Strings - Execrise

In [1]:

```
text = """The University of Hawaii began using radio to send digital information as early a
Friedhelm Hillebrand conceptualised SMS in 1984 while working for Deutsche Telekom. Sitting
Hillebrand typed out random sentences and counted every letter, number, punctuation, and sp
Almost every time, the messages contained fewer than 160 characters, thus giving the basis
limit one could type via text messaging. With Bernard Ghillebaert of France Télécom, he dev
a proposal for the GSM (Groupe Spécial Mobile) meeting in February 1985 in Oslo.
The first technical solution evolved in a GSM subgroup under the leadership of Finn Trosby.
It was further developed under the leadership of Kevin Holley and Ian Harris (see Short Mes
SMS forms an integral part of SS7 (Signalling System No. 7). under SS7, it is a "state" wit
coded in the ITU-T "T.56" text format, that has a "sequence lead in" to determine different
and may have special character codes that permits, for example, sending simple graphs as te
This was part of ISDN (Integrated Services Digital Network) and since GSM is based on this,
made its way to the mobile phone. Messages could be sent and received on ISDN phones,
and these can send SMS to any GSM phone. The possibility of doing something is one thing,
implementing it another, but systems existed from 1988 that sent SMS messages to mobile pho
```

How many characters in text

In [2]:

```
# CODE HERE
```

In [3]:

```
print(len(text))
```

```
1507
```

How many words are there in the "text"

In [4]:

```
# CODE HERE
```

In [5]:

```
len(text.split())
```

Out[5]:

```
244
```

How many unique words in the "text"

In [6]:

```
# CODE HERE
```

In [7]:

```
set1 = set(text)
print(len(set1))
```

```
57
```

Find Lexical diversity

lexical_diversity = (number of words)/(number of unique words)

In [8]:

```
number_of_words        = len(text.split())
number_of_unique_words = len(set1)
lexical_diversity      = (number_of_words/number_of_unique_words)
print(lexical_diversity)
```

```
4.280701754385965
```

Count how many "the" in text

In [9]:

```
# CODE HERE
```

In [10]:

```
z1 = text.upper()
b = z1.count('the'.upper())
print(b)
```

```
14
```

Count how many "a" in text

In [11]:

```
c = z1.count('a'.upper())
print(c)
```

```
92
```

Extract First 10 words in text

In [12]:

```
# CODE HERE
```

In [13]:

```
list1 = list(text.split())
a = list1[0:10]
str1 = ' '.join(a)
print(str1)
```

```
The University of Hawaii began using radio to send digital
```

Append " Innomatics Technology Hub" in first 10 words

In [14]:

```
# CODE HERE
```

In [15]:

```
list1[0]= 'Innomatics'
list1[1]= 'Technology'
list1[2]= 'Hub'
str2 = ' '.join(list1[0:10])
print(str2)
```

```
Innomatics Technology Hub Hawaii began using radio to send digital
```

Extract First Fourteen (14) character in text

In [16]:

```
# CODE HERE
```

In [17]:

```
text[0:14]
```

Out[17]:

```
'The University'
```

Extract first Fourteen (14) words in text

In [18]:

```
# CODE HERE
```

In [19]:

```
str3 = ' '.join(list1[0:15])
print(str3)
```

```
Innomatics Technology Hub Hawaii began using radio to send digital informati
on as early as 1971,using
```

Extract First 10 words in text

- Convert every letter into ***upper*** case
- Convert every letter into ***lower*** case

In [20]:

```
# CODE HERE
```

In [21]:

```
str4 = ' '.join(list1[0:10])
print(str4.upper())
```

```
INNOMATICS TECHNOLOGY HUB HAWAII BEGAN USING RADIO TO SEND DIGITAL
```

In [22]:

```
# CODE HERE
```

In [23]:

```
str4 = ' '.join(list1[0:10])
print(str4.lower())
```

```
innomatics technology hub hawaii began using radio to send digital
```

> Find the list of letter starting with

- u
- o

In [24]:

```
# CODE HERE
```

In [25]:

```
str1 = 'u'
l1 = text.split()
l2 = [i for i in l1 if i[0].lower() == str1.lower()]
print(set(l2))
```

```
{'using', 'University', 'under'}
```

In [26]:

```
str1 = 'o'
l1 = text.split()
l2 = [i for i in l1 if i[0].lower() == str1.lower()]
print(set(l2))
```

```
{'one', 'of', 'on', 'out', 'Oslo.'}
```

> Find the list of letter ending with

- e
- n

In [27]:

```
# CODE HERE
```

In [28]:

```
str1 = 'e'
l1 = text.split()
l2 = [i for i in l1 if i[-1].lower() == str1.lower()]
print(set(l2))
```

```
{'these', 'since', 'The', '(see', 'simple', '(compare', 'one', 'while', 'Deu
tsche', 'have', 'Message', 'be', '"sequence', 'determine', 'type', 'languag
e', 'mobile', 'made', 'he', '(Groupe', 'France', 'the'}
```

In [29]:

```
str1 = 'n'
l1 = text.split()
l2 = [i for i in l1 if i[-1].lower() == str1.lower()]
print(set(l2))
```

```
{'in', 'ISDN', 'an', 'began', 'Kevin', 'information', 'on', 'Finn', 'Ian',
'can', 'solution', 'than'}
```

Extract first 10 words of text and Capitalize first letter of each word

In [30]:

```
# CODE HERE
```

In [31]:

```
list3 = list(text.split())
a1 = ' '.join(list3[0:10])
print(a1.title())
```

```
The University Of Hawaii Began Using Radio To Send Digital
```

Replace the word "University" with name "Innomatics" in text

In [32]:

```
# CODE HERE
```

In [33]:

```
list4 = list(a1.split())
list4[1] = 'Innomatics'
a2 = ' '.join(list4)
print(a2)
```

```
The Innomatics of Hawaii began using radio to send digital
```

Replace the word "University" with name "Innomatics" in text

In [34]:

```
# CODE HERE
```

In [35]:

```
lst = text.split()
lst[1] = 'Innomatics'
s= ' '.join(lst)
print(s)
```

```
The Innomatics of Hawaii began using radio to send digital information as ea
rly as 1971,using ALOHAnet. Friedhelm Hillebrand conceptualised SMS in 1984
while working for Deutsche Telekom. Sitting at a typewriter at home, Hillebr
and typed out random sentences and counted every letter, number, punctuatio
n, and space. Almost every time, the messages contained fewer than 160 chara
cters, thus giving the basis for the limit one could type via text messagin
g. With Bernard Ghillebaert of France Télécom, he developed a proposal for t
he GSM (Groupe Spécial Mobile) meeting in February 1985 in Oslo. The first t
echnical solution evolved in a GSM subgroup under the leadership of Finn Tro
sby. It was further developed under the leadership of Kevin Holley and Ian H
arris (see Short Message Service). SMS forms an integral part of SS7 (Signal
ling System No. 7). under SS7, it is a "state" with a 160 character data, co
ded in the ITU-T "T.56" text format, that has a "sequence lead in" to determ
ine different language codes, and may have special character codes that perm
its, for example, sending simple graphs as text. This was part of ISDN (Inte
grated Services Digital Network) and since GSM is based on this, made its wa
y to the mobile phone. Messages could be sent and received on ISDN phones, a
nd these can send SMS to any GSM phone. The possibility of doing something i
s one thing, implementing it another, but systems existed from 1988 that sen
t SMS messages to mobile phones (compare ND-NOTIS).
```

Convert the "text" into sentances and store that into sentance

In [36]:

```
# CODE HERE
```

In [37]:

```
text
a = text.split('.')
print(a)
```

```
['The University of Hawaii began using radio to send digital information as
early as 1971,using ALOHAnet', ' \nFriedhelm Hillebrand conceptualised SMS i
n 1984 while working for Deutsche Telekom', ' Sitting at a typewriter at hom
e, \nHillebrand typed out random sentences and counted every letter, number,
punctuation, and space', ' \nAlmost every time, the messages contained fewer
than 160 characters, thus giving the basis for the \nlimit one could type vi
a text messaging', ' With Bernard Ghillebaert of France Télécom, he develope
d \na proposal for the GSM (Groupe Spécial Mobile) meeting in February 1985
in Oslo', ' \nThe first technical solution evolved in a GSM subgroup under t
he leadership of Finn Trosby', ' \nIt was further developed under the leader
ship of Kevin Holley and Ian Harris (see Short Message Service)', ' \nSMS fo
rms an integral part of SS7 (Signalling System No', ' 7)', ' under SS7, it i
s a "state" with a 160 character data, \ncoded in the ITU-T "T', '56" text f
ormat, that has a "sequence lead in" to determine different language codes,
\nand may have special character codes that permits, for example, sending si
mple graphs as text', ' \nThis was part of ISDN (Integrated Services Digital
Network) and since GSM is based on this, \nmade its way to the mobile phon
e', ' Messages could be sent and received on ISDN phones, \nand these can se
nd SMS to any GSM phone', ' The possibility of doing something is one thing,
\nimplementing it another, but systems existed from 1988 that sent SMS messa
ges to mobile phones (compare ND-NOTIS)', '']
```

1.From the above sentance remove '\n'

2. From the above sentace print the first word from each sentance

3. From the above sentace print even posioned sentances

In [38]:

```
#REMOVING \N FROM SENTENCE
b = text.strip()
print(b)
```

```
The University of Hawaii began using radio to send digital information as ea
rly as 1971,using ALOHAnet.
Friedhelm Hillebrand conceptualised SMS in 1984 while working for Deutsche T
elekom. Sitting at a typewriter at home,
Hillebrand typed out random sentences and counted every letter, number, punc
tuation, and space.
Almost every time, the messages contained fewer than 160 characters, thus gi
ving the basis for the
limit one could type via text messaging. With Bernard Ghillebaert of France
Télécom, he developed
a proposal for the GSM (Groupe Spécial Mobile) meeting in February 1985 in O
slo.
The first technical solution evolved in a GSM subgroup under the leadership
of Finn Trosby.
It was further developed under the leadership of Kevin Holley and Ian Harris
(see Short Message Service).
SMS forms an integral part of SS7 (Signalling System No. 7). under SS7, it i
s a "state" with a 160 character data,
coded in the ITU-T "T.56" text format, that has a "sequence lead in" to dete
rmine different language codes,
and may have special character codes that permits, for example, sending simp
le graphs as text.
This was part of ISDN (Integrated Services Digital Network) and since GSM is
based on this,
made its way to the mobile phone. Messages could be sent and received on ISD
N phones,
and these can send SMS to any GSM phone. The possibility of doing something
is one thing,
implementing it another, but systems existed from 1988 that sent SMS message
s to mobile phones (compare ND-NOTIS).
```

In [39]:

```
a1 = []
a2 = []
a3 = []
for i in a:
    b1 = i.lstrip(" \n")
    a1.append(b1)
for j in a1:
    b2 = j.split(" ")
    a2.append(b2)
for k in a2:
    b3 = k[0]
    a3.append(b3)
print(a3)
```

```
['The', 'Friedhelm', 'Sitting', 'Almost', 'With', 'The', 'It', 'SMS', '7)',
'under', '56"', 'This', 'Messages', 'The', '']
```

In [40]:

```
#PRINTING EVEN POSITIONED SENTENCES
for i in range(0,len(a)+1):
    if i%2 == 0:
        print(a[i])
```

```
The University of Hawaii began using radio to send digital information as ea
rly as 1971,using ALOHAnet
 Sitting at a typewriter at home,
Hillebrand typed out random sentences and counted every letter, number, punc
tuation, and space
 With Bernard Ghillebaert of France Télécom, he developed
a proposal for the GSM (Groupe Spécial Mobile) meeting in February 1985 in O
slo

It was further developed under the leadership of Kevin Holley and Ian Harris
(see Short Message Service)
 7)
56" text format, that has a "sequence lead in" to determine different langua
ge codes,
and may have special character codes that permits, for example, sending simp
le graphs as text
 Messages could be sent and received on ISDN phones,
and these can send SMS to any GSM phone
```

If the following string is given as input to the program:

- H1e2l3l4o5w6o7r8l9d

Then, the output of the program should be:

- Helloworld

In [41]:

```
# CODE HERE
s = 'H1e2l3l4o5w6o7r8l9d'
a = ''
for i in s:
    if i.isalpha():
        a += str(i)
print(a)
```

```
Helloworld
```