boAt Website Scraping

A Project Submitted to the

IT Vedant Institute, Thane.

Data Science & Data Analytics With AI

Python-Web-Scrapping Project

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WEB SCRAPING PROJECT

boAt Earbuds

USING PYTHON AND BEAUTIFULSOUP

DESCRIPTION

Earbuds web scrapping project involves extracting data from websites. This data can be used for various purposes, such as data analysis, research, reporting, or populating databases. We are going to use Ear buds to scrape site. To do so, we are going to use tools like Python, Requests, BeautifulSoup.

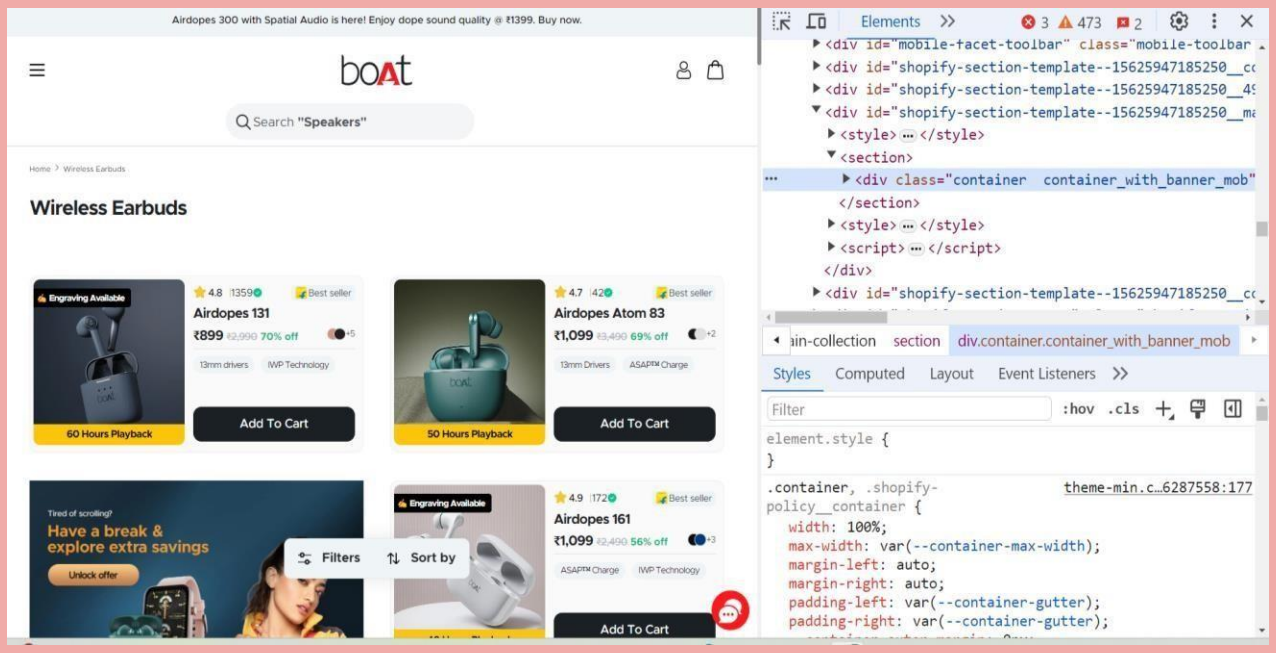
OUTLINE

From this site, we are going to grab the following information:

- Ear buds Name
- Actual Price
- Discount
- Final Price
- Ratings
- Features
- Technology

STEPS:

Choose the Website and Webpage URL
Inspect the Website



Installing the important libraries

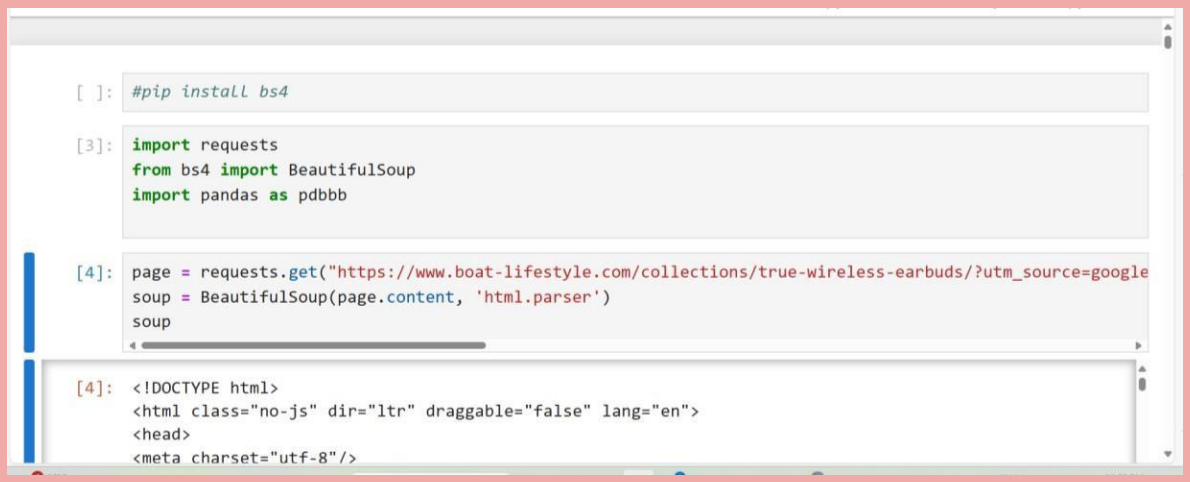
Python has several web scrapping libraries. We will use the following libraries:

- **Requests**
- **BeautifulSoup**
- **Pandas**

Write the Python source code
Exporting the extracted data

boAt Earbuds Web Scraping Coding

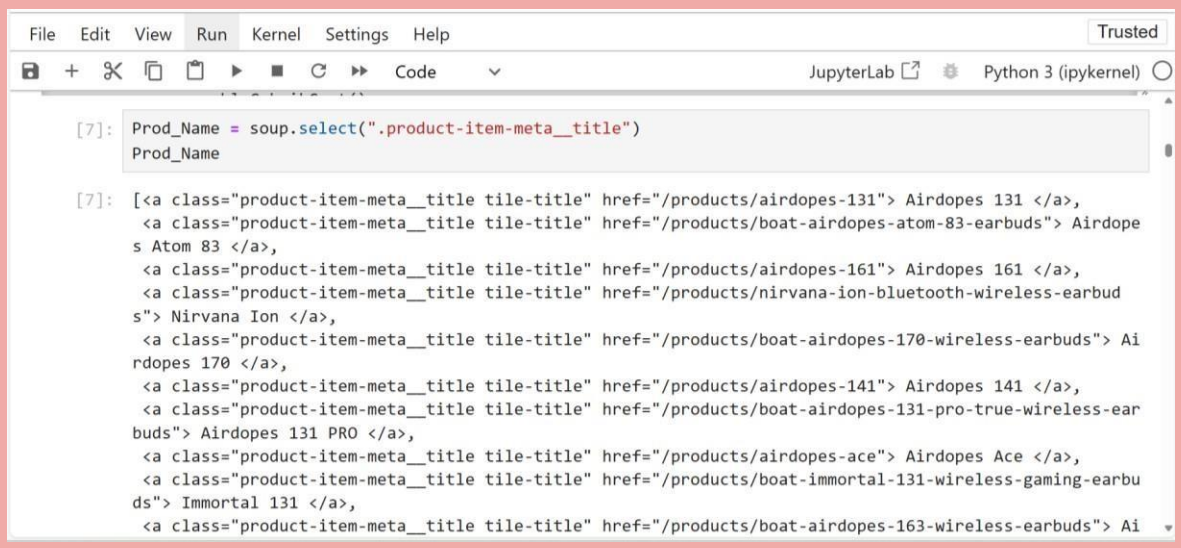
Accessing the Website using requests and BeautifulSoup Library , and Using html.parser



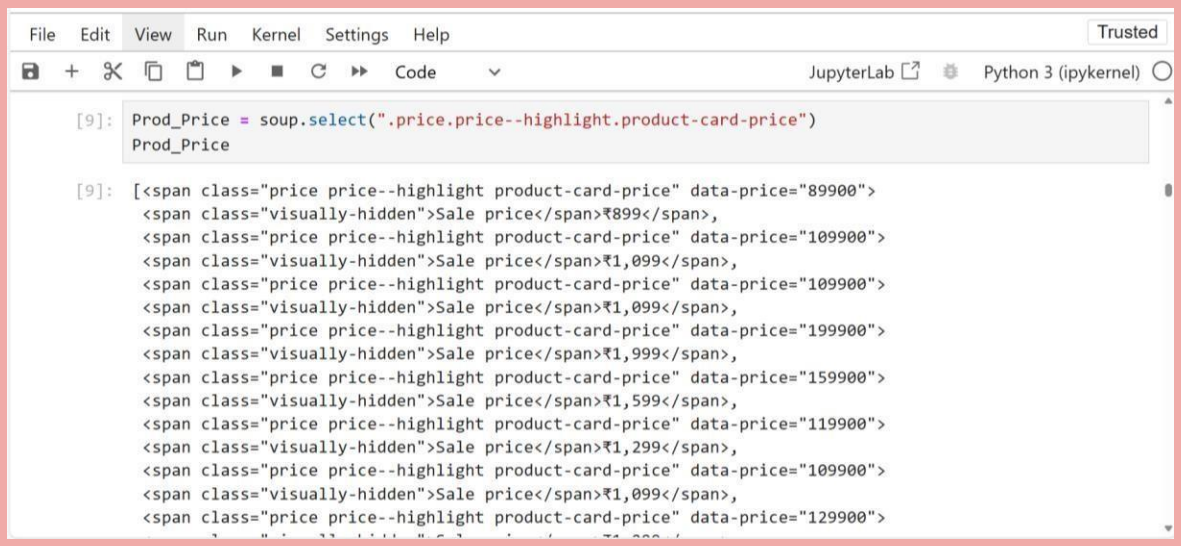
```
[ ]: #pip install bs4

[3]: import requests
     from bs4 import BeautifulSoup
     import pandas as pdbbb

[4]: page = requests.get("https://www.boat-lifestyle.com/collections/true-wireless-earbuds/?utm_source=google
     soup = BeautifulSoup(page.content, 'html.parser')
     soup

[4]: <!DOCTYPE html>
     <html class="no-js" dir="ltr" draggable="false" lang="en">
     <head>
     <meta charset="utf-8"/>
```

```
[6]: print(soup.prettify())

<!DOCTYPE html>
<html class="no-js" dir="ltr" draggable="false" lang="en">
 <head>
  <meta charset="utf-8"/>
  <meta content="width=device-width, initial-scale=1.0, height=device-height, minimum-scale=1.0, maxim
um-scale=6.0" name="viewport"/>
  <meta content="#ffffff" name="theme-color"/>
  <meta content="qad1e3gldwmxjf6luncdygpvcpduub" name="facebook-domain-verification"/>
  <link href="https://www.boat-lifestyle.com/collections/true-wireless-earbuds" rel="canonical"/>
  <link href="//www.boat-lifestyle.com/cdn/shop/files/32x32_256x256.png_32x32_2d0995d9-ec86-4c14-b928-
71101777194c_96x96.png?v=1647426716" rel="shortcut icon" type="image/png"/>
  <title>
   Earbuds - Buy Wireless Earbuds Online in India | boAt
```

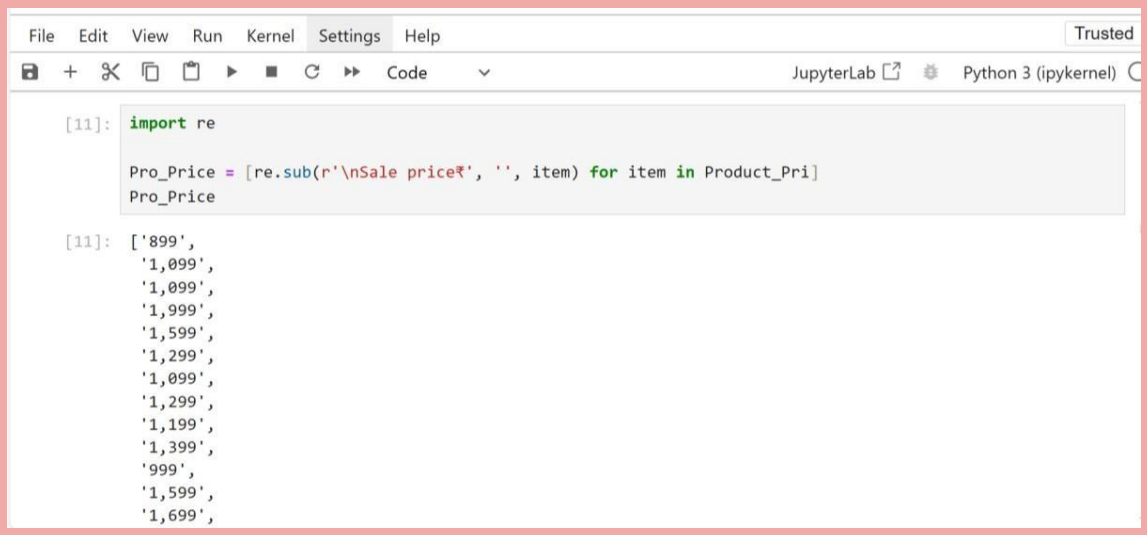
Now accessing the **Earbuds name.**



Accessing the **Final price** of every product.



Using Regular Expression to extract specific data.



Accessing the **discount** on every product.

```
[12]: Dis = soup.select(".m-0.pr-2.off")
      Dis

[12]: [<p class="m-0 pr-2 off">70% off</p>,
       <p class="m-0 pr-2 off">69% off</p>,
       <p class="m-0 pr-2 off">56% off</p>,
       <p class="m-0 pr-2 off">75% off</p>,
       <p class="m-0 pr-2 off">54% off</p>,
       <p class="m-0 pr-2 off">71% off</p>,
       <p class="m-0 pr-2 off">63% off</p>,
       <p class="m-0 pr-2 off">63% off</p>,
       <p class="m-0 pr-2 off">66% off</p>,
       <p class="m-0 pr-2 off">44% off</p>,
       <p class="m-0 pr-2 off">71% off</p>,
       <p class="m-0 pr-2 off">68% off</p>,
       <p class="m-0 pr-2 off">69% off</p>,
       <p class="m-0 pr-2 off">59% off</p>,
       <p class="m-0 pr-2 off">68% off</p>
```

```
[13]: Discount=[]
      for i in Dis:
          Discount.append(i.get_text())
      Discount

[13]: ['70% off',
       '69% off',
       '56% off',
       '75% off',
       '54% off',
       '71% off',
       '63% off',
       '63% off',
       '66% off',
       '44% off',
       '71% off',
```

Using regular expression accordingly.

```
[28]: import re
      Discount_ = [re.sub(r'%\s*off','',item) for item in Discount]
      Discount_
      #len(Discount_)

[28]: ['70',
       '71',
       '60',
       '75',
       '77',
       '76',
       '44',
       '63',
       '74',
       '63',
       '54',
       '59',
       '68',
       '66',
       '70',
       '47',
       '46',
```

Now accessing the **Ratings** on the Earbuds.

```
[15]: Rating_tags = soup.select(".rating__stars")
      Rating_tags
```

```
[15]: [<div aria-label="4.84 out of 5.0 stars" class="rating__stars" role="img"><span>
       <svg height="12" viewbox="0 0 22 22" width="12" xmlns="http://www.w3.org/2000/svg">
       <g data-name="Group 334346" id="Group_334346" transform="translate(17150 -5434)">
       <rect data-name="Rectangle 114376" fill="transparent" height="22" id="Rectangle_114376" transform="tr
      anslate(-17150 5434)" width="22"></rect>
       <g data-name="Group 334341" id="Group_334341" transform="translate(-17149 5435)">
       <path d="M1153.144,361.362a1.527,1.527,0,0,1,2.738,012.313,4.692,5.154.768a1.527,1.527,0,0,1,.848,2.6
      l-3.729,3.683.868,5.179a1.526,1.526,0,0,1-2.216,1.61l-4.606-2.424-4.607,2.424a1.526,1.526,0,0,1-2.216-
      1.61l.868-5.179-3.729-3.683a1.526,1.526,0,0,1,.848-2.615l.154-.768Z" data-name="Path 332351" fill="#f4c7
      30" fill-rule="evenodd" id="Path_332351" transform="translate(-1144.374 -360.511)"></path>
       </g>
       </g>
       </svg>
       </span>
```

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Code JupyterLab Python 3 (ipykernel)

```
[16]: Rating_list=[]
      for i in Rating_tags:
          Rating_list.append(i.get_text())


      Rating_list
```

```
[16]: ['\n\n\n\n\n\n\n\n\n\n        4.8\n      ',
       '\n\n\n\n\n\n\n\n\n\n        4.7\n      ',
       '\n\n\n\n\n\n\n\n\n\n        4.9\n      ',
       '\n\n\n\n\n\n\n\n\n\n        5.0\n      ',
       '\n\n\n\n\n\n\n\n\n\n        5.0\n      ',
       '\n\n\n\n\n\n\n\n\n\n        4.9\n      ',
       '\n\n\n\n\n\n\n\n\n\n        4.9\n      ',
       '\n\n\n\n\n\n\n\n\n\n        4.6\n      ',
       '\n\n\n\n\n\n\n\n\n\n        4.9\n      ',
       '\n\n\n\n\n\n\n\n\n\n        4.8\n      ',
       '\n\n\n\n\n\n\n\n\n\n        4.9\n      ',
```

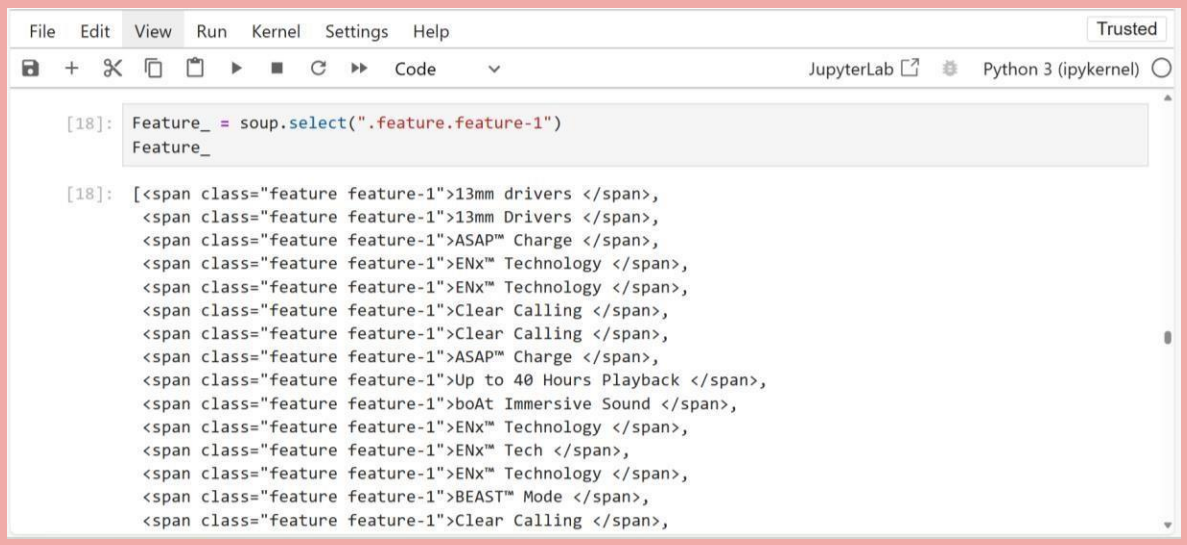
Using Regular Expression.

```
[17]: import re

      Rating_ = [re.sub(r'\s*\n+\s*','',item) for item in Rating_list]
      Rating_
      #Len(Rating_)

[17]: ['4.8',
       '4.7',
       '4.9',
       '5.0',
       '5.0',
       '4.9',
       '4.9',
       '4.6',
       '4.9',
       '4.8',
```

Now accessing some **features** of the product.



Now accessing the **Technology** of the product.

```
[18]: Tech = soup.select(".feature.feature-2")
      Tech

[18]: [<span class="feature feature-2"> IWP Technology</span>,
       <span class="feature feature-2"> ASAP™ Charge</span>,
       <span class="feature feature-2"> IWP Technology</span>,
       <span class="feature feature-2"> BEAST™ Mode </span>,
       <span class="feature feature-2"> BEAST™ Mode </span>,
       <span class="feature feature-2"> ASAP™ Charge</span>,
       <span class="feature feature-2"> BEAST™ Mode</span>,
       <span class="feature feature-2"> ENx™ Technology </span>,
       <span class="feature feature-2"> IWP Technology</span>,
       <span class="feature feature-2"> BEAST™ Mode </span>,
       <span class="feature feature-2"> IWP™ Tech </span>,
       <span class="feature feature-2">  ASAP™ Charge </span>,
       <span class="feature feature-2"> BEAST™ Mode </span>,
       <span class="feature feature-2"> 40 Hours Playback </span>,
       <span class="feature feature-2"> ASAP™ Charge</span>,
```

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Code JupyterLab Python 3 (ipykernel)

```
[19]: Technology_=[]
      for i in Tech:
          Technology_.append(i.get_text())

      Technology_
      #Len(Technology_)

[19]: [' IWP Technology',
       ' ASAP™ Charge',
       ' IWP Technology',
       ' BEAST™ Mode ',
       ' BEAST™ Mode ',
       ' ASAP™ Charge',
       ' BEAST™ Mode',
       ' ENx™ Technology ',
       ' IWP Technology',
       ' BEAST™ Mode ',
       ' IWP™ Tech ',
```

Accessing the **actual and initial price** of the product.

```
[22]: Act_price= soup.select(".price.price--compare.line-through")
      Act_price
```

```
[22]: [<span class="price price--compare line-through" data-compare-price="299000">
       <span class="visually-hidden">Regular price</span>₹2,990</span>,
       <span class="price price--compare line-through" data-compare-price="349000">
       <span class="visually-hidden">Regular price</span>₹3,490</span>,
       <span class="price price--compare line-through" data-compare-price="249000">
       <span class="visually-hidden">Regular price</span>₹2,490</span>,
       <span class="price price--compare line-through" data-compare-price="799000">
       <span class="visually-hidden">Regular price</span>₹7,990</span>,
       <span class="price price--compare line-through" data-compare-price="349000">
       <span class="visually-hidden">Regular price</span>₹3,490</span>,
       <span class="price price--compare line-through" data-compare-price="449000">
       <span class="visually-hidden">Regular price</span>₹4,490</span>,
       <span class="price price--compare line-through" data-compare-price="299000">
```

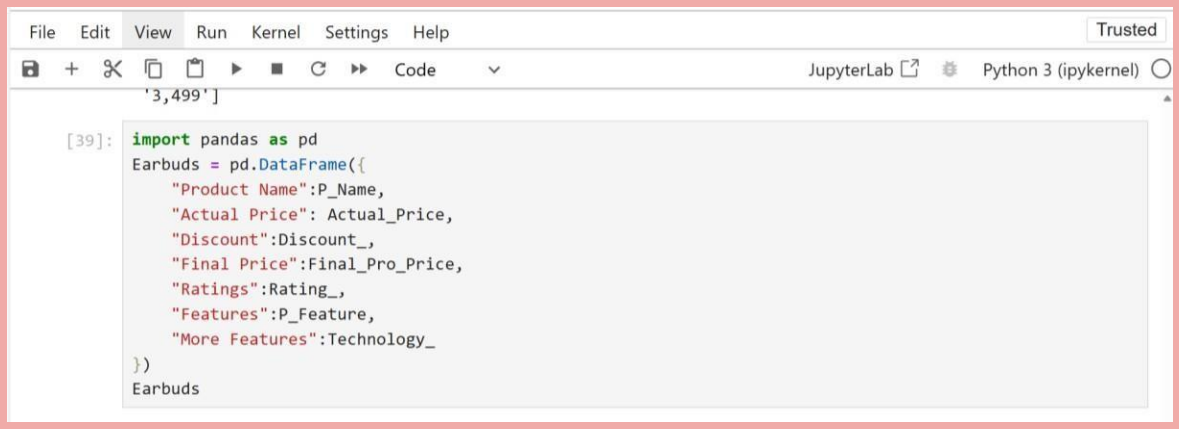
```
[23]: Actual_Pri_=[]
      for i in Act_price :
          Actual_Pri_.append(i.get_text())

      Actual_Pri_
```

```
[23]: ['\nRegular price₹2,990',
       '\nRegular price₹3,490',
       '\nRegular price₹2,490',
       '\nRegular price₹7,990',
       '\nRegular price₹3,490',
       '\nRegular price₹4,490',
       '\nRegular price₹2,990',
       '\nRegular price₹3,490',
       '\nRegular price₹3,490',
       '\nRegular price₹2,490',
```

```
[24]: import re

      Actual_Price = [re.sub(r'\nRegular price₹','', item) for item in Actual_Pri_]
      Actual_Price
```

```
[24]: ['2,990',
       '3,490',
       '2,490',
       '7,990',
       '3,490',
       '4,490',
       '2,990',
       '3,490',
       '3,490',
       '2,490',
       '3,490',
       '4,990',
       '5,490',
```

Using Dataframe and pandas library.



[23]:

	Product Name	Actual Price	Discount	Final Price	Ratings	Features	Technology
0	Airdopes 131	2,990	70%	899	4.8	13mm drivers	IWP Technology
1	Airdopes Atom 83	3,490	69%	1,099	4.7	13mm Drivers	ASAP™ Charge
2	Airdopes 161	2,490	56%	1,099	4.9	ASAP™ Charge	IWP Technology
3	Nirvana Ion	7,990	75%	1,999	5.0	ENx™ Technology	BEAST™ Mode
4	Airdopes 170	3,490	54%	1,599	5.0	ENx™ Technology	BEAST™ Mode
5	Airdopes 141	4,490	71%	1,299	4.9	Clear Calling	ASAP™ Charge
6	Airdopes 131 PRO	2,990	63%	1,099	4.9	Clear Calling	BEAST™ Mode
7	Airdopes Ace	3,490	63%	1,299	4.6	ASAP™ Charge	ENx™ Technology

Exporting all the data into a CSV File.

```
[24]: Earbuds.to_csv("boAt_Report_Scraping.csv",index=False)

[25]: Read=pd.read_csv("boAt_Report_Scraping.csv")
      Read
```

[25]:

	Product Name	Actual Price	Discount	Final Price	Ratings	Features	Technology
0	Airdopes 131	2,990	70%	899	4.8	13mm drivers	IWP Technology
1	Airdopes Atom 83	3,490	69%	1,099	4.7	13mm Drivers	ASAP™ Charge
2	Airdopes 161	2,490	56%	1,099	4.9	ASAP™ Charge	IWP Technology
3	Nirvana Ion	7,990	75%	1,999	5.0	ENx™ Technology	BEAST™ Mode
4	Airdopes 170	3,490	54%	1,599	5.0	ENx™ Technology	BEAST™ Mode
5	Airdopes 141	4,490	71%	1,299	4.9	Clear Calling	ASAP™ Charge

Open the file in the application and below is the Output for it.

	A	B	C	D	E	F	G
1	Product Name	Actual Price	Discount	Final Price	Ratings	Features	Technology
2	Airdopes 131	2,990	70%	899	4.8	13mm drivers	IWP Technology
3	Airdopes Atom 83	3,490	69%	1,099	4.7	13mm Drivers	ASAPâ„¢ Charge
4	Airdopes 161	2,490	56%	1,099	4.9	ASAPâ„¢ Charge	IWP Technology
5	Nirvana Ion	7,990	75%	1,999	5	ENxâ„¢ Technology	BEASTâ„¢ Mode
6	Airdopes 170	3,490	54%	1,599	5	ENxâ„¢ Technology	BEASTâ„¢ Mode
7	Airdopes 141	4,490	71%	1,299	4.9	Clear Calling	ASAPâ„¢ Charge
8	Airdopes 131 PRO	2,990	63%	1,099	4.9	Clear Calling	BEASTâ„¢ Mode
9	Airdopes Ace	3,490	63%	1,299	4.6	ASAPâ„¢ Charge	ENxâ„¢ Technology
10	Airdopes 163	2,490	44%	1,399	4.8	boAt Immersive Sound	IWP Technology
11	Immortal 131	3,490	66%	1,199	4.9	Up to 40 Hours Playback	BEASTâ„¢ Mode
12	Airdopes Ultra Plus	4,990	68%	1,599	4.8	ENxâ„¢ Tech	IWPâ„¢ Tech
13	Airdopes Alpha	3,490	71%	999	4.9	ENxâ„¢ Technology	ASAPâ„¢ Charge
14	Airdopes Hype	5,490	69%	1,699	4.5	ENxâ„¢ Technology	BEASTâ„¢ Mode
15	Immortal 111	3,499	59%	1,449	5	BEASTâ„¢ Mode	40 Hours Playback
16	Airdopes 148	4,490	68%	1,449	5	Clear Calling	ASAPâ„¢ Charge
17	TRebel Airdopes 141	4,490	73%	1,199	5	Clear Calling	ASAPâ„¢ Charge

boAt_Report_Scraping Excel file

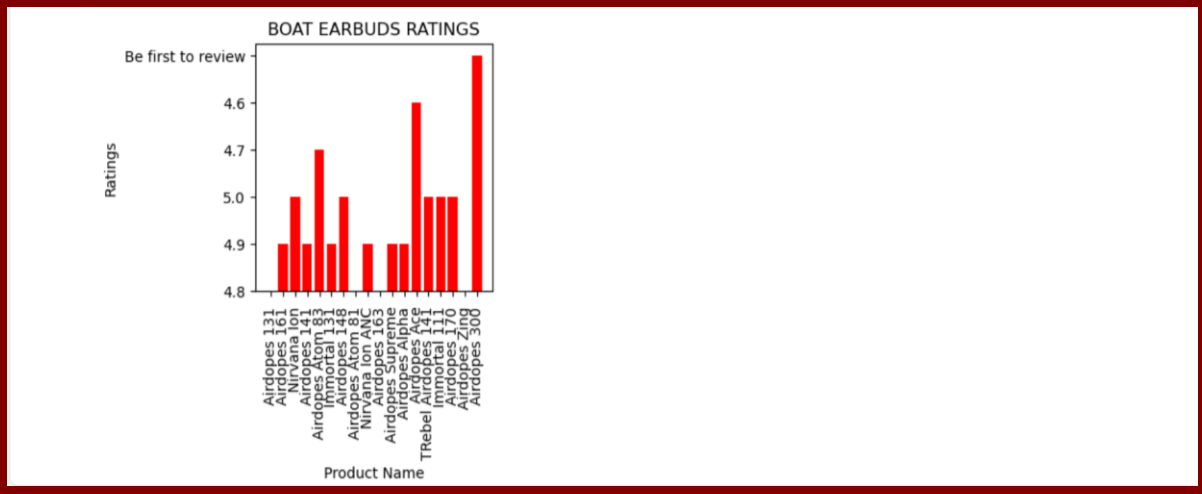
DATA VISUALIZATION

1)BAR PLOT

```
# DATA VISUALIZATION
```

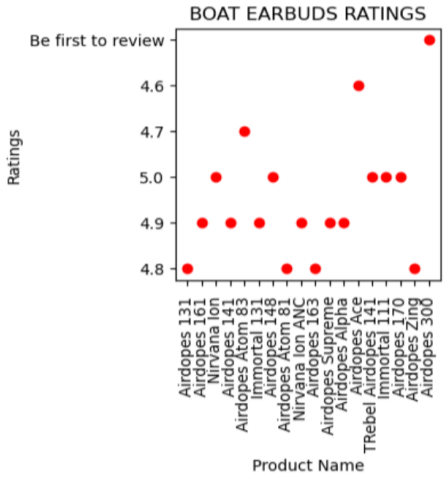
[24]:
```
import numpy as np
import pandas as pd
import seaborn as sns

import matplotlib.pyplot as plt
import warnings
warnings.filterwarnings('ignore')
```

[47]:
```
plt.figure(figsize=(3,3))
plt.bar(Earbuds['Product Name'], Earbuds['Ratings'], color='red')
plt.title('BOAT EARBUDS RATINGS')
plt.ylabel('Ratings')
plt.xlabel('Product Name')
plt.xticks(rotation=90)
plt.show()
```



2)SCATTER PLOT

```
[48]: plt.figure(figsize=(3,3))
      plt.scatter(x=Earbuds['Product Name'], y=Earbuds['Ratings'], color='red')
      plt.title('BOAT EARBUDS RATINGS')
      plt.ylabel('Ratings')
      plt.xlabel('Product Name')
      plt.xticks(rotation=90)
      plt.show()
```



CONCLUSION

In conclusion, the web scraping project focused on boAt Earbuds has successfully achieved its objectives. The omprehensive data retrieval provided detailed specifications, product name, price, ratings , discounts and special features of the product .