

```
In [ ]: 1 # http://www.flipkart.com/robots.txt
```

Defination of BeautifulSoup

BeautifulSoup is a Python library for pulling data out of HTML and XML files. It works with your favorite parser to provide idiomatic ways of navigating, searching, and modifying the parse tree. It commonly saves programmers hours or days of work.

sometime it is legal and some time illegal

KEY POINTS:

I have took the flipkart samsung website we have distributed analysis in 3 parts :

1.TITLE 2.RATING 3.PRICE

Because if customer want to purchase mobile then this 3 things are important for customer

```
In [1]: 1 import requests
```

```
In [2]: 1 from bs4 import BeautifulSoup
```

```
In [3]: 1 url="https://www.flipkart.com/search?q=samsung+mobiles&sid=tyy%2C4io&as=on&a
```

```
In [5]: 1 url_req=requests.get(url)
```

```
In [6]: 1 url_req
```

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

```
In [7]: 1 url_req.status_code
```

```
Out[7]: 200
```

In [8]: 1 print(url_req.text)

```
ss="ttx38n"><path d="M16 23.207L6.11 13.161 16 3.093 12.955 0 0 13.161l12.955 13.161z" fill="#fff" class="IIvmWM"></path></svg></div></section><section class=" _167Mu3 _2hbLCH"><div class=" _213eRC _2ssEMF"><div class=" _2gmUFU _3V8ra o">Number of Cores</div><svg width="16" height="27" viewBox="0 0 16 27" xmlns="http://www.w3.org/2000/svg" class="ttx38n"><path d="M16 23.207L6.11 13.161 16 3.093 12.955 0 0 13.161l12.955 13.161z" fill="#fff" class="IIvmWM"></path></svg></div></section><section class=" _167Mu3 _2hbLCH"><div class=" _213eRC _2 ssEMF"><div class=" _2gmUFU _3V8rao">Availability</div><svg width="16" height="27" viewBox="0 0 16 27" xmlns="http://www.w3.org/2000/svg" class="ttx38n"><path d="M16 23.207L6.11 13.161 16 3.093 12.955 0 0 13.161l12.955 13.161z" fill="#fff" class="IIvmWM"></path></svg></div></section><section class=" _167Mu3 _2hbLCH"><div class=" _213eRC _2ssEMF"><div class=" _2gmUFU _3V8rao">Discount</div><svg width="16" height="27" viewBox="0 0 16 27" xmlns="http://www.w3.org/2000/svg" class="ttx38n _3DyGEM"><path d="M16 23.207L6.11 13.161 16 3.093 12.955 0 0 13.161l12.955 13.161z" fill="#fff" class="IIvmWM"></path></svg></div><div class=" _3FPh42"><div class=" _2d0we9"><div class=" _4921Z t0pPfW" title="4 0% or more"><div class=" _1Y4Vhm _4F07b6"><label class=" _2iDkf8 t0pPfW"><input type="checkbox" class=" _30VH1S" readonly="" /><div class=" _24_Dny"></div><div class=" _3879cV">40% or more</div></label></div></div><div class=" _4921Z t0pPf W" title="30% or more"><div class=" _1Y4Vhm _4F07b6"><label class=" _2iDkf8 t0pPf W" title="30% or more"></div></div>
```

In [9]: 1 soup=BeautifulSoup(url_req.content,"lxml") #lxml - it is parser - for reading

In [10]: 1 soup

```
hVSre _3nq8ih"><div class=" _36FSn5"><svg class=" _110elc" height="16" viewBox="0 0 20 16" width="16" xmlns="http://www.w3.org/2000/svg"><path class="eX72w L" d="M8.695 16.682C4.06 12.382 1 9.536 1 6.065 1 3.219 3.178 1 5.95 1c1.566 0 3.069.746 4.05 1.915C10.981 1.745 12.484 1 14.05 1 16.822 1 19 3.22 19 6.065C0 3.471-3.06 6.316-7.695 10.617L10 17.897l-1.305-1.215z" fill="#2874F0" fill-rule="evenodd" opacity=".9" stroke="#FFF"></path></svg></div></div><div class=" _3pLy-c row"><div class="col col-7-12"><div class=" _4rR01T">SAMSUNG Galaxy F13 (Sunrise Copper, 128 GB)</div><div class="gUuXy-><span class=" _11Rcqv" id="productRating_LSTMOBGENJWHQZS6BKPFBLUBU_MOBGENJWHQZS6BKP_><div class=" _3LWz1K">4.4</div></span><span class=" _2_R_DZ"><span>1,07,867 Ratings </span><span class=" _13vcMD">&#amp;</span><span> 6,188 Reviews</span></span></div><div class="fMghE0"><ul class=" _1xgFaf"><li class="rgWa7D">4 GB RAM | 128 GB ROM | Expandable Upto 1 TB</li><li class="rgWa7D">16.76 cm (6.6 inch) Full HD+ Display</li><li class="rgWa7D">50MP + 5MP + 2MP | 8M
```

P Front Camera<li class="rgWa7D">6000 mAh Lithium Ion Battery<li class="rgWa7D">6.6 cm (6.6 inch) Full HD+ Display<li class="rgWa7D">50MP + 5MP + 2MP | 8M

```
In [11]: 1 print(soup.prettify()) #data printed in better way - much more readable
<meta content="http://ai.flipkart.com/ai/home?" name="twitter:app:url:ipad"/>
<meta content="Flipkart" name="twitter:app:name:googleplay"/>
<meta content="com.flipkart.android" name="twitter:app:id:googleplay"/>
<meta content="http://dl.flipkart.com/dl/home?" name="twitter:app:url:googleplay"/>
<style>
#container {
    height: 100%;
}

</style>
<link href="///fk-cp-zion/css/Browse.chunk.fff59ed.css" rel="stylesheet"/>
<title>
    Samsung Mobiles- Buy Products Online at Best Price in India - All Categories | Flipkart.com
</title>
<meta content="Samsung Mobiles- Buy Products Online at Best Price in India - All Categories | Flipkart.com" name="og_title" property="og:title"/>
<meta content="Samsung Mobiles" name="Keywords"/>
<meta content="Samsung Mobiles- Buy Products Online at Best Price in India - All Categories | Flipkart.com" name="og_desc" property="og:description"/>
```

```
In [12]: 1 soup.title
```

```
Out[12]: <title>Samsung Mobiles- Buy Products Online at Best Price in India - All Categories | Flipkart.com</title>
```

```
In [13]: 1 soup.title.string
```

```
Out[13]: 'Samsung Mobiles- Buy Products Online at Best Price in India - All Categories | Flipkart.com'
```

```
In [14]: 1 soup.div #division tag of page
2 #we can make the section
```

```
<div class="1jJQdf _2Mji8F" href="/mobiles/pr?sid=tty,4io&q=samsung+mobiles&otracker=categorytree" title="Mobiles">Mobiles</a></div></div><div class="2yz7eI _2hbLCH"><div class="3KxRU6 _2ssEMF"><div class="UR1L2I _3V8rao"><span>Price</span></div></div><div class="2NBi0m"><div class="1inneZ0"><div class="2TbXIJ" style="height:0;width:0"></div><div class="2TbXIJ" style="height:0;width:0"></div><div class="2TbXIJ" style="height:0;width:0"></div><div class="2TbXIJ" style="height:0;width:0"></div></div></div><div class="2r34S" style="height:0;width:0"></div></div><div class="12FhcQ"><div class="31Kbhn _28DFQy"><div class="3FdLqY"></div></div><div class="31Kbhn WC_zGJ"><div class="3FdLqY"></div></div><div class="2IN3-t"></div><div class="2IN3-t _1mRwRd"></div></div><div class="15GU70"><div class="1ftpqI" style="width:undefinedpx">.</div><div class="1ftpqI" style="width:undefinedpx">.</div><div class="1ftpqI" style="width:undefinedpx">.</div><div class="1ftpqI" style="width:undefinedpx">.</div></div></div><div class="2b0bUo"><div class="1YAKP4"><select class="2YxDZ"><option class="3AsjWR" selected="" value="Min">Min</option><option class="3AsjWR" value="10000">₹10000</option><option class="3AsjWR" value="15000">₹15000</option><option class="3AsjWR" value="20000">₹20000</option>
```

```
In [15]: 1 soup.div.string #no value bcz there is not only char
```

please read on this website -

<https://beautiful-soup-4.readthedocs.io/en/latest/>
<https://beautiful-soup-4.readthedocs.io/en/latest/>

```
In [17]: 1 soup.a # a is use for hyperlink - ex. a href
```

```
Out[17]: <a href="/"></a>
```

```
In [15]: 1 soup.find_all("a") # print all hyperlink
```

```
<original-image></a>
<div class="3PzNI"><span class="f3A4_V"><label class="2iDkf8"><input checked="" type="checkbox"/></div></label></span><label class="6Up2sF"><span>Add to Compare</span></label></div>
<div class="2hVSre _3nq8ih"><div class="36FSn5"><svg class="110e1c" height="16" viewBox="0 0 20 16" width="16" xmlns="http://www.w3.org/2000/svg"><path class="eX72wL" d="M8.695 16.682C4.06 12.382 1 9.536 1 6.065 1 3.219 3.178 1 5.95 1c1.566 0 3.069 7.46 4.05 1.915C10.981 1.745 12.484 1 14.05 1 16.822 1 19 3.22 19 6.065C0 3.471-3.06 6.316-7.695 10.617L10 17.897L-1.305-1.215z" fill="#2874F0" fill-rule="evenodd" opacity=".9" stroke="#FFF"/></path></svg></div>
</div></div>
<div class="3pLy-c row"><div class="col col-7-12"><div class="4rR01T">SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)</div><div class="gUuXy-><span class="11Rcqv" id="productRating_LSTMOBGBKQF45XPEUHAYAHBJE_MOBGBKQF45XPEUHA_"><div class="3LWZlK">4.3</div></span><span class="2_R_DZ"><span>1,37,422 Ratings </span>&lt;/span><span class="13vcmD">&amp;lt;/span><span> 11,205 Reviews</span></span></div><div class="fMghEO"><ul class="1xgFaf"><li>
```

In [18]:

```

1 all_links=soup.find_all('a')
2 for r in all_links:
3     print(r.get('href'))
4
5

os=0&as-type=HISTORY&as-searchtext=sa&page=2
/samsung-galaxy-m33-5g-deep-ocean-blue-128-gb/p/item6faf6189184d?pid=MOBGHDXF
KZZVPYZJ&marketplace=FLIPKART
/samsung-galaxy-f23-5g-aqua-blue-128-gb/p/item7e22cf838b231?pid=MOGBBKQF45XPEU
HA&marketplace=FLIPKART
/samsung-galaxy-m13-5g-midnight-blue-128-gb/p/item036ac71322801?pid=MOBGGHCYPY
CCARFC&marketplace=FLIPKART
/samsung-galaxy-f23-5g-aqua-blue-128-gb/p/itemca05995899ad5?pid=MOGBBKQFHKZHTH
KJ&marketplace=FLIPKART
/samsung-galaxy-s21-fe-5g-graphite-128-gb/p/item7be0f72ffff180?pid=MOGBPFZSPRG
8GSU&marketplace=FLIPKART
/helpcentre?otracker=undefined_footer_navlinks
/about-us?otracker=undefined_footer_navlinks
https://www.flipkartcareers.com/?otracker=undefined\_footer\_navlinks (https://www.flipkartcareers.com/?otracker=undefined\_footer\_navlinks)
http://stories.flipkart.com/?otracker=undefined\_footer\_navlinks (http://stories.flipkart.com/?otracker=undefined\_footer\_navlinks)
/s/press?otracker=undefined_footer_navlinks
https://www.flipkartwholesale.com/?otracker=undefined\_footer\_navlinks (https://www.flipkartwholesale.com/?otracker=undefined\_footer\_navlinks)

```

In [19]:

```

1 all_table=soup.find_all("table")
2 print(all_table)

```

[]

In [20]:

```
1 soup.prettify()
```

```

class="_3AsjWR" value="30000">\n                    ₹30000\n                </option>
>\n                <option class="_3AsjWR" selected="" value="Max">\n₹30000+\n                </option>\n            </select>\n        </div>\n    </div>\n    </section>\n    <section class=" _167Mu3 _2hbLCH">\n        <div class=" _213eRC _2ssEMF">\n            <div class=" _2gmUFU _3V8rao">\n                Brand\n            </div>\n            \n            <path class="IIvmWm" d="M16 23.207L6.11 13.161 16 3.093 12.955 0 0 13.161l12.955 13.161z" fill="#fff"/>\n        </div>\n        <div class=" _2d0we9">\n            <div class=" _4921Z t0pPfW" title="SAMSUNG">\n                <div class=" _1Y4Vhm _4F07b6">\n                    <label class=" _2iDkf8 t0pPfW">\n                        <input checked="" type="checkbox"/>\n                    <div class=" _24_Dny">\n                        <div class=" _3879cV">\n                            SAMSUNG\n                        </div>\n                    </div>\n                </div>\n            </div>\n        </div>\n    </section>\n    <section class=" _2hbLCH _24gLJx">\n        <label class=" _2iDkf8 shbqsL">\n            <input checked="" type="checkbox"/>\n        <div class=" _24_Dny _3tCU7L">\n            <div class=" _3879cV">\n
```

TITLE:

```
In [21]: 1 model=soup.findAll('div',{'class':'_4rR01T'})
2 model
```

```
Out[21]: [<div class="_4rR01T">SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy F13 (Nightsky Green, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy F13 (Waterfall Blue, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Guru Music 2</div>,
<div class="_4rR01T">SAMSUNG Galaxy F13 (Nightsky Green, 64 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy F13 (Sunrise Copper, 64 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy F13 (Waterfall Blue, 64 GB)</div>,
<div class="_4rR01T">SAMSUNG Guru Music 2</div>,
<div class="_4rR01T">SAMSUNG GURU MUSIC 2</div>,
<div class="_4rR01T">SAMSUNG Galaxy F13 (Sunrise Copper, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Guru Music 2</div>,
<div class="_4rR01T">SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG GALAXY M13 5G (Midnight Blue, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG GALAXY M13 5G (Aqua Green, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Guru Music 2</div>,
<div class="_4rR01T">SAMSUNG Guru Music 2</div>,
<div class="_4rR01T">SAMSUNG Galaxy F22 (Denim Blue, 64 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy M33 5G (Deep Ocean Blue, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG Galaxy S21 FE 5G (Graphite, 128 GB)</div>,
<div class="_4rR01T">SAMSUNG M53 5G (Deep Ocean Blue, 128 GB)</div>]
```

```
In [22]: 1 product_name= []
2 for i in model:
3     p=i.text
4     product_name.append(p)
5 print(product_name)
```

```
['SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)', 'SAMSUNG Galaxy F13 (Nightsky Green, 128 GB)', 'SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)', 'SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)', 'SAMSUNG Galaxy F13 (Waterfall Blue, 128 GB)', 'SAMSUNG Guru Music 2', 'SAMSUNG Galaxy F13 (Nightsky Green, 64 GB)', 'SAMSUNG Galaxy F13 (Sunrise Copper, 64 GB)', 'SAMSUNG Galaxy F13 (Waterfall Blue, 64 GB)', 'SAMSUNG Guru Music 2', 'SAMSUNG GURU MUSIC 2', 'SAMSUNG Galaxy F13 (Sunrise Copper, 128 GB)', 'SAMSUNG Guru Music 2', 'SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)', 'SAMSUNG GALAXY M13 5G (Midnight Blue, 128 GB)', 'SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)', 'SAMSUNG GALAXY M13 5G (Aqua Green, 128 GB)', 'SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)', 'SAMSUNG Guru Music 2', 'SAMSUNG Guru Music 2', 'SAMSUNG Galaxy F22 (Denim Blue, 64 GB)', 'SAMSUNG Galaxy M33 5G (Deep Ocean Blue, 128 GB)', 'SAMSUNG Galaxy S21 FE 5G (Graphite, 128 GB)', 'SAMSUNG M53 5G (Deep Ocean Blue, 128 GB)']
```

In [23]: 1 product_name

Out[23]: ['SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)',
'SAMSUNG Galaxy F13 (Nightsky Green, 128 GB)',
'SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)',
'SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)',
'SAMSUNG Galaxy F13 (Waterfall Blue, 128 GB)',
'SAMSUNG Guru Music 2',
'SAMSUNG Galaxy F13 (Nightsky Green, 64 GB)',
'SAMSUNG Galaxy F13 (Sunrise Copper, 64 GB)',
'SAMSUNG Galaxy F13 (Waterfall Blue, 64 GB)',
'SAMSUNG Guru Music 2',
'SAMSUNG GURU MUSIC 2',
'SAMSUNG Galaxy F13 (Sunrise Copper, 128 GB)',
'SAMSUNG Guru Music 2',
'SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)',
'SAMSUNG GALAXY M13 5G (Midnight Blue, 128 GB)',
'SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)',
'SAMSUNG GALAXY M13 5G (Aqua Green, 128 GB)',
'SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)',
'SAMSUNG Guru Music 2',
'SAMSUNG Guru Music 2',
'SAMSUNG Galaxy F22 (Denim Blue, 64 GB)',
'SAMSUNG Galaxy M33 5G (Deep Ocean Blue, 128 GB)',
'SAMSUNG Galaxy S21 FE 5G (Graphite, 128 GB)',
'SAMSUNG M53 5G (Deep Ocean Blue, 128 GB)']

In [24]: 1 len(product_name)

Out[24]: 24

In [23]: 1 type(product_name)

Out[23]: list

RATING:

In [25]:

```

1 model_rating=soup.findAll('div',{'class':'_3LWZ1K'})
2 model_rating

```

SIXMii+PHBhdGggZm1sbD0iI0ZGRiIgZD0iTTYuNSA5LjQzOWwtMy42NzQgMi4yMy45NC00LjI2LT
 MuMjEtMi440DMgNC4yNTQtLjQwNEw2LjUuMTEybDEuNjkgNC4wMSA0LjI1NC40MDQtMy4yMSAyLjg
 4Mi45NCA0LjI2eiIvPjwvc3ZnPg=="/></div>,
<div class=_3LWZ1K>4.2</div>,
<div class=_3LWZ1K>4.2</div>,
<div class=_3LWZ1K _1BLPMq>5</div>,
<div class=_3LWZ1K _1BLPMq>5₹16,999</div>,
<div class=" _30jeq3 _1_WHN1">₹12,999</div>,
<div class=" _30jeq3 _1_WHN1">₹16,999</div>,
<div class=" _30jeq3 _1_WHN1">₹16,999</div>,
<div class=" _30jeq3 _1_WHN1">₹12,999</div>,
<div class=" _30jeq3 _1_WHN1">₹2,075</div>,
<div class=" _30jeq3 _1_WHN1">₹11,999</div>,
<div class=" _30jeq3 _1_WHN1">₹11,999</div>,
<div class=" _30jeq3 _1_WHN1">₹2,075</div>,
<div class=" _30jeq3 _1_WHN1">₹2,075</div>,
<div class=" _30jeq3 _1_WHN1">₹12,999</div>,
<div class=" _30jeq3 _1_WHN1">₹2,099</div>,
<div class=" _30jeq3 _1_WHN1">₹15,999</div>,
<div class=" _30jeq3 _1_WHN1">₹14,699</div>,
<div class=" _30jeq3 _1_WHN1">₹15,999</div>,
<div class=" _30jeq3 _1_WHN1">₹14,989</div>,
<div class=" _30jeq3 _1_WHN1">₹15,999</div>,
<div class=" _30jeq3 _1_WHN1">₹2,075</div>,
<div class=" _30jeq3 _1_WHN1">₹2,075</div>,
<div class=" _30jeq3 _1_WHN1">₹11,499</div>,
<div class=" _30jeq3 _1_WHN1">₹18,299</div>,
<div class=" _30jeq3 _1_WHN1">₹39,999</div>,
<div class=" _30jeq3 _1_WHN1">₹24,899</div>]
```

In [33]:

```
1 product_price= []
2 for i in model_price:
3 price=i.text
4 product_price.append(price)
5 print(product_price)
```

```
['₹16,999', '₹12,999', '₹16,999', '₹16,999', '₹12,999', '₹2,075', '₹11,999',
'₹11,999', '₹11,999', '₹2,075', '₹2,075', '₹12,999', '₹2,099', '₹15,999', '₹14,
699', '₹15,999', '₹14,989', '₹15,999', '₹2,075', '₹2,075', '₹11,499', '₹18,29
9', '₹39,999', '₹24,899']
```

In [34]:

```
1 len(product_price)
```

Out[34]: 24

```
In [64]: 1 product_rating
```

```
Out[64]: ['4.4',
 '4.3',
 '4.3',
 '4.3',
 '4.4',
 '4.3',
 '4.4',
 '4.4',
 '4.3',
 '4.4',
 '4.4',
 '4.1',
 '4.3',
 '4.2',
 '4.1',
 '4.3',
 '4.2',
 '4.1',
 '4.2',
 '4.3',
 '4.2',
 '4.3',
 '4.4',
 '4.2',
 '5',
 '5',
 '4.3',
 '3',
 '5',
 '4.1',
 '4',
 '1',
 '4.2',
 '3',
 '2',
 '4.4',
 '5',
 '4']
```

```
In [36]: 1 len(product_rating)
```

```
Out[36]: 39
```

```
In [52]: 1 product_rating=product_rating[0:24]
```

```
In [53]: 1 import pandas as pd
```

```
In [54]: 1 df={'product_name':product_name,
2 'Price':product_price,
3 'Rating':product_rating}
```

In [55]: 1 df

Out[55]: {'product\_name': ['SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)', 'SAMSUNG Galaxy F13 (Nightsky Green, 128 GB)', 'SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)', 'SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)', 'SAMSUNG Galaxy F13 (Waterfall Blue, 128 GB)', 'SAMSUNG Guru Music 2', 'SAMSUNG Galaxy F13 (Nightsky Green, 64 GB)', 'SAMSUNG Galaxy F13 (Sunrise Copper, 64 GB)', 'SAMSUNG Galaxy F13 (Waterfall Blue, 64 GB)', 'SAMSUNG Guru Music 2', 'SAMSUNG GURU MUSIC 2', 'SAMSUNG Galaxy F13 (Sunrise Copper, 128 GB)', 'SAMSUNG Guru Music 2', 'SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)', 'SAMSUNG GALAXY M13 5G (Midnight Blue, 128 GB)', 'SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)', 'SAMSUNG GALAXY M13 5G (Aqua Green, 128 GB)', 'SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)', 'SAMSUNG Guru Music 2', 'SAMSUNG Guru Music 2', 'SAMSUNG Galaxy F22 (Denim Blue, 64 GB)', 'SAMSUNG Galaxy M33 5G (Deep Ocean Blue, 128 GB)', 'SAMSUNG Galaxy S21 FE 5G (Graphite, 128 GB)', 'SAMSUNG M53 5G (Deep Ocean Blue, 128 GB)'], 'Price': ['₹16,999', '₹12,999', '₹16,999', '₹16,999', '₹12,999', '₹2,075', '₹11,999', '₹11,999', '₹11,999', '₹2,075', '₹2,075', '₹12,999', '₹2,099', '₹15,999', '₹14,699', '₹15,999', '₹14,989', '₹15,999', '₹2,075', '₹2,075', '₹11,499', '₹18,299', '₹39,999', '₹24,899'], 'Rating': ['4.3', '4.4', '4.3', '4.3', '4.4', '4.3']},

```
'4.4',
'4.4',
'4.4',
'4.3',
'4.1',
'4.4',
'4.3',
'4.2',
'4.1',
'4.2',
'4.1',
'4.2',
'4.3',
'4.3',
'4.3',
'4.2',
'4.4',
'4.2']}
```

In [44]: 1 len(product\_rating)

Out[44]: 24

In [45]: 1 len(product\_name)

Out[45]: 24

In [46]: 1 len(product\_price)

Out[46]: 24

In [59]: 1 data\_flipkart\_sam=pd.DataFrame(df) #getting error bcz all columns should s

In [60]: 1 data\_flipkart\_sam

Out[60]:

	product_name	Price	Rating
0	SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)	₹16,999	4.3
1	SAMSUNG Galaxy F13 (Nightsky Green, 128 GB)	₹12,999	4.4
2	SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)	₹16,999	4.3
3	SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)	₹16,999	4.3
4	SAMSUNG Galaxy F13 (Waterfall Blue, 128 GB)	₹12,999	4.4
5	SAMSUNG Guru Music 2	₹2,075	4.3
6	SAMSUNG Galaxy F13 (Nightsky Green, 64 GB)	₹11,999	4.4
7	SAMSUNG Galaxy F13 (Sunrise Copper, 64 GB)	₹11,999	4.4
8	SAMSUNG Galaxy F13 (Waterfall Blue, 64 GB)	₹11,999	4.4
9	SAMSUNG Guru Music 2	₹2,075	4.3
10	SAMSUNG GURU MUSIC 2	₹2,075	4.1
11	SAMSUNG Galaxy F13 (Sunrise Copper, 128 GB)	₹12,999	4.4
12	SAMSUNG Guru Music 2	₹2,099	4.3
13	SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)	₹15,999	4.2
14	SAMSUNG GALAXY M13 5G (Midnight Blue, 128 GB)	₹14,699	4.1
15	SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)	₹15,999	4.2
16	SAMSUNG GALAXY M13 5G (Aqua Green, 128 GB)	₹14,989	4.1
17	SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)	₹15,999	4.2
18	SAMSUNG Guru Music 2	₹2,075	4.3
19	SAMSUNG Guru Music 2	₹2,075	4.3
20	SAMSUNG Galaxy F22 (Denim Blue, 64 GB)	₹11,499	4.3
21	SAMSUNG Galaxy M33 5G (Deep Ocean Blue, 128 GB)	₹18,299	4.2
22	SAMSUNG Galaxy S21 FE 5G (Graphite, 128 GB)	₹39,999	4.4
23	SAMSUNG M53 5G (Deep Ocean Blue, 128 GB)	₹24,899	4.2

## EDA on the DataFrame:

In [ ]: 1 import pandas as pd  
2 import numpy as np  
3 import matplotlib.pyplot as plt  
4 import seaborn as sns  
5 import warnings  
6 warnings.filterwarnings('ignore')

```
In [61]: 1 data_flipkart_sam.columns
```

```
Out[61]: Index(['product_name', 'Price', 'Rating'], dtype='object')
```

```
In [62]: 1 data_flipkart_sam.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 24 entries, 0 to 23
Data columns (total 3 columns):
 # Column Non-Null Count Dtype

 0 product_name 24 non-null object
 1 Price 24 non-null object
 2 Rating 24 non-null object
dtypes: object(3)
memory usage: 704.0+ bytes
```

```
In [64]: 1 data_flipkart_sam.describe()
```

```
Out[64]:
```

	product_name	Price	Rating
<b>count</b>	24	24	24
<b>unique</b>	17	12	4
<b>top</b>	SAMSUNG Guru Music 2	₹2,075	4.3
<b>freq</b>	5	5	9

```
In [65]: 1 data_flipkart_sam.isnull().sum()
```

```
Out[65]: product_name 0
 Price 0
 Rating 0
 dtype: int64
```

```
In [67]: 1 data_flipkart_sam.nunique()
```

```
Out[67]: product_name 17
 Price 12
 Rating 4
 dtype: int64
```

In [68]: 1 data\_flipkart\_sam.head()

Out[68]:

	product_name	Price	Rating
0	SAMSUNG Galaxy F23 5G (Aqua Blue, 128 GB)	₹16,999	4.3
1	SAMSUNG Galaxy F13 (Nightsky Green, 128 GB)	₹12,999	4.4
2	SAMSUNG Galaxy F23 5G (Copper Blush, 128 GB)	₹16,999	4.3
3	SAMSUNG Galaxy F23 5G (Forest Green, 128 GB)	₹16,999	4.3
4	SAMSUNG Galaxy F13 (Waterfall Blue, 128 GB)	₹12,999	4.4

In [69]: 1 data\_flipkart\_sam.tail()

Out[69]:

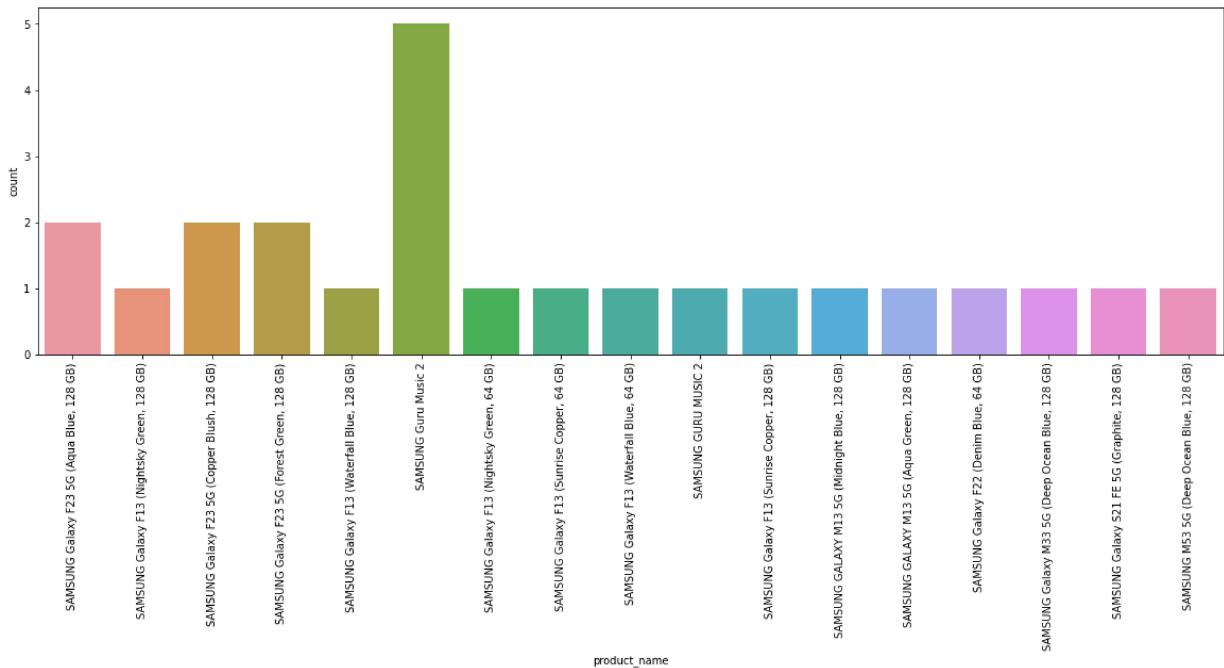
	product_name	Price	Rating
19	SAMSUNG Guru Music 2	₹2,075	4.3
20	SAMSUNG Galaxy F22 (Denim Blue, 64 GB)	₹11,499	4.3
21	SAMSUNG Galaxy M33 5G (Deep Ocean Blue, 128 GB)	₹18,299	4.2
22	SAMSUNG Galaxy S21 FE 5G (Graphite, 128 GB)	₹39,999	4.4
23	SAMSUNG M53 5G (Deep Ocean Blue, 128 GB)	₹24,899	4.2

## Visualisation

```
In [70]: 1 plt.bar(data_flipkart_sam['Price'], data_flipkart_sam['Rating']) #pass co
 2 plt.title('Price vs Rating', fontsize=16, color='r') #pass ti
 3 plt.xlabel('Price')
 4 plt.ylabel('Rating')
 5 plt.xticks(rotation=90) # this 90 is angle
 6 plt.grid(True)
 7 plt.show()
```



```
In [72]: 1 plt.figure(figsize=(20,6))
2 sns.countplot(x=data_flipkart_sam['product_name'])
3 plt.xticks(rotation=90)
4 plt.show()
```



In [1]: 1

