1
sir”    7
them”   1
these”  1
they”   1
this”   1
thousand”       1
time”   1
undrunk 1
velvetcovered   1
watching”       1
weirder”        1
wwwztcprepcom   15
–       9
—       15
—”      5
‘A      1
“       1
“Ah     1
“And    1
“Been   1
“But    2
“Come   1
“Did    1
```

```
“Dobby  1
“Dobby” 1
“Fair   1
“For    1
“Freedom        1
“Harry  2
“He     1
“Houseelves     3
“How    1
“How’s  1
“I      2
“Ideas  1
“It’s   2
“I’m    1
“Knew   1
“Ludo   1
“Master 1
“Ministry       1
“Mr     1
“My     1
“National       1
“No     2
“Oh     3
“Omnioculars”   1
“Oooh   1
“Paying”        1
“Prime  1
“Seats  1
“See    1
“So     1
“Sorry” 1
“Thank  1
“They’ve        1
“Three  1
“Top    1
“We     1
“Weird  1
“Well   2
“What   1
“What’s 2
“Why    1
“Why’s  1
“Why”   1
“Wild”  1
“Winky  1
“Wish   1
“Wow    1
“Yeah   1
“You    3
“You’ll 2
“ah     1
“but    1
”       2
…       12
…”      1
```

In [ ]: