

```
1 from bs4 import BeautifulSoup as bs
```

```
1 import requests
```

```
1 link = "https://www.flipkart.com/vivo-t1-5g-rainbow-fantasy-128-gb/p/itm594222523bd8f?p
```

```
1 page=requests.get(link)
```

1 page

<Response [200]>

```
1 page.content
```

```
b'<!doctype html><html lang="en"><head><link href="https://rukminim1.flixcart.com" rel="preconnect"/><link rel="stylesheet" href="//static-assets-web.b.flixcart.com/fk-p-linchpin-web/fk-cp-zion/css/app_modules.chunk.905c37.css"/><link rel="stylesheet" href="//static-assets-web.flixcart.com/fk-p-linchpin-web/fk-cp-zion/css/app.chunk.104e9a.css"/><meta http-equiv="Content-type" content="text/html; charset=utf-8"/><meta http-equiv="X-UA-Compatible" content="IE=Edge"/><meta property="fb:page_id" content="102988293558"/><meta property="fb:admins" content="658873552,624500995,100000233612389"/><meta name="robots" content="noodp"/><link rel="shortcut icon" href="https://static-assets-web.flixcart.com/www/promos/new/20150528-140547-favicon-retina.ico"/><link type="application/opensearchdescription+xml" rel="search" href="/osdd.xml?v=2"/><meta property="og:type" content="website"/><meta name="og_site_name" property="og:site_name" content="Flipkart.com"/><link rel="apple-touch-icon" sizes="57x57" href="/apple-touch-icon-57x57.png"/><link rel="apple-touch-icon" sizes="72x72" href="/apple-touch-icon-72x72.png"/><link rel="apple-touch-icon" sizes="114x114" href="/apple-touch-icon-114x114.png"/><link rel="apple-touch-icon" sizes="144x144" href="/apple-touch-icon-144x144.png"/><link rel="apple-touch-icon" href="/apple-touch-icon
```

```
1 soup=bs(page.content, "html.parser")
```

In [8]:

1 soup

Out[8]:

```
<!DOCTYPE html>
<html lang="en"><head><link href="https://rukminim1.flixcart.com" rel="pre
connect"><link href="//static-assets-web.flixcart.com/fk-p-linchpin-web/f
k-cp-zion/css/app_modules.chunk.905c37.css" rel="stylesheet"><link href
="//static-assets-web.flixcart.com/fk-p-linchpin-web/fk-cp-zion/css/app.ch
unk.104e9a.css" rel="stylesheet"><meta content="text/html; charset=utf-8"
http-equiv="Content-type"><meta content="IE=Edge" http-equiv="X-UA-Compat
ible"><meta content="102988293558" property="fb:page_id"><meta content
="658873552,624500995,100000233612389" property="fb:admins"><meta content
="noodp" name="robots"><link href="https://static-assets-web.flixcart.co
m/www/promos/new/20150528-140547-favicon-retina.ico" rel="shortcut icon">
<link href="/osdd.xml?v=2" rel="search" type="application/opensearchdescri
ption+xml"><meta content="website" property="og:type"><meta content="Fli
pkart.com" name="og_site_name" property="og:site_name"><link href="/apple
-touch-icon-57x57.png" rel="apple-touch-icon" sizes="57x57"><link href="/
apple-touch-icon-72x72.png" rel="apple-touch-icon" sizes="72x72"><link hr
ef="/apple-touch-icon-114x114.png" rel="apple-touch-icon" sizes="114x114"/
><link href="/apple-touch-icon-144x144.png" rel="apple-touch-icon" sizes
```

In [9]:

1 print(soup.prettify())

```
rt=a.now()))),u.on("fn-end",function(t,e){this.xhrCbStart&&u.emit("xhr-cb
-time",[a.now()-this.xhrCbStart,this.onload,e],e)}),u.on("fetch-before-sta
rt",function(t){function e(t,e){var n=!1;return e.newrelicHeader&&(t.set
("newrelic",e.newrelicHeader),n=!0),e.traceContextParentHeader&&(t.set("tr
aceparent",e.traceContextParentHeader),e.traceContextStateHeader&&t.set("t
racestate",e.traceContextStateHeader),n=!0),n}var n,r=t[1]||{};"string"==t
ypeof t[0]?n=t[0]:t[0]&&t[0].url?n=t[0].url:window.URL&&t[0]&&t[0]instance
of URL&&(n=t[0].href),n&&(this.parsedOrigin=c(n),this.sameOrigin=this.pars
edOrigin.sameOrigin);var o=f(this.parsedOrigin);if(o&&(o.newrelicHeader||
o.traceContextParentHeader))if("string"==typeof t[0]||window.URL&&t[0]&&t
[0]instanceof URL){var i={};for(var a in r)i[a]=r[a];i.headers=new Headers
(r.headers||{}),e(i.headers,o)&&(this.dt=o),t.length>1?t[1]=i:t.push(i)}el
se t[0]&&t[0].headers&&e(t[0].headers,o)&&(this.dt=o)},u.on("fetch-star
t",function(t,e){this.params={},this.metrics={},this.startTime=a.now(),thi
s.dt=e,t.length>=1&&(this.target=t[0]),t.length>=2&&(this.opts=t[1]);var
n,r=this.opts||{},i=this.target;if("string"==typeof i?n=i:"object"==typeof
i&&i instanceof y?n=i.url:window.URL&&"object"==typeof i&&i instanceof URL
&&(n=i.href),o(this,n),"data"!==this.params.protocol){var s=""+(i&&i inst
anceof y&&i.method||r.method||"GET")).toUpperCase();this.params.method=s,t
his.txSize=m(r.body)||0}},u.on("fetch-done",function(t,e){if(this.endTime
```

TITLE

In [10]:

```
1 title=soup.title
2 print(soup.title)
```

```
<title>vivo T1 5G ( 128 GB Storage, 4 GB RAM ) Online at Best Price On Flipk
art.com</title>
```

In [11]:

```
1 print(type(soup))
```

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

In [12]:

```
1 print(title.string)
```

```
vivo T1 5G ( 128 GB Storage, 4 GB RAM ) Online at Best Price On Flipkart.com
```

PRICE

In [13]:

```
1 price=soup.find_all("div",class="_30jeq3 _16Jk6d")
```

In [14]:

```
1 print(price)
```

```
[<div class="_30jeq3 _16Jk6d">₹15,990</div>]
```

In [15]:

```
1 product_price=[]
2 for i in range(0,len(price)):
3     product_price.append(price[i].get_text())
4
5 print(product_price)
```

```
['₹15,990']
```

In [16]:

```
1 price[i].get_text()
```

Out[16]:

```
'₹15,990'
```

CUSTOMER NAME

In [17]:

```
1 names=soup.find_all("p",class_="_2sc7ZR _2V5EHH")
2 names
```

Out[17]:

```
[<p class="_2sc7ZR _2V5EHH">Flipkart Customer</p>,
<p class="_2sc7ZR _2V5EHH">Satyam Agrawal</p>,
<p class="_2sc7ZR _2V5EHH">Shabab Alam</p>,
<p class="_2sc7ZR _2V5EHH">Sutiksh Sharma</p>,
<p class="_2sc7ZR _2V5EHH">Dhanurdhar Nath</p>,
<p class="_2sc7ZR _2V5EHH">Flipkart Customer</p>,
<p class="_2sc7ZR _2V5EHH">Ragini shrivastav</p>,
<p class="_2sc7ZR _2V5EHH">Flipkart Customer</p>,
<p class="_2sc7ZR _2V5EHH">Atul Shingade</p>,
<p class="_2sc7ZR _2V5EHH">Harikesh Gautam</p>]
```

In [18]:

```
1 cust_name=[]
2 for i in range(0,len(names)):
3     cust_name.append(names[i].get_text())
4 cust_name
```

Out[18]:

```
['Flipkart Customer',
'Satyam Agrawal',
'Shabab Alam',
'Sutiksh Sharma',
'Dhanurdhar Nath',
'Flipkart Customer',
'Ragini shrivastav',
'Flipkart Customer',
'Atul Shingade',
'Harikesh Gautam']
```

REVIEWS

In [19]:

```
1 review=soup.find_all("p",class_="_2-N8zT")
2 review
```

Out[19]:

```
[<p class="_2-N8zT">Fabulous!</p>,
<p class="_2-N8zT">Really Nice</p>,
<p class="_2-N8zT">Good</p>,
<p class="_2-N8zT">Decent product</p>,
<p class="_2-N8zT">Simply awesome</p>,
<p class="_2-N8zT">Best in the market!</p>,
<p class="_2-N8zT">Very Good</p>,
<p class="_2-N8zT">Simply awesome</p>,
<p class="_2-N8zT">Nice product</p>,
<p class="_2-N8zT">Just wow!</p>]
```

In [20]:

```
1 cust_rev=[]
2 for i in range(0,len(review)):
3     cust_rev.append(review[i].get_text())
4 cust_rev
```

Out[20]:

```
['Fabulous!',
'Really Nice',
'Good',
'Decent product',
'Simply awesome',
'Best in the market!',
'Very Good',
'Simply awesome',
'Nice product',
'Just wow!']
```

STAR RATING

In [21]:

```
1 rating=soup.find_all("div",class_="_3LWZlK _1BLPMq")
2 rating
```

Out[21]:

```
[<div class="_3LWZlK _1BLPMq">5</div>,
<div class="_3LWZlK _1BLPMq">4</div>,
<div class="_3LWZlK _1BLPMq">3</div>,
<div class="_3LWZlK _1BLPMq">3</div>,
<div class="_3LWZlK _1BLPMq">5</div>,
<div class="_3LWZlK _1BLPMq">5</div>,
<div class="_3LWZlK _1BLPMq">4</div>,
<div class="_3LWZlK _1BLPMq">5</div>,
<div class="_3LWZlK _1BLPMq">4</div>,
<div class="_3LWZlK _1BLPMq">5</div>]
```

In [22]:

```
1 cust_rating=[]
2 for i in range(0,len(rating)):
3     cust_rating.append(rating[i].get_text())
4 cust_rating
```

Out[22]:

```
['5', '4', '3', '3', '5', '5', '4', '5', '4', '5']
```

COMMENTS

In [23]:

```
1 comment=soup.find_all("div",class_="t-ZTKy")
2 comment
```

Out[23]:

```
[<div class="t-ZTKy"><div><div class="">superb phone <br>i am very happy t
o buy it<br>colour camara and screen was fantastic <br>i really love it <
br>thanku 😊😊</br></div><span class="_1H-bmy"><span>READ MORE</spa
n></span></div></div>,
<div class="t-ZTKy"><div><div class="">At this price range this is the be
st phone<br>Processor is top notch 695 snapdragon can be good for next 2-
3 years<br>Camera is ok according to price<br>Phone feels light in hand
and had a eye catching look</div><span class="_1H-bmy"><span>READ MORE</sp
an></span></div></div>,
<div class="t-ZTKy"><div><div class="">Good phn but camera not good as i
expected<br>Battery backup v.good charger not worth 18W i expect this phn
has 44W</div><span class="_1H-bmy"><span>READ MORE</span></span></div></di
v>,
<div class="t-ZTKy"><div><div class="">Reasons for giving 3 stars, super
night mode is not available in 4gb varient and this was not clearly mentio
ned, no 30w fast charging, drop notch display, these are the only cons i f
ound. rest is good.</div><span class="_1H-bmy"><span>READ MORE</span></spa
n></div></div>,
<div class="t-ZTKy"><div><div class="">I have used this device for 12 day
s this device no any issues & perfectly work but BGMI gaming There is
a problem in doing this, there is an automatic refresh, it may be fixed af
ter the software update I am very happy to buy this mobile I really liked
the color of it and the camera frame was also very nice And the display is
IPS not so good but when used outside, its light remains bright. And talki
ng about the network, after the arrival of 5g, you will know how much spee
d it is giving, it is...</div><span class="_1BWGvX"><span>READ MORE</span>
</span></div></div>,
<div class="t-ZTKy"><div><div class="">Guys the camera quality of the pho
ne is very good.<br><br>And even it best In segment for gaming.<br><br>
Only macro camera is not good but camera quality is decent .<br><br>And
even look of the phone is very pretty the design looks very nice. The phon
e is soo slim and light weight. <br>I have shared some photos clicked by
vivo T1 <br><br>The battery backup is also good But it should have atlea
st 33w charging speed but it has only 18w charging which is not soo fast.
</div><span class="_1H-bmy"><span>READ MORE</span></span></div></div>,
<div class="t-ZTKy"><div><div class="">As usual we all known that Vivo is
famous for their camera. If you look for good camera quality and space go
for it. It looks is awsm 🤖 <br>Disadvantages :- screen touch 2/5 I rate
d bcz its not working properly and after installing apps its work more slo
wer thn before 😞</div><span class="_1H-bmy"><span>READ MORE</span></span>
</div></div>,
<div class="t-ZTKy"><div><div class="">I gifted this phone to my father.
The front camera is better that Samsung f23 model. I bought it in sky-blue
colour. The best thing of this is you get charger, back cover and handset
with this, whi h is not the case with Samsung F23. You have to buy everyth
ing saperately for Samsung which is a disadvantage. This is also very ligh
weight.</div><span class="_1H-bmy"><span>READ MORE</span></span></div></di
v>,
<div class="t-ZTKy"><div><div class="">Best price and best mobile eve
r.... 👍👍<br>Camera quality is asome.<br>Micro mode also good work and
clear image captured.</div><span class="_1H-bmy"><span>READ MORE</span></s
pan></div></div>,
<div class="t-ZTKy"><div><div class="">The best UI I got it and Android 1
2 gives you a better experience..<br>Camera is so good as I expected...<b
```



```
r/>Gaming is so good but gyroscope delay a little... but all 👍<br/>Love
Vivo....</div><span class="_1H-bmy"><span>READ MORE</span></span></div></d
iv>]
```

In [24]:

```
1 cust_comment=[]
2 for i in range(0,len(comment)):
3     cust_comment.append(comment[i].get_text())
4 cust_comment
```

Out[24]:

```
['superb phone i am very happy to buy itcolour camara and screen was fantast
ic i really love it thanku 😊😊 READ MORE',
 'At this price range this is the best phoneProcessor is top notch 695 snapd
ragon can be good for next 2-3 yearsCamera is ok according to pricePhone fee
ls light in hand and had a eye catching lookREAD MORE',
 'Good phn but camera not good as i expectedBattery backup v.good charger no
t worth 18W i expect this phn has 44WREAD MORE',
 'Reasons for giving 3 stars, super night mode is not available in 4gb varie
nt and this was not clearly mentioned, no 30w fast charging, drop notch disp
lay, these are the only cons i found. rest is good.READ MORE',
 'I have used this device for 12 days this device no any issues & perfectly
work but BGMI gaming There is a problem in doing this, there is an automatic
refresh, it may be fixed after the software update I am very happy to buy th
is mobile I really liked the color of it and the camera frame was also very
nice And the display is IPS not so good but when used outside, its light rem
ains bright. And talking about the network, after the arrival of 5g, you wil
l know how much speed it is giving, it is...READ MORE',
 'Guys the camera quality of the phone is very good.And even it best In segm
ent for gaming.Only macro camera is not good but camera quality is decent .A
nd even look of the phone is very pretty the design looks very nice. The pho
ne is soo slim and light weight. I have shared some photos clicked by vivo T
1 The battery backup is also good But it should have atleast 33w charging sp
eed but it has only 18w charging which is not soo fast.READ MORE',
 'As usual we all known that Vivo is famous for their camera. If you look fo
r good camera quality and space go for it. It looks is awsm 🧑\u200d♀ Disadv
antages :- screen touch 2/5 I rated bcz its not working properly and after i
nstalling apps its work more slower thn before 😞 READ MORE',
 'I gifted this phone to my father. The front camera is better that Samsung
f23 model. I bought it in sky-blue colour. The best thing of this is you get
charger, back cover and handset with this, whi h is not the case with Samsun
g F23. You have to buy everything saperately for Samsung which is a disadvan
tage. This is also very ligh weight.READ MORE',
 'Best price and best mobile ever.... 👍👍 Camera quality is asome.Micro mode
also good work and clear image captured.READ MORE',
 'The best UI I got it and Android 12 gives you a better experience..Camera
is so good as I expected...Gaming is so good but gyroscope delay a little...
but all 👍 Love Vivo....READ MORE']
```

DATAFRAME

In [25]:

```
1 import pandas as pd
```

In [26]:

```
1 df=pd.DataFrame()
```

In [27]:

```
1 df["Customer Names"]=cust_name
2 df["Customer Review"]=cust_rev
3 df["Customer Comment"]=cust_comment
4 df["Ratings"]=cust_rating
```

In [28]:

```
1 df
```

Out[28]:

	Customer Names	Customer Review	Customer Comment	Ratings
0	Flipkart Customer	Fabulous!	superb phone i am very happy to buy itcolour c...	5
1	Satyam Agrawal	Really Nice	At this price range this is the best phoneProc...	4
2	Shabab Alam	Good	Good phn but camera not good as i expectedBatt...	3
3	Sutiksh Sharma	Decent product	Reasons for giving 3 stars, super night mode i...	3
4	Dhanurdhar Nath	Simply awesome	I have used this device for 12 days this devic...	5
5	Flipkart Customer	Best in the market!	Guys the camera quality of the phone is very g...	5
6	Ragini shrivastav	Very Good	As usual we all known that Vivo is famous for ...	4
7	Flipkart Customer	Simply awesome	I gifted this phone to my father. The front ca...	5
8	Atul Shingade	Nice product	Best price and best mobile ever.... 🍌 🍌 Camera qu...	4
9	Harikesh Gautam	Just wow!	The best UI I got it and Android 12 gives you ...	5

In [29]:

1 df.T

Out[29]:

	0	1	2	3	4	5	6
Customer Names	Flipkart Customer	Satyam Agrawal	Shabab Alam	Sutiksh Sharma	Dhanurdhar Nath	Flipkart Customer	Ragini shrivastav
Customer Review	Fabulous!	Really Nice	Good	Decent product	Simply awesome	Best in the market!	Very Good
Customer Comment	superb phone i am very happy to buy it colour c...	At this price range this is the best phoneProc...	Good phn but camera not good as i expectedBatt...	Reasons for giving 3 stars, super night mode i...	I have used this device for 12 days this devic...	Guys the camera quality of the phone is very g...	As usual we all known that Vivo is famous for ...
Ratings	5	4	3	3	5	5	4

In [30]:

1 df.shape

Out[30]:

(10, 4)

In [31]:

1 df.size

Out[31]:

40

In [32]:

1 df.columns

Out[32]:

```
Index(['Customer Names', 'Customer Review', 'Customer Comment', 'Ratings'],
      dtype='object')
```

In [33]:

1 df.ndim

Out[33]:

2

CSV FILE

In [35]:

```
1 df.to_csv("Vivo Smartphone FlipKart Review",index=False)
```

In [36]:

```
1 df=pd.read_csv("Vivo Smartphone FlipKart Review")
2 df
```

Out[36]:

	Customer Names	Customer Review	Customer Comment	Ratings
0	Flipkart Customer	Fabulous!	superb phone i am very happy to buy itcolour c...	5
1	Satyam Agrawal	Really Nice	At this price range this is the best phoneProc...	4
2	Shabab Alam	Good	Good phn but camera not good as i expectedBatt...	3
3	Sutiksh Sharma	Decent product	Reasons for giving 3 stars, super night mode i...	3
4	Dhanurdhar Nath	Simply awesome	I have used this device for 12 days this devic...	5
5	Flipkart Customer	Best in the market!	Guys the camera quality of the phone is very g...	5
6	Ragini shrivastav	Very Good	As usual we all known that Vivo is famous for ...	4
7	Flipkart Customer	Simply awesome	I gifted this phone to my father. The front ca...	5
8	Atul Shingade	Nice product	Best price and best mobile ever.... 🍑 🍑 Camera qu...	4
9	Harikesh Gautam	Just wow!	The best UI I got it and Android 12 gives you ...	5

In [37]:

```
1 df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9
Data columns (total 4 columns):
#   Column          Non-Null Count  Dtype
---  -
0   Customer Names   10 non-null     object
1   Customer Review  10 non-null     object
2   Customer Comment 10 non-null     object
3   Ratings          10 non-null     int64
dtypes: int64(1), object(3)
memory usage: 448.0+ bytes
```

In [38]:

```
1 df.head()
```

Out[38]:

	Customer Names	Customer Review	Customer Comment	Ratings
0	Flipkart Customer	Fabulous!	superb phone i am very happy to buy itcolour c...	5
1	Satyam Agrawal	Really Nice	At this price range this is the best phoneProc...	4
2	Shabab Alam	Good	Good phn but camera not good as i expectedBatt...	3
3	Sutiksh Sharma	Decent product	Reasons for giving 3 stars, super night mode i...	3
4	Dhanurdhar Nath	Simply awesome	I have used this device for 12 days this devic...	5

In [39]:

```
1 df.tail()
```

Out[39]:

	Customer Names	Customer Review	Customer Comment	Ratings
5	Flipkart Customer	Best in the market!	Guys the camera quality of the phone is very g...	5
6	Ragini shrivastav	Very Good	As usual we all known that Vivo is famous for ...	4
7	Flipkart Customer	Simply awesome	I gifted this phone to my father. The front ca...	5
8	Atul Shingade	Nice product	Best price and best mobile ever.... 🙌 🙌 Camera qu...	4
9	Harikesh Gautam	Just wow!	The best UI I got it and Android 12 gives you ...	5

In [40]:

```
1 df["Customer Review"]
2
```

Out[40]:

```
0      Fabulous!
1      Really Nice
2      Good
3      Decent product
4      Simply awesome
5      Best in the market!
6      Very Good
7      Simply awesome
8      Nice product
9      Just wow!
Name: Customer Review, dtype: object
```

In [41]:

```
1 df["Customer Review"].sort_values()
```

Out[41]:

```
5    Best in the market!
3    Decent product
0    Fabulous!
2    Good
9    Just wow!
8    Nice product
1    Really Nice
4    Simply awesome
7    Simply awesome
6    Very Good
Name: Customer Review, dtype: object
```

In [42]:

```
1 df[df.Ratings==5]["Customer Names"]
```

Out[42]:

```
0    Flipkart Customer
4    Dhanurdhar Nath
5    Flipkart Customer
7    Flipkart Customer
9    Harikesh Gautam
Name: Customer Names, dtype: object
```

In [43]:

```
1 df["Ratings"].min()
```

Out[43]:

```
3
```

In [44]:

```
1 df["Ratings"].unique()
2
```

Out[44]:

```
array([5, 4, 3], dtype=int64)
```

In [45]:

```
1 df["Ratings"].value_counts()
```

Out[45]:

```
5    5
4    3
3    2
Name: Ratings, dtype: int64
```

In [46]:

```
1 df.loc[[2,4,6],["Customer Names","Customer Comment"]]
```

Out[46]:

	Customer Names	Customer Comment
2	Shabab Alam	Good phn but camera not good as i expectedBatt...
4	Dhanurdhar Nath	I have used this device for 12 days this devic...
6	Ragini shrivastav	As usual we all known that Vivo is famous for ...

VISUALIZATION

In [47]:

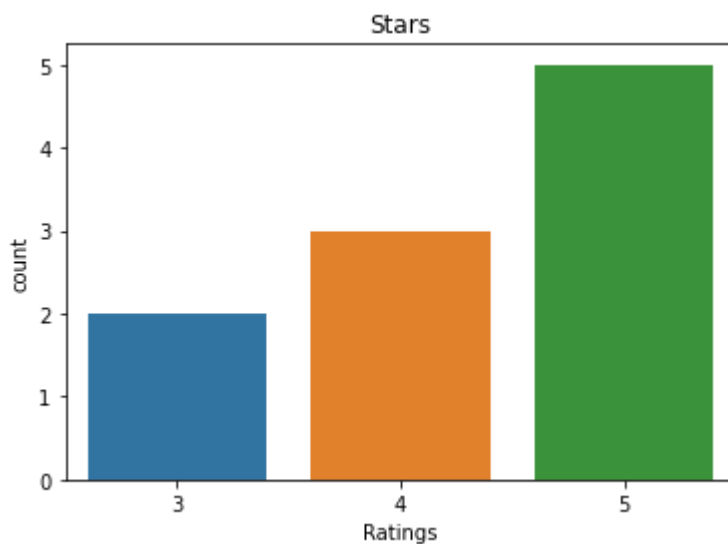
```
1 import matplotlib.pyplot as plt
2 import seaborn as sns
```

In [48]:

```
1 sns.countplot(x=df["Ratings"])
2 plt.title("Stars")
```

Out[48]:

Text(0.5, 1.0, 'Stars')



In [51]:

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



In []:

1