

# DSBDAL Assignment 9 - Shivendra Bhonsle

In [1]:

```
# importing required libraries to access web pages

from bs4 import BeautifulSoup as bs
import requests
```

## EXTRACT AND CLEAN THE DATA

In [2]:

```
# store url to acces
link = 'https://www.amazon.in/OnePlus-Mirror-Black-128GB-Storage/product-reviews/B07DJHV6VZ'
```

In [3]:

```
# perform GET operation on chosen url
page = requests.get(link)
```

In [4]:

```
# check response code of the operation, 200 means OK
page
```

Out[4]:

<Response [200]>

In [5]:

```
# check unformatted page content
page.content
```

Out[5]:

```
b'<!doctype html><html lang="en-in" class="a-no-js" data-19ax5a9jf="ding
o"><!-- sp:feature:head-start -->\n<head><script>var aPageStart = (new Dat
e()).getTime();</script><meta charset="utf-8"/>\n<!-- sp:end-feature:head-
start -->\n\n<!-- sp:feature:cs-optimization -->\n<meta http-equiv=\'x-dns
-prefetch-control\' content=\'on\'>\n<link rel="dns-prefetch" href="http
s://images-eu.ssl-images-amazon.com">\n<link rel="dns-prefetch" href="http
s://m.media-amazon.com">\n<link rel="dns-prefetch" href="https://completio
n.amazon.com">\n<!-- sp:end-feature:cs-optimization -->\n\n<!-- sp:featur
e:ui-assets -->\n<link rel="stylesheet" href="https://images-eu.ssl-image
s-amazon.com/images/I/11EIQ5IGqaL._RC|01ZTHTZ0bnL.css,41wZkyTaWoL.css,31Y8
m1dzTdL.css,013z33uKh2L.css,017DsKjNQJL.css,0131vqWP5UL.css,41EW001BJ9L.cs
s,11TIuySqr6L.css,01ElnPIdxWL.css,11bGSgD5pDL.css,01Dm5eKVxwL.css,01IdKcBu
AdL.css,01y-XA1I+2L.css,21N4kUH7pxL.css,01oDR3IULNL.css,41CYNpGpGlrL.css,01
XPHJk60-L.css,114y0SIP+yL.css,21aPhFy+riL.css,11gneA3MtJL.css,21fecG8pUzL.
css,01ulGzBW88L.css,01CFUgsA-YL.css,31C80IiXaLL.css,11qour3ND0L.css,11gKCC
KQV+L.css,11061HxnEvL.css,11oHt2HYxnL.css,013RDhw9hoL.css,11JQtnL-6eL.css,
116v6uYvN6L.css,11jtXRmpwL.css,01QrWuRrZ-L.css,21zuRztKjtL.css,11QyqG8yiq
L.css.11K24e07p4L.css.11F2+0B7l vL.css.01890+Vwk8L.css.11Y05DTFl 6L.css.01ch
```

In [6]:

```
# use BeautifulSoup to parse the unformatted content as html
soup = bs(page.content, 'html.parser')
```

In [7]:

```
# prettify the html formatted content
print(soup.prettify())
```

```
<!DOCTYPE html>
<html class="a-no-js" data-19ax5a9jf="dingo" lang="en-in">
  <!-- sp:feature:head-start -->
  <head>
    <script>
      var aPageStart = (new Date()).getTime();
    </script>
    <meta charset="utf-8"/>
    <!-- sp:end-feature:head-start -->
    <!-- sp:feature:cs-optimization -->
    <meta content="on" http-equiv="x-dns-prefetch-control"/>
    <link href="https://images-eu.ssl-images-amazon.com" rel="dns-prefetch"/>
  >
    <link href="https://m.media-amazon.com" rel="dns-prefetch"/>
    <link href="https://completion.amazon.com" rel="dns-prefetch"/>
    <!-- sp:end-feature:cs-optimization -->
    <!-- sp:feature:ui-assets -->
    <link href="https://images-eu.ssl-images-amazon.com/images/I/11EIQ5IGqa
L._RC|01ZTHTZ0bnL.css,41wZkyTaWoL.css,31Y8m1dzTdL.css,013z33uKh2L.css,017D
sKjNQJL.css,0131vqWP5UL.css,41EW001BJ9L.css,11TIuySqr6L.css,01ElnPIdxWL.css,11bGSgD5pDL.css,01Dm5eKVxwL.css,01IdKcBuAdL.css,01y-XA1I+2L.css,21N4kUH7pxL.css,01oDR3IULNL.css,41CYNpGpGlrL.css,01XPHJk60-L.css,114y0SIP+yL.css,21aPhFy+riL.css,11gneA3MtJL.css,21fecG8pUzL.css,01ulGzBW88L.css,01CFUgsA-YL.css,31C80IiXaLL.css,11qour3ND0L.css,11gKCCKQV+L.css,11061HxnEvL.css,11oHt2HYxnL.css,013RDhw9hoL.css,11JQtnL-6eL.css,116v6uYvN6L.css,11jtXRmpwL.css,01QrWuRrZ-L.css,21zuRztKjtL.css,11QyqG8yiqL.css.11K24e07p4L.css.11F2+0B7l vL.css.01890+Vwk8L.css.11Y05DTFl 6L.css.01ch
```

In [8]:

```
# based off the HTML class names, extract required data (here, names of the reviewers)
names = soup.find_all('span', class_='a-profile-name')
```

In [9]:

```
# display the extracted html data
names
```

Out[9]:

```
[<span class="a-profile-name">Tanmay Shukla</span>,
 <span class="a-profile-name">Surbhi Garg</span>,
 <span class="a-profile-name">Tanmay Shukla</span>,
 <span class="a-profile-name">Surbhi Garg</span>,
 <span class="a-profile-name">klknow</span>,
 <span class="a-profile-name">abdulkadir garari</span>,
 <span class="a-profile-name">Anshu K.</span>,
 <span class="a-profile-name">Anshu K.</span>,
 <span class="a-profile-name">Regidi Mahesh Dora</span>,
 <span class="a-profile-name">nagaraj s.</span>,
 <span class="a-profile-name">Aakash Sinha</span>,
 <span class="a-profile-name">Aakash Sinha</span>,
 <span class="a-profile-name">Mumtaz Alam</span>,
 <span class="a-profile-name">Mumtaz Alam</span>,
 <span class="a-profile-name">Vaibhav Narvaria</span>]
```

In [10]:

```
# extract all names
cust_name = []
for i in range(0, len(names)):
    cust_name.append(names[i].get_text())
cust_name
```

Out[10]:

```
['Tanmay Shukla',
 'Surbhi Garg',
 'Tanmay Shukla',
 'Surbhi Garg',
 'klknow',
 'abdulkadir garari',
 'Anshu K.',
 'Anshu K.',
 'Regidi Mahesh Dora',
 'nagaraj s.',
 'Aakash Sinha',
 'Aakash Sinha',
 'Mumtaz Alam',
 'Mumtaz Alam',
 'Vaibhav Narvaria']
```

In [11]:

```
cust_name.pop(0)
```

Out[11]:

```
'Tanmay Shukla'
```

In [12]:

```
cust_name
```

Out[12]:

```
['Surbhi Garg',  
'Tanmay Shukla',  
'Surbhi Garg',  
'klknow',  
'abdulkadir garari',  
'Anshu K.',  
'Anshu K.',  
'Regidi Mahesh Dora',  
'nagaraj s.',  
'Aakash Sinha',  
'Aakash Sinha',  
'Mumtaz Alam',  
'Mumtaz Alam',  
'Vaibhav Narvaria']
```

In [13]:

```
cust_name.pop(0)
```

Out[13]:

```
'Surbhi Garg'
```

In [14]:

```
cust_name
```

Out[14]:

```
['Tanmay Shukla',  
'Surbhi Garg',  
'klknow',  
'abdulkadir garari',  
'Anshu K.',  
'Anshu K.',  
'Regidi Mahesh Dora',  
'nagaraj s.',  
'Aakash Sinha',  
'Aakash Sinha',  
'Mumtaz Alam',  
'Mumtaz Alam',  
'Vaibhav Narvaria']
```

In [15]:

```
# extract the title of every review  
title = soup.find_all('a',class_='review-title-content')
```

In [16]:

```
# display extracted title html content
title
```

Out[16]:

```
[<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/RG5
2NAY3E12BR?ASIN=B07DJHV6VZ">
  <span>Flagship Killer</span>
</a>,
<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/R1E
E0UTB5657D6?ASIN=B07DJHV6VZ">
  <span>Camera quality is very poor.</span>
</a>,
<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/R33
GOMNOW0H21X?ASIN=B07DJHV6VZ">
  <span>Dead on arrival</span>
</a>,
<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/R22
HPI22GRD028?ASIN=B07DJHV6VZ">
  <span>Not worth to buy 6T</span>
</a>,
<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/RP8
4LWZU2465S?ASIN=B07DJHV6VZ">
  <span>Beautiful phone</span>
</a>,
<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/R8R
FWZ3LN6RS?ASIN=B07DJHV6VZ">
  <span>NO WAY GOING TO BE A CUSTOMER OF A COMPANY (Oneplus6T) THAT CANNOT GE
T NEW CUSTOMER SERVICE CORRECT</span>
</a>,
<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/R17
C4CZRJA22GP?ASIN=B07DJHV6VZ">
  <span>Awesome value for the money</span>
</a>,
<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/R3E
54TMP6XTNA4?ASIN=B07DJHV6VZ">
  <span>OnePlust 6T McLaren Edition - Salute to Speed!</span>
</a>,
<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/RI1
1MIG62RRBL?ASIN=B07DJHV6VZ">
  <span>Waste of money</span>
</a>,
<a class="a-size-base a-link-normal review-title a-color-base review-title-
content a-text-bold" data-hook="review-title" href="/gp/customer-reviews/R2M
DSPX08USH3E?ASIN=B07DJHV6VZ">
  <span>Superb phone</span>
</a>]
```

In [17]:

```
# extract all title data
review_title = []
for i in range(0,len(title)):
    review_title.append(title[i].get_text())
review_title
```

Out[17]:

```
['\nFlagship Killer\n',
 '\nCamera quality is very poor.\n',
 '\nDead on arrival\n',
 '\nNot worth to buy 6T\n',
 '\nBeautiful phone\n',
 '\nNO WAY GOING TO BE A CUSTOMER OF A COMPANY (Oneplus6T) THAT CANNOT GET N
EW CUSTOMER SERVICE CORRECT\n',
 '\nAwesome value for the money\n',
 '\nOnePlust 6T McLaren Edition - Salute to Speed!\n',
 '\nWaste of money\n',
 '\nSuperb phone\n']
```

In [18]:

```
# clean the strings
review_title[:] = [titles.lstrip('\n') for titles in review_title]
review_title
```

Out[18]:

```
['Flagship Killer\n',
 'Camera quality is very poor.\n',
 'Dead on arrival\n',
 'Not worth to buy 6T\n',
 'Beautiful phone\n',
 'NO WAY GOING TO BE A CUSTOMER OF A COMPANY (Oneplus6T) THAT CANNOT GET NEW
CUSTOMER SERVICE CORRECT\n',
 'Awesome value for the money\n',
 'OnePlust 6T McLaren Edition - Salute to Speed!\n',
 'Waste of money\n',
 'Superb phone\n']
```

In [19]:

```
review_title[:] = [titles.rstrip('\n') for titles in review_title]
review_title
```

Out[19]:

```
['Flagship Killer',
 'Camera quality is very poor.',
 'Dead on arrival',
 'Not worth to buy 6T',
 'Beautiful phone',
 'NO WAY GOING TO BE A CUSTOMER OF A COMPANY (Oneplus6T) THAT CANNOT GET NEW CUSTOMER SERVICE CORRECT',
 'Awesome value for the money',
 'OnePlust 6T McLaren Edition - Salute to Speed!',
 'Waste of money',
 'Superb phone']
```

In [20]:

```
# extract and display html content for review ratings
rating = soup.find_all('i',class_='review-rating')
rating
```

Out[20]:

```
[<i class="a-icon a-icon-star a-star-5 review-rating" data-hook="review-star-rating-view-point"><span class="a-icon-alt">5.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-2 review-rating" data-hook="review-star-rating-view-point"><span class="a-icon-alt">2.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-5 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">5.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-2 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">2.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-1 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">1.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-1 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">1.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-4 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">4.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-1 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">1.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-5 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">5.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-5 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">5.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-1 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">1.0 out of 5 stars</span></i>,
 <i class="a-icon a-icon-star a-star-5 review-rating" data-hook="review-star-rating"><span class="a-icon-alt">5.0 out of 5 stars</span></i>]
```

In [21]:

```
# extract rating data from html
rate = []
for i in range(0, len(rating)):
    rate.append(rating[i].get_text())
rate
```

Out[21]:

```
['5.0 out of 5 stars',
 '2.0 out of 5 stars',
 '5.0 out of 5 stars',
 '2.0 out of 5 stars',
 '1.0 out of 5 stars',
 '1.0 out of 5 stars',
 '4.0 out of 5 stars',
 '1.0 out of 5 stars',
 '5.0 out of 5 stars',
 '5.0 out of 5 stars',
 '1.0 out of 5 stars',
 '5.0 out of 5 stars']
```

In [22]:

```
len(rate)
```

Out[22]:

```
12
```

In [23]:

```
rate.pop(0)
```

Out[23]:

```
'5.0 out of 5 stars'
```

In [24]:

```
rate.pop(0)
```

Out[24]:

```
'2.0 out of 5 stars'
```



In [25]:

```
rate
```

Out[25]:

```
['5.0 out of 5 stars',  
 '2.0 out of 5 stars',  
 '1.0 out of 5 stars',  
 '1.0 out of 5 stars',  
 '4.0 out of 5 stars',  
 '1.0 out of 5 stars',  
 '5.0 out of 5 stars',  
 '5.0 out of 5 stars',  
 '1.0 out of 5 stars',  
 '5.0 out of 5 stars']
```

In [26]:

```
# extract review html data
review = soup.find_all("span", {"data-hook": "review-body"})
review
```

Out[26]:

```
[<span class="a-size-base review-text review-text-content" data-hook="review-body">
  <span>
    I got this phone on Friday evening.<br/><br/>Pros:<br/>Great battery life
<br/>Amazing performance<br/>Premium design<br/>Impressive rear and front ca
mera<br/>In display fingerprint scanner is really fast<br/><br/>Cons:<br/>No
headphone jack but you'll get a converter<br/>No notification LED<br/>No mic
roSD card slot<br/><br/>I will give points on my personal experience of 2 da
ys full usage as below:<br/><br/>Weight: 9/10<br/>OS: 10/10<br/>Screen size:
10/10<br/>CPU: 10/10<br/>Performance: 10/10<br/>Storage: 10/10 (you'll get a
pprox 113 gb for use)<br/>Battery: 8/10<br/>Rear camera: 10/10<br/>Front cam
era: 10/10<br/>In display fingerprint scanner: 9/10<br/>Face unlock: 10/10<b
r/><br/>I hope this will help full.
  </span>
</span>,
  <span class="a-size-base review-text review-text-content" data-hook="review-body">
    <span>
      Camera quality is not upto the mark. I visited one plus store and the sto
re representative checked my phone and compared the camera quality with his
demo phone. He noticed a significant difference between the two.<br/><br/>I
request Amazon to replace my phone with a new one as it is evident that this
phone has some problems.
    </span>
</span>,
    <span class="a-size-base review-text review-text-content" data-hook="review-body">
      <span>
        I charged the phone completely out of the box and then turned it on. It
went to the OnePlus logo screen but did nothing after that. No buttons wor
k, no combinations of any buttons do anything to take it out of logo screen,
it won't even turn off. Amazon won't allow return until technician looks at
the phone??? OnePlus support said take it to a service center but couldn't
tell me the closest one. Really disappointed in lack of support form both c
ompanies for a brand new product and release. I'm sure they will now try to
push a replacement but I'm not really interested in the product anymore.
      </span>
</span>,
      <span class="a-size-base review-text review-text-content" data-hook="review-body">
        <span>
          One plus 6 was costing 28k during the big billion sale and 6T costs 38k.
It is not worth to spend 10 k just for some small improvements.
        </span>
</span>,
      <span class="a-size-base review-text review-text-content" data-hook="review-body">
        <span>
          Good build.<br/>amazing battery life. ( Minimum 3 days stand by along wit
h basic use in airtel's 4g network)<br/>good accessories on op site.<br/>coo
l phone box packing.<br/>in display fingerprint sensor & face recognitio
n both are good.<br/>loudspeaker is decent. has a c type to 3.5mm adapter in
the box.<br/>value for money. Go for it!
        </span>
      </span>
    ]
```

```

</span>
</span>,
<span class="a-size-base review-text review-text-content" data-hook="review
-body">
<span>
    Two days back I received 6T and had many problems with the mobile<br>The
mobile is getting heated when it's on camera mode or doing nothing., and whi
le using mobile it's getting struck.. I don't think I got an original set,
I'm sure it's a duplicate set.<br>Please for god sake please exchange my mo
bile with a new one
</span>
</span>,
<span class="a-size-base review-text review-text-content" data-hook="review
-body">
<span>
    Phone is simply superb in all aspects...low light performance of the came
ra is outstanding...you simply cannot go wrong with this phone
</span>
</span>,
<span class="a-size-base review-text review-text-content" data-hook="review
-body">
<span>
    This has by far been the best phone I have ever used hands-on. Flagship S
pecs, Classy look, Premium Packaging and the Speed you Need!<br>Appearance
- The device looks very much similar to the OnePlus 6T upfront but it has go
t the speed orange highlights at the back, carbon finish and McLaren Brandin
g at the bottom.<br>Camera - The night mode really captures amazing picture
s and the portrait mode is just amazing. The low light photography could sti
ll be improved.<br>Battery - With average usage with full day data on, it e
asily lasts upto 2 days. The Warp charging is just amazing, it takes around
40-45 mins to charge from 0-100%. But you could easily get a day's charge wi
thin 20 mins.<br>Speed - With 10 Gigs of RAM, speed should not be a questio
n. You could open up 5 high specs games and it still wouldn't lag. And its b
ragging rights for sure!<br><br>Overall, I am really satisfied with this d
evice and feels great to be a part of OnePlus Community! Go, get it! Its for
those, who are in continuous pursuit for speed!
</span>
</span>,
<span class="a-size-base review-text review-text-content" data-hook="review
-body">
<span>
    Battery-Extremely Poor<br>Camera-Satisfactory<br>Look-Good<br>Weight-G
ood<br>Sound-Superb<br><br>Overall I would have given it half star,deeply
through by it's battery.<br>And even after the replacement,the same problem
persists,which means it's a clear cut case of faulty manufacturing.<br><br>
Please don't buy it,if you really love your hard earned money.....
</span>
</span>,
<span class="a-size-base review-text review-text-content" data-hook="review
-body">
<span>
    After replace the handset issue was resolved. Now i unlocked the speed i
need.
</span>
</span>]

```

In [27]:

```
# extract reviews from their html
review_content = []
for i in range(0,len(review)):
    review_content.append(review[i].get_text())
review_content
```

Out[27]:

["\n\n I got this phone on Friday evening.Pros:Great battery lifeAmazing performancePremium designImpressive rear and front cameraIn display fingerprint scanner is really fastCons:No headphone jack but you'll get a converterNo notification LEDNo microSD card slotI will give points on my personal experience of 2 days full usage as below:Weight: 9/10OS: 10/10Screen size: 10/10CPU: 10/10Performance: 10/10Storage: 10/10 (you'll get approx 113 gb for use)Battery: 8/10Rear camera: 10/10Front camera: 10/10In display fingerprint scanner: 9/10Face unlock: 10/10I hope this will help full.\n\n",

'\n\n Camera quality is not upto the mark. I visited one plus store and the store representative checked my phone and compared the camera quality with his demo phone. He noticed a significant difference between the two.I request Amazon to replace my phone with a new one as it is evident that this phone has some problems.\n\n',

"\n\n I charged the phone completely out of the box and then turned it on. It went to the OnePlus logo screen but did nothing after that. No buttons work, no combinations of any buttons do anything to take it out of logo screen, it won't even turn off. Amazon won't allow return until technician looks at the phone??? OnePlus support said take it to a service center but couldn't tell me the closest one. Really disappointed in lack of support from both companies for a brand new product and release. I'm sure they will now try to push a replacement but I'm not really interested in the product anymore.\n\n",

'\n\n One plus 6 was costing 28k during the big billion sale and 6T costs 38k. It is not worth to spend 10 k just for some small improvements.\n\n',

"\n\n Good build.amazing battery life. ( Minimum 3 days stand by along with basic use in airtel's 4g network)good accessories on op site.cool phone box packing.in display fingerprint sensor & face recognition both are good.loudspeaker is decent. has a c type to 3.5mm adapter in the box.value for money. Go for it!\n\n",

"\n\n Two days back I received 6T and had many problems with the mobileThe mobile is getting heated when it's on camera mode or doing nothing., and while using mobile it's getting struck.. I don't think I got an original set, I'm sure it's a duplicate set.Please for god sake please exchange my mobile with a new one\n\n",

'\n\n Phone is simply superb in all aspects...low light performance of the camera is outstanding...you simply cannot go wrong with this phone\n\n',

"\n\n This has by far been the best phone I have ever used hands-on. Flagship Specs, Classy look, Premium Packaging and the Speed you Need!Appearance - The device looks very much similar to the OnePlus 6T upfront but it has got the speed orange highlights at the back, carbon finish and McLaren Branding at the bottom.Camera - The night mode really captures amazing pictures and the portrait mode is just amazing. The low light photography could still be improved.Battery - With average usage with full day data on, it easily lasts upto 2 days. The Warp charging is just amazing, it takes around 40-45 mins to charge from 0-100%. But you could easily get a day's charge within 20 mins.Speed - With 10 Gigs of RAM, speed should not be a question. You could open up 5 high specs games and it still wouldn't lag. And its bragging rights for sure!Overall, I am really satisfied with this device and feels great to be a part of OnePlus Community! Go, get it! Its for those, who are in continuous pursuit for speed!\n\n",

"\n\n Battery-Extremely PoorCamera-SatisfactoryLook-GoodWeight-GoodSound-S

```
uperbOverall I would have given it half star,deeply through by it's battery.  
And even after the replacement,the same problem persists,which means it's a  
clear cut case of faulty manufacturing.Please don't buy it,if you really lov  
e your hard earned money.....\n\n",  
'\n\n After replace the handset issue was resolved. Now i unlocked the spe  
ed i need.\n\n']
```

In [28]:

```
# format and clean the review strings
review_content[:] = [reviews.lstrip('\n') for reviews in review_content]
review_content
```

Out[28]:

```
[ " I got this phone on Friday evening.Pros:Great battery lifeAmazing performancePremium designImpressive rear and front cameraIn display fingerprint scanner is really fastCons:No headphone jack but you'll get a converterNo notification LEDNo microSD card slotI will give points on my personal experience of 2 days full usage as below:Weight: 9/10OS: 10/10Screen size: 10/10CPU: 10/10Performance: 10/10Storage: 10/10 (you'll get approx 113 gb free or use)Battery: 8/10Rear camera: 10/10Front camera: 10/10In display fingerprint scanner: 9/10Face unlock: 10/10I hope this will help full.\n\n",
  ' Camera quality is not upto the mark. I visited one plus store and the store representative checked my phone and compared the camera quality with his demo phone. He noticed a significant difference between the two.I request Amazon to replace my phone with a new one as it is evident that this phone has some problems.\n\n',
  " I charged the phone completely out of the box and then turned it on. It went to the OnePlus logo screen but did nothing after that. No buttons work, no combinations of any buttons do anything to take it out of logo screen, it won't even turn off. Amazon won't allow return until technician looks at the phone??? OnePlus support said take it to a service center but it couldn't tell me the closest one. Really disappointed in lack of support from both companies for a brand new product and release. I'm sure they will now try to push a replacement but I'm not really interested in the product anymore.\n\n",
  ' One plus 6 was costing 28k during the big billion sale and 6T costs 38k. It is not worth to spend 10 k just for some small improvements.\n\n',
  " Good build.amazing battery life. ( Minimum 3 days stand by along with basic use in airtel's 4g network)good accessories on op site.cool phone box packing.in display fingerprint sensor & face recognition both are good.loudspeaker is decent. has a c type to 3.5mm adapter in the box.value for money. Go for it!\n\n",
  " Two days back I received 6T and had many problems with the mobileThe mobile is getting heated when it's on camera mode or doing nothing., and while using mobile it's getting struck.. I don't think I got an original set, I'm sure it's a duplicate set.Please for god sake please exchange my mobile with a new one\n\n",
  ' Phone is simply superb in all aspects...low light performance of the camera is outstanding...you simply cannot go wrong with this phone\n\n',
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  " Battery-Extremely PoorCamera-SatisfactoryLook-GoodWeight-GoodSound-SuperbOverall I would have given it half star,deeply through by it's battery. And even after the replacement,the same problem persists,which means it's
```

```
a clear cut case of faulty manufacturing.Please don't buy it,if you really  
love your hard earned money.....\n\n",  
    ' After replace the handset issue was resolved. Now i unlocked the speed  
i need.\n\n']
```

In [29]:

```
review_content[:] = [reviews.rstrip('\n') for reviews in review_content]
review_content
```

Out[29]:

```
[ " I got this phone on Friday evening.Pros:Great battery lifeAmazing perfor
mancePremium designImpressive rear and front cameraIn display fingerprint sc
anner is really fastCons:No headphone jack but you'll get a converterNo noti
fication LEDNo microSD card slotI will give points on my personal experience
of 2 days full usage as below:Weight: 9/10OS: 10/10Screen size: 10/10CPU: 1
0/10Performance: 10/10Storage: 10/10 (you'll get approx 113 gb for use)Batte
ry: 8/10Rear camera: 10/10Front camera: 10/10In display fingerprint scanner:
9/10Face unlock: 10/10I hope this will help full.",
' Camera quality is not upto the mark. I visited one plus store and the st
ore representative checked my phone and compared the camera quality with his
demo phone. He noticed a significant difference between the two.I request Am
azon to replace my phone with a new one as it is evident that this phone has
some problems.',
" I charged the phone completely out of the box and then turned it on. It
went to the OnePlus logo screen but did nothing after that. No buttons wor
k, no combinations of any buttons do anything to take it out of logo screen,
it won't even turn off. Amazon won't allow return until technician looks at
the phone??? OnePlus support said take it to a service center but couldn't
tell me the closest one. Really disappointed in lack of support form both c
ompanies for a brand new product and release. I'm sure they will now try to
push a replacement but I'm not really interested in the product anymore.",
' One plus 6 was costing 28k during the big billion sale and 6T costs 38
k. It is not worth to spend 10 k just for some small improvements.',
" Good build.amazing battery life. ( Minimum 3 days stand by along with ba
sic use in airtel's 4g network)good accessories on op site.cool phone box pa
cking.in display fingerprint sensor & face recognition both are good.loudspe
aker is decent. has a c type to 3.5mm adapter in the box.value for money. Go
for it!",
" Two days back I received 6T and had many problems with the mobileThe mob
ile is getting heated when it's on camera mode or doing nothing., and while
using mobile it's getting struck.. I don't think I got an original set, I'm
sure it's a duplicate set.Please for god sake please exchange my mobile with
a new one",
' Phone is simply superb in all aspects...low light performance of the cam
era is outstanding...you simply cannot go wrong with this phone',
" This has by far been the best phone I have ever used hands-on. Flagship
Specs, Classy look, Premium Packaging and the Speed you Need!Appearance - Th
e device looks very much similar to the OnePlus 6T upfront but it has got th
e speed orange highlights at the back, carbon finish and McLaren Branding at
the bottom.Camera - The night mode really captures amazing pictures and the
portrait mode is just amazing. The low light photography could still be impr
oved.Battery - With average usage with full day data on, it easily lasts upt
o 2 days. The Warp charging is just amazing, it takes around 40-45 mins to c
harge from 0-100%. But you could easily get a day's charge within 20 mins.Sp
eed - With 10 Gigs of RAM, speed should not be a question. You could open up
5 high specs games and it still wouldn't lag. And its bragging rights for su
re!Overall, I am really satisfied with this device and feels great to be a p
art of OnePlus Community! Go, get it! Its for those, who are in continuous p
ursuit for speed!",
" Battery-Extremely PoorCamera-SatisfactoryLook-GoodWeight-GoodSound-Super
bOverall I would have given it half star,deeply through by it's battery.And
even after the replacement,the same problem persists,which means it's a clea
r cut case of faulty manufacturing.Please don't buy it,if you really love yo
ur hard earned money.....",
```



```
' After replace the handset issue was resolved. Now i unlocked the speed i need.']
```

In [30]:

```
len(review_content)
```

Out[30]:

10

## DISPLAYING ALL EXTRACTED DATA

In [31]:

```
cust_name
```

Out[31]:

```
['Tanmay Shukla',  
'Surbhi Garg',  
'klknow',  
'abdulkadir garari',  
'Anshu K.',  
'Anshu K.',  
'Regidi Mahesh Dora',  
'nagaraj s.',  
'Aakash Sinha',  
'Aakash Sinha',  
'Mumtaz Alam',  
'Mumtaz Alam',  
'Vaibhav Narvaria']
```

In [32]:

```
review_title
```

Out[32]:

```
['Flagship Killer',  
'Camera quality is very poor.',  
'Dead on arrival',  
'Not worth to buy 6T',  
'Beautiful phone',  
'NO WAY GOING TO BE A CUSTOMER OF A COMPANY (Oneplus6T) THAT CANNOT GET NEW  
CUSTOMER SERVICE CORRECT',  
'Awesome value for the money',  
'OnePlust 6T McLaren Edition - Salute to Speed!',  
'Waste of money',  
'Superb phone']
```

In [33]:

```
rate
```

Out[33]:

```
['5.0 out of 5 stars',  
 '2.0 out of 5 stars',  
 '1.0 out of 5 stars',  
 '1.0 out of 5 stars',  
 '4.0 out of 5 stars',  
 '1.0 out of 5 stars',  
 '5.0 out of 5 stars',  
 '5.0 out of 5 stars',  
 '1.0 out of 5 stars',  
 '5.0 out of 5 stars']
```

In [34]:

review\_content

Out[34]:

[ " I got this phone on Friday evening.Pros:Great battery lifeAmazing performancePremium designImpressive rear and front cameraIn display fingerprint scanner is really fastCons:No headphone jack but you'll get a converterNo notification LEDNo microSD card slotI will give points on my personal experience of 2 days full usage as below:Weight: 9/10OS: 10/10Screen size: 10/10CPU: 10/10Performance: 10/10Storage: 10/10 (you'll get approx 113 gb for use)Battery: 8/10Rear camera: 10/10Front camera: 10/10In display fingerprint scanner: 9/10Face unlock: 10/10I hope this will help full.",

' Camera quality is not upto the mark. I visited one plus store and the store representative checked my phone and compared the camera quality with his demo phone. He noticed a significant difference between the two.I request Amazon to replace my phone with a new one as it is evident that this phone has some problems.',

" I charged the phone completely out of the box and then turned it on. It went to the OnePlus logo screen but did nothing after that. No buttons work, no combinations of any buttons do anything to take it out of logo screen, it won't even turn off. Amazon won't allow return until technician looks at the phone??? OnePlus support said take it to a service center but couldn't tell me the closest one. Really disappointed in lack of support from both companies for a brand new product and release. I'm sure they will now try to push a replacement but I'm not really interested in the product anymore.",

' One plus 6 was costing 28k during the big billion sale and 6T costs 38 k. It is not worth to spend 10 k just for some small improvements.',

" Good build.amazing battery life. ( Minimum 3 days stand by along with basic use in airtel's 4g network)good accessories on op site.cool phone box packing.in display fingerprint sensor & face recognition both are good.loudspeaker is decent. has a c type to 3.5mm adapter in the box.value for money. Go for it!",

" Two days back I received 6T and had many problems with the mobileThe mobile is getting heated when it's on camera mode or doing nothing., and while using mobile it's getting struck.. I don't think I got an original set, I'm sure it's a duplicate set.Please for god sake please exchange my mobile with a new one",

' Phone is simply superb in all aspects...low light performance of the camera is outstanding...you simply cannot go wrong with this phone',

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" Battery-Extremely PoorCamera-SatisfactoryLook-GoodWeight-GoodSound-SuperbOverall I would have given it half star,deeply through by it's battery.And even after the replacement,the same problem persists,which means it's a clear cut case of faulty manufacturing.Please don't buy it,if you really love your hard earned money.....",

```
' After replace the handset issue was resolved. Now i unlocked the speed i need.']
```

## CONVERTING EXTRACTED DATA TO DATAFRAME

In [35]:

```
import pandas as pd
import numpy as np
```

In [36]:

```
df = pd.DataFrame() # creating an empty DataFrame
```

In [37]:

```
df
```

Out[37]:

—

In [38]:

```
# removing duplicates to match dimensions and adding a column to df
cust_name = np.array(cust_name)
df['Customer Name'] = np.unique(cust_name)
```

In [39]:

```
df
```

Out[39]:

	Customer Name
0	Aakash Sinha
1	Anshu K.
2	Mumtaz Alam
3	Regidi Mahesh Dora
4	Surbhi Garg
5	Tanmay Shukla
6	Vaibhav Narvaria
7	abdulkadir garari
8	klknow
9	nagaraj s.

In [40]:

```
# adding remaining data as separate columns to df
df['Review title']=review_title
df['Ratings']=rate
df['Reviews']=review_content
```

In [41]:

```
# displaying the final dataframe
df
```

Out[41]:

	Customer Name	Review title	Ratings	Reviews
0	Aakash Sinha	Flagship Killer	5.0 out of 5 stars	I got this phone on Friday evening.Pros:Grea...
1	Anshu K.	Camera quality is very poor.	2.0 out of 5 stars	Camera quality is not upto the mark. I visit...
2	Mumtaz Alam	Dead on arrival	1.0 out of 5 stars	I charged the phone completely out of the bo...
3	Regidi Mahesh Dora	Not worth to buy 6T	1.0 out of 5 stars	One plus 6 was costing 28k during the big bi...
4	Surbhi Garg	Beautiful phone	4.0 out of 5 stars	Good build.amazing battery life. ( Minimum 3...
5	Tanmay Shukla	NO WAY GOING TO BE A CUSTOMER OF A COMPANY (On...	1.0 out of 5 stars	Two days back I received 6T and had many pro...
6	Vaibhav Narvaria	Awesome value for the money	5.0 out of 5 stars	Phone is simply superb in all aspects...low ...
7	abdulkadir garari	OnePlust 6T McLaren Edition - Salute to Speed!	5.0 out of 5 stars	This has by far been the best phone I have e...
8	klknow	Waste of money	1.0 out of 5 stars	Battery-Extremely PoorCamera-SatisfactoryLoo...
9	nagaraj s.	Superb phone	5.0 out of 5 stars	After replace the handset issue was resolved...

## CONVERTING DF TO CSV

In [42]:

```
# locally storing the dataframe as a CSV
df.to_csv('E:\COLLEGE\THIRD YEAR\Assignments\SEM 2\DSBD\web scraped_reviews.csv',index=True)
```

In [ ]:

