

```
In [1]: from bs4 import BeautifulSoup as bs
```

```
In [2]: import requests
```

```
In [3]: link="https://www.flipkart.com/hp-15s-ryzen-3-dual-core-3250u-4-gb-1-tb-hdd-windo
```

```
In [5]: page=requests.get(link)
```

```
In [6]: page
```

```
Out[6]: <Response [200]>
```

```
In [7]: page.content
```

...

```
In [8]: soup=bs(page.content,"html.parser")
        soup
```

...

```
In [10]: print(soup.prettify())
```

...

Title Of the Product

```
In [19]: title=soup.title
```

```
In [20]: print(soup.title)
```

```
<title>Hp 15s Ryzen 3 Dual Core 3250u 4 Gb 1 Tb Hdd Windows 10 Home 15s Gr0006a
u Thin Light Laptop Reviews: Latest Review of Hp 15s Ryzen 3 Dual Core 3250u 4
Gb 1 Tb Hdd Windows 10 Home 15s Gr0006au Thin Light Laptop | Price in India | F
lipkart.com</title>
```

```
In [21]: print(type(soup))
```

```
<class 'bs4.BeautifulSoup'>
```

```
In [22]: print(title.string)
```

```
Hp 15s Ryzen 3 Dual Core 3250u 4 Gb 1 Tb Hdd Windows 10 Home 15s Gr0006au Thin
Light Laptop Reviews: Latest Review of Hp 15s Ryzen 3 Dual Core 3250u 4 Gb 1 Tb
Hdd Windows 10 Home 15s Gr0006au Thin Light Laptop | Price in India | Flipkart.
com
```

Check Product Price

```
In [23]: price=soup.find_all("div",class="_30jeq3")
```

```
In [24]: price
```

```
Out[24]: [<div class="_30jeq3">₹32,990</div>]
```

```
In [26]: product_price=[]

for i in range(0,len(price)):
    product_price.append(price[i].get_text())
```

```
In [27]: product_price
```

```
Out[27]: ['₹32,990']
```

```
In [29]: price[i].get_text()
```

```
Out[29]: '₹32,990'
```

Scrap Customer Names

```
In [30]: names=soup.find_all("p",class="_2sc7ZR _2V5EHH")
names
```

```
Out[30]: [<p class="_2sc7ZR _2V5EHH">Vaibhav Bharati</p>,
<p class="_2sc7ZR _2V5EHH">MD MATHIN ALI</p>,
<p class="_2sc7ZR _2V5EHH">Sayani Banerjee </p>,
<p class="_2sc7ZR _2V5EHH">Satyajit Swain</p>,
<p class="_2sc7ZR _2V5EHH">Vijay Singh Shekhawat</p>,
<p class="_2sc7ZR _2V5EHH">Anoop Mathew</p>,
<p class="_2sc7ZR _2V5EHH">Vivek Raturi</p>,
<p class="_2sc7ZR _2V5EHH">Anand Amirtharaj</p>,
<p class="_2sc7ZR _2V5EHH">Flipkart Customer</p>,
<p class="_2sc7ZR _2V5EHH">Shivani Pankaj</p>]
```

```
In [31]: cust_name=[]

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

```
In [32]: cust_name
```

```
Out[32]: ['Vaibhav Bharati',  
          'MD MATHIN ALI',  
          'Sayani Banerjee ',  
          'Satyajit Swain',  
          'Vijay Singh Shekhawat',  
          'Anoop Mathew',  
          'Vivek Raturi',  
          'Anand Amirtharaj',  
          'Flipkart Customer',  
          'Shivani Pankaj']
```

Scrap Reviews

```
In [33]: review=soup.find_all("p",class_="_2-N8zT")  
review
```

```
Out[33]: [<p class="_2-N8zT">Very Good</p>,  
          <p class="_2-N8zT">Terrific</p>,  
          <p class="_2-N8zT">Worth every penny</p>,  
          <p class="_2-N8zT">Fair</p>,  
          <p class="_2-N8zT">Fair</p>,  
          <p class="_2-N8zT">Just wow!</p>,  
          <p class="_2-N8zT">Good</p>,  
          <p class="_2-N8zT">Wonderful</p>,  
          <p class="_2-N8zT">Very Good</p>,  
          <p class="_2-N8zT">Nice product</p>]
```

```
In [34]: cust_rev=[]  
  
for i in range(0,len(review)):  
    cust_rev.append(review[i].get_text())
```

```
In [35]: cust_rev
```

```
Out[35]: ['Very Good',  
          'Terrific',  
          'Worth every penny',  
          'Fair',  
          'Fair',  
          'Just wow! ',  
          'Good',  
          'Wonderful',  
          'Very Good',  
          'Nice product']
```

```
In [40]: #soup.find("p",class_="_2-N8zT").get_text()
```

Scrap Comments

```
In [41]: comment=soup.find_all("div",class_="t-ZTKy")
comment
```

```
Out[41]: [<div class="t-ZTKy"><div><div class="">Read carefully.. My Experience was complicated just because of boot time i.e. on/off time was too long until I didn't go for updates but once I have done all updates... I am telling you guys...Mask a..hai.. Maska..<br/><br/>Superb performance.. and look wise i liked it very much. I use to play GT racing without any lag..<br/><br/>My daughter is also happy for her online studies.<br/><br/>My suggestion is that don't think twice just go for it with Flipkart.<br/><br/>Thanks flipkart for very safe and on time delivery.</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
  <div class="t-ZTKy"><div><div class="">#Price up to mark<br/>Its wonderful product for those ,who looking for student and domestic work<br/><br/>1)Its just my dream lappi,(laptop)<br/>2)just go for laptop,its really awesome<br/>3)I just bought it for my project and bussiness work it's awesome<br/>4)one of the best product from HP<br/>5)just price is little high ,it have to be reduced<br/>6) I loved it<br/>7) I recommend it for u,👍👍❤️</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
  <div class="t-ZTKy"><div><div class="">Nice laptop and Ryzen 3 is a good processor for multi tasking... Design and color both are good. It's better to go with this HP laptop in this price segment...</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
  <div class="t-ZTKy"><div><div class="">This laptop needs to be upgraded to at least 8 gb memory for better performance as most of HP bloatware that comes with the windows build use almost 80% of ram all the time. Besides the built in vega gpu shares Ram as it does not have dedicated graphics memory. An SSD upgrade and booting the OS in there should do wonders to the disk I/O and overall performance. Out of the box, laptop is sluggish so 3 stars.</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
  <div class="t-ZTKy"><div><div class="">HP Product is Good/Ok, but personally i will prefer Dell Laptop. Dell Laptop is best & friendly for smooth process<br/>& I thing i3 is better comparison to Rayzen 3.</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
  <div class="t-ZTKy"><div><div class="">Awesome and nice for students and all. The favorite things is its comes with Windows and office home and student precious.</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
  <div class="t-ZTKy"><div><div class="">Do not expect much :<br/>1)Very slow takes a lot of time just open a browser.<br/>2)Design is good <br/>3)Battery backup ok.<br/>if you want to do basic editing and some gaming then go for atleast 8 GB ram and 4 core processor .</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
  <div class="t-ZTKy"><div><div class="">Compare to i3, ryzen 3 is far better in performance with 4gb ram, full Battery charged still works more than 6 hrs... No heating problem.. Display only not bad quality, rest of them are worth for this amount</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
  <div class="t-ZTKy"><div><div class="">Very nice product finishing is very good.</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
  <div class="t-ZTKy"><div><div class="">This laptop is very light weight and I am happy!! 😊😊</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>]
```

```
In [42]: cust_comment=[]

for i in range(0,len(comment)):
    cust_comment.append(comment[i].get_text())
```

```
In [43]: cust_comment
```

```
Out[43]: ["Read carefully.. My Experience was complicated just because of boot time i.e.
on/off time was too long until I didn't go for updates but once I have done all
updates... I am telling you guys...Maska..hai.. Maska..Superb performance.. and
look wise i liked it very much. I use to play GT racing without any lag..My dau
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very.READ MORE",
"#Price up to markIts wonderful product for those ,who looking for student an
d domestic work1)Its just my dream lappi,(laptop)2)just go for laptop,its reall
y awesome3)I just bought it for my project and bussiness work it's awesome4)one
of the best product from HP5)just price is little high ,it have to be reduced6)
I loved it7) I recommend it for u,💯💯❤️READ MORE",
"Nice laptop and Ryzen 3 is a good processor for multi tasking... Design and c
olor both are good. It's better to go with this HP laptop in this price segmen
t...READ MORE",
'This laptop needs to be upgraded to at least 8 gb memory for better performan
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ram all the time. Besides the built in vega gpu shares Ram as it does not have
dedicated graphics memory. An SSD upgrade and booting the OS in there should do
wonders to the disk I/O and overall performance. Out of the box, laptop is slug
gish so 3 stars.READ MORE',
'HP Product is Good/Ok, but personally i will prefer Dell Laptop. Dell Laptop
is best & friendly for smooth process& I thing i3 is better comparison to Rayze
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'Awesome and nice for students and all. The favorite things is its comes with
Windows and office home and student precious.READ MORE',
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bad quality, rest of them are worth for this amountREAD MORE',
'Very nice product finishing is very good.READ MORE',
'This laptop is very light weight and I am happy!! 😊😊READ MORE']
```

Scrap Rating

```
In [44]: rating=soup.find_all("div",class_="_3LWZ1K _1BLPMq")
rating
```

...

```
In [45]: cust_rating=[]

for i in range(0,len(rating)):
    cust_rating.append(rating[i].get_text())
```

```
In [46]: cust_rating
```

```
Out[46]: ['4', '5', '5', '3', '3', '5', '3', '4', '4', '4']
```

```
In [47]: import pandas as pd
```

```
In [48]: df=pd.DataFrame()

df["Customer Names"]=cust_name
df["Customer Review"]=cust_rev
df["Customer Comment"]=cust_comment
df["Ratings"]=cust_rating
```

```
In [49]: df
```

```
Out[49]:
```

	Customer Names	Customer Review	Customer Comment	Ratings
0	Vaibhav Bharati	Very Good	Read carefully.. My Experience was complicated...	4
1	MD MATHIN ALI	Terrific	#Price up to markIts wonderful product for tho...	5
2	Sayani Banerjee	Worth every penny	Nice laptop and Ryzen 3 is a good processor fo...	5
3	Satyajit Swain	Fair	This laptop needs to be upgraded to at least 8...	3
4	Vijay Singh Shekhawat	Fair	HP Product is Good/Ok, but personally i will p...	3
5	Anoop Mathew	Just wow!	Awesome and nice for students and all. The fav...	5
6	Vivek Raturi	Good	Do not expect much :1)Very slow takes a lot of...	3
7	Anand Amirtharaj	Wonderful	Compare to i3, ryzen 3 is far better in perfor...	4
8	Flipkart Customer	Very Good	Very nice product finishing is very good.READ ...	4
9	Shivani Pankaj	Nice product	This laptop is very light weight and I am happ...	4

In [50]: df.T

Out[50]:

	0	1	2	3	4	5	6	7
Customer Names	Vaibhav Bharati	MD MATHIN ALI	Sayani Banerjee	Satyajit Swain	Vijay Singh Shekhawat	Anoop Mathew	Vivek Raturi	Anand Amirtharaj
Customer Review	Very Good	Terrific	Worth every penny	Fair	Fair	Just wow!	Good	Wonderful
Customer Comment	Read carefully.. My Experience was complicated...	#Price up to markIts wonderful product for tho...	Nice laptop and Ryzen 3 is a good processor fo...	This laptop needs to be upgraded to at least 8...	HP Product is Good/Ok, but personally i will p...	Awesome and nice for students and all. The fav...	Do not expect much :1)Very slow takes a lot of...	Compare to i3, ryzen 3 is far better in perfor... g
Ratings	4	5	5	3	3	5	3	4



In [51]: df.shape

Out[51]: (10, 4)

In [52]: df.size

Out[52]: 40

In [62]: df.columns

Out[62]: Index(['Customer Names', 'Customer Review', 'Customer Comment', 'Ratings'], dtype='object')

In [63]: df.ndim

Out[63]: 2

In [64]: df.to_csv("Hp Product FlipKart Review",index=False)

```
In [65]: df=pd.read_csv("Hp Product FlipKart Review")
df
```

Out[65]:

	Customer Names	Customer Review	Customer Comment	Ratings
0	Vaibhav Bharati	Very Good	Read carefully.. My Experience was complicated...	4
1	MD MATHIN ALI	Terrific	#Price up to markIts wonderful product for tho...	5
2	Sayani Banerjee	Worth every penny	Nice laptop and Ryzen 3 is a good processor fo...	5
3	Satyajit Swain	Fair	This laptop needs to be upgraded to at least 8...	3
4	Vijay Singh Shekhawat	Fair	HP Product is Good/Ok, but personally i will p...	3
5	Anoop Mathew	Just wow!	Awesome and nice for students and all. The fav...	5
6	Vivek Raturi	Good	Do not expect much :1)Very slow takes a lot of...	3
7	Anand Amirtharaj	Wonderful	Compare to i3, ryzen 3 is far better in perfor...	4
8	Flipkart Customer	Very Good	Very nice product finishing is very good.READ ...	4
9	Shivani Pankaj	Nice product	This laptop is very light weight and I am happ...	4

```
In [104]: df["Customer Review"]
```

```
Out[104]: 0          Very Good
1          Terrific
2    Worth every penny
3             Fair
4             Fair
5          Just wow!
6             Good
7          Wonderful
8          Very Good
9      Nice product
Name: Customer Review, dtype: object
```

```
In [105]: df["Ratings"].min()
```

Out[105]: 3

```
In [106]: df["Ratings"].unique()
```

Out[106]: array([4, 5, 3], dtype=int64)

```
In [107]: df["Ratings"].value_counts()
```

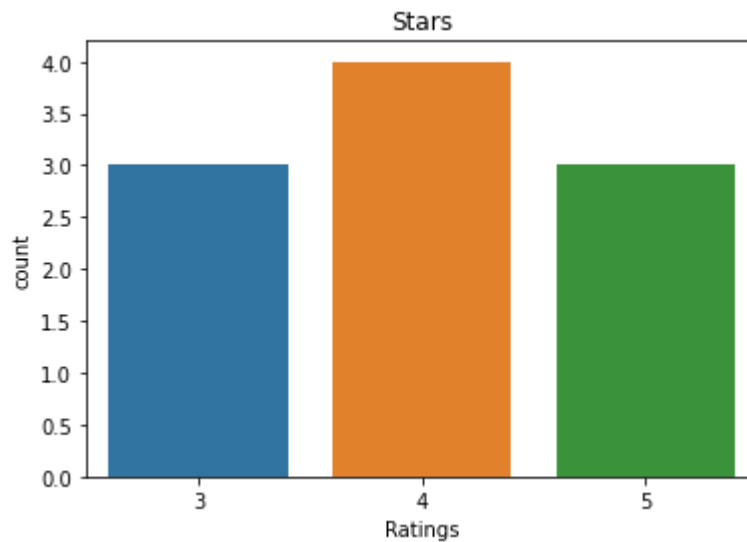
```
Out[107]: 4    4
5    3
3    3
Name: Ratings, dtype: int64
```



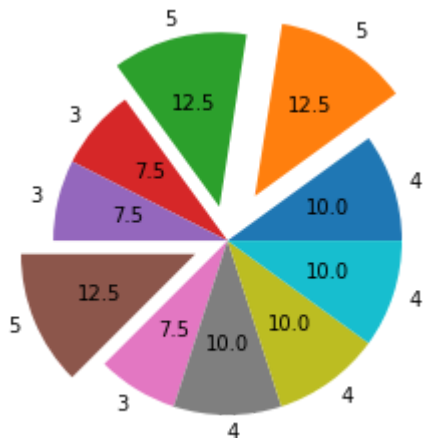
```
In [66]: import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [72]: sns.countplot(x=df["Ratings"])
plt.title("Stars")
```

Out[72]: Text(0.5, 1.0, 'Stars')



```
In [87]: data=['4', '5', '5', '3', '3', '5', '3', '4', '4', '4']
plt.pie(x=data, labels=data, explode=(0,0.3,0.2,0,0,0.2,0,0,0,0), autopct="%1.1f")
plt.show()
```

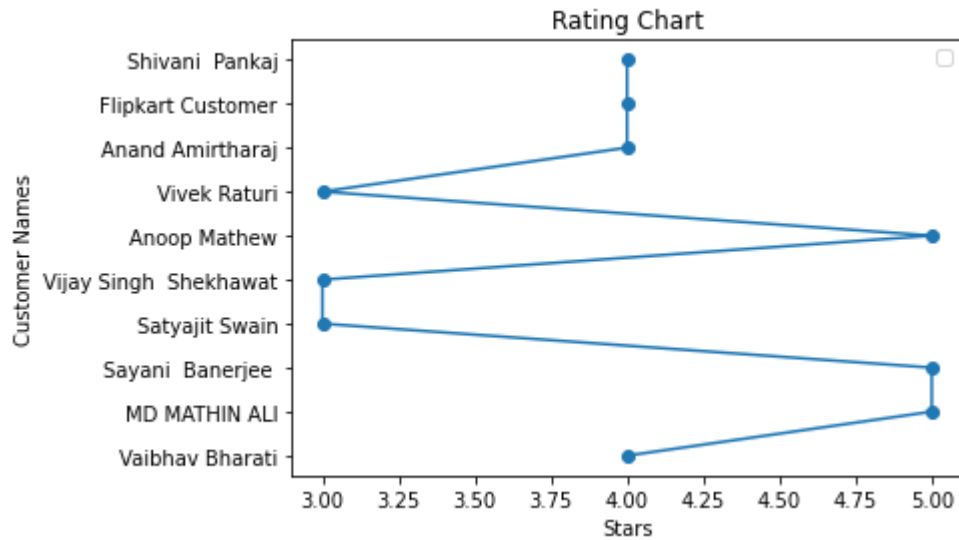


In []:

```
In [103]: #Label=["Names", "Rating"]
plt.plot(df["Ratings"], df["Customer Names"], marker="o")

plt.xlabel("Stars")
plt.ylabel("Customer Names")
plt.legend()
plt.title("Rating Chart")
plt.show()
```

No artists with labels found to put in legend. Note that artists whose labels start with an underscore are ignored when legend() is called with no argument.



In []: