



# Real Time Product Analysis using Data Mining

Presented by:

**Ashna Jain** (201501008)

**Charmi Chokshi** (201501021)

**Janvi Patel** (201501072)

Subject: Computer Networks

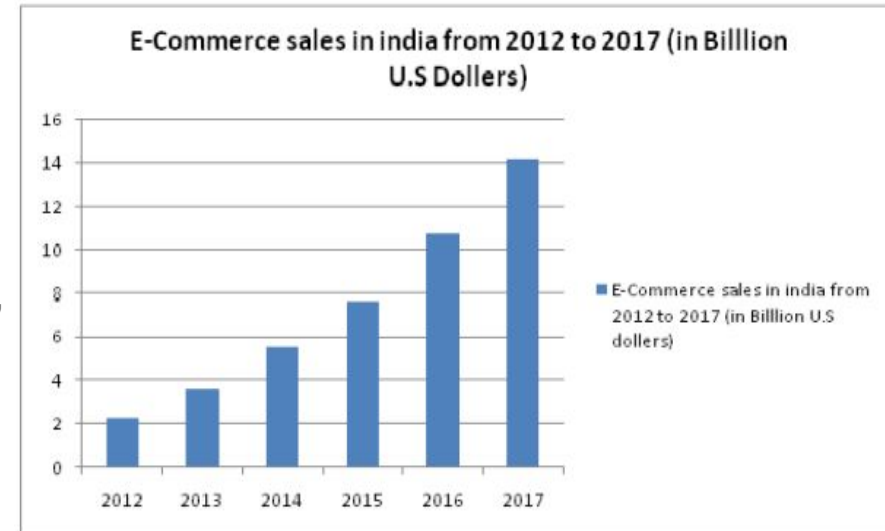
Guided by: Dr. Manish Chaturvedi

# Outline

- Problem Definition
- System Architecture
- Output Screen Shots
- Live Demo
- Conclusion
- Future Work
- References
- Q&A

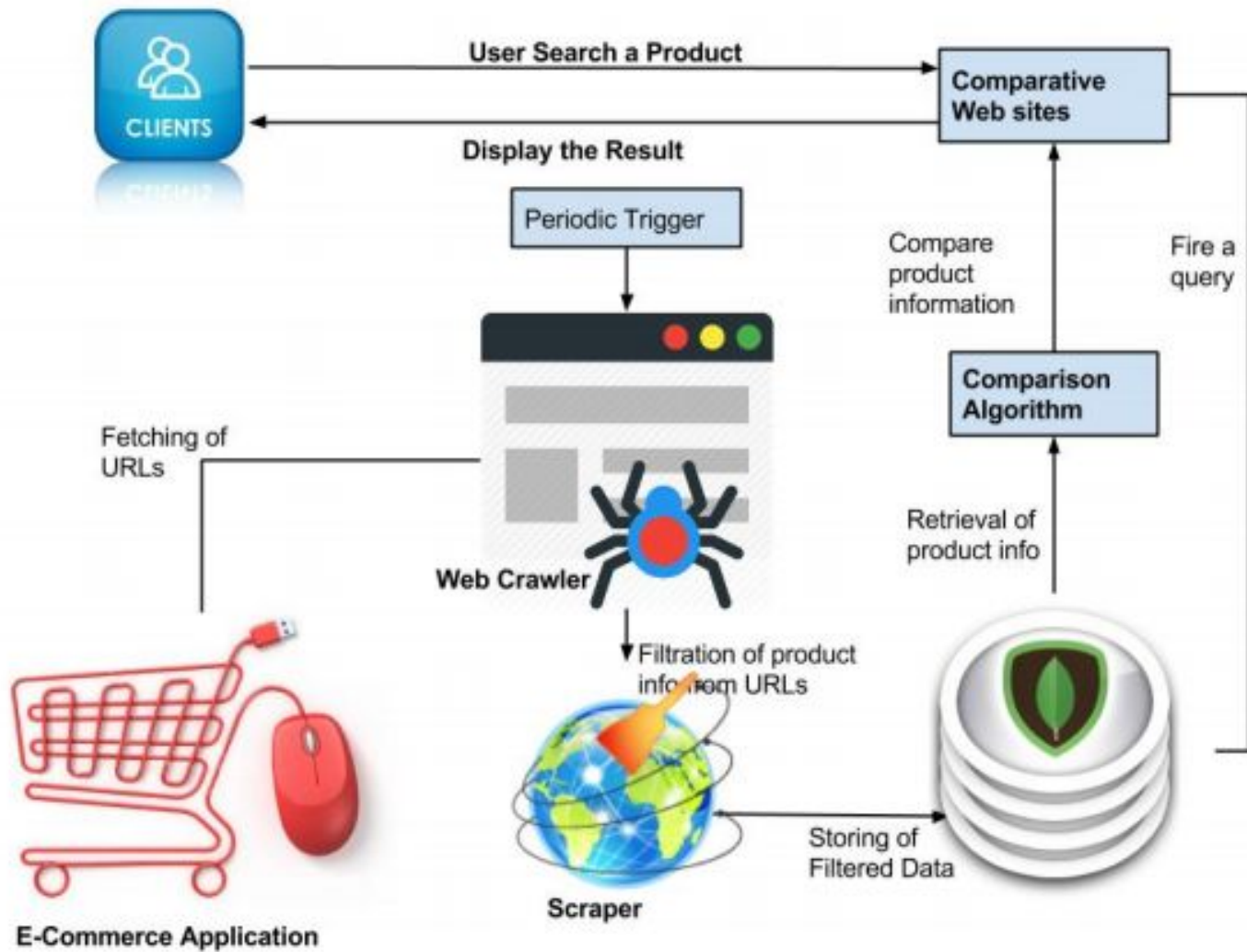
# Problem Definition

- E-commerce is globally increasing business with increasing revenues every year manifold times. This is simple indication of more people moving online for shopping.
- The Real Time product Analysis using Data Mining which is made using Web-Crawler and Web-Scraper, is a price comparison engine that aims to facilitate the buyers to compare products from different E-commerce websites and purchase the product at the cheapest price with best deal.
- This way, **the buyer has more power in his/her hands** and can make better decisions.
- Thus by this project we will **saves buyer's efforts, time and money.**



# System Architecture

- Since every website can be considered as graph, first step is to develop a Web Crawler using Python language to traverse different websites ([www.ebay.com](http://www.ebay.com) and [www.myntra.in](http://www.myntra.in)) and stores the product links on local machine as .csv file.
- After that using Scraper the project fetches relevant information of searched product (Product name, Price and link) from HTML tags of websites and provides the best deal.
- **What is Web Crawler?** A Web crawler, sometimes called a spider, is an Internet bot that systematically browses the World Wide Web, typically for the purpose of Web indexing.
- **What is Web Scraper?** Web scraping, web harvesting, or web data extraction is data scraping used for extracting data from websites. Web scraping software may access the World Wide Web directly using the Hypertext Transfer Protocol, or through a web browser.
- The project also contains the implementation of web crawler for [www.flipkart.com](http://www.flipkart.com). Here, it will crawl all the links present on this website and stores it in local machine.

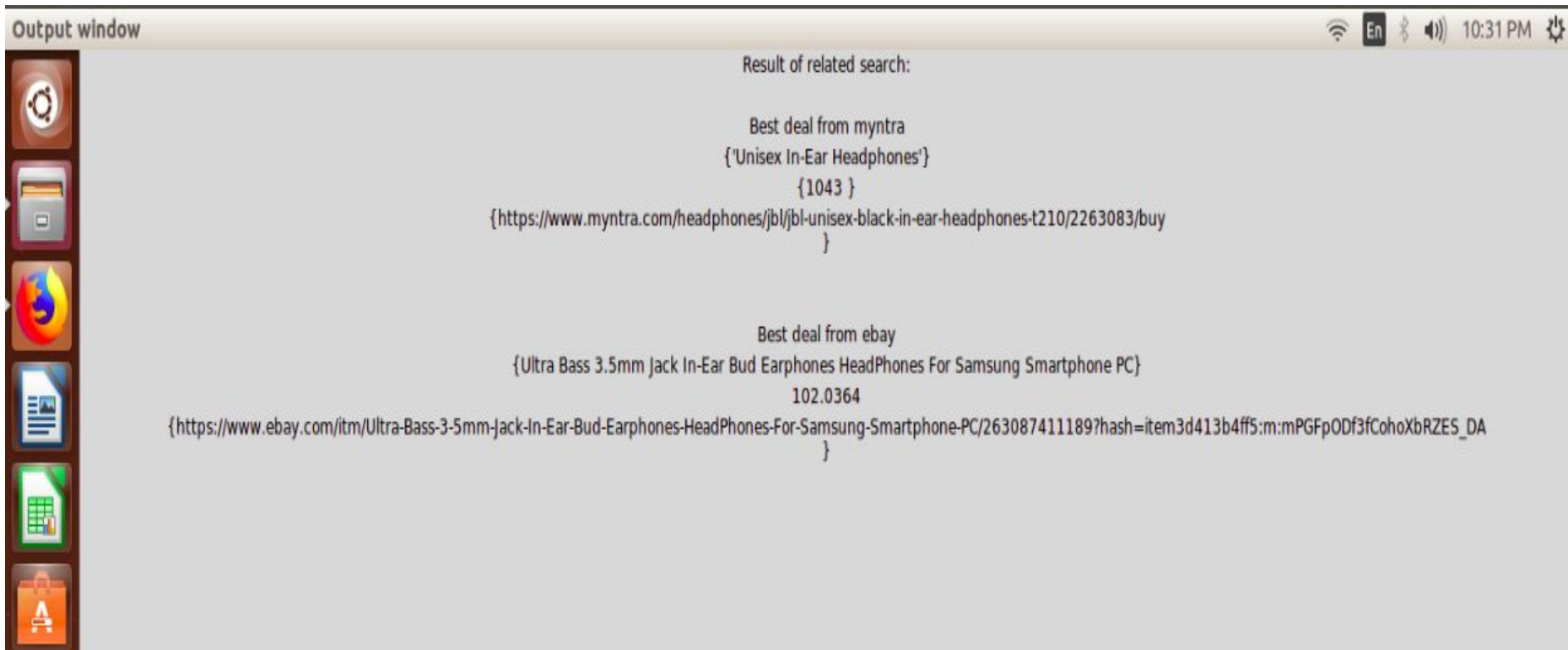


# Output Screen Shots

# Searching for Headphones from application



# Output generated by the application





# Showing the best deal on ebay.com



Browser address bar: <https://www.ebay.com/itm/Ultra-Bass-3-5mm-Jack-In-Ear-Bud-Earphone>

Navigation: Most Visited | Getting Started | Sign in or register | Daily Deals | Gift Cards | Help & Contact | Free Shipping on the Hottest Gifts | Sell | My eBay | Search

Search bar: Search for anything | All Categories | Search | Advanced

Category: Back to home page | Listed in category: Consumer Electronics > Portable Audio & Headphones > Headphones

Promotion: **BUY 1, GET 1 AT 5% OFF (add 2 to cart)** See all eligible items >



### Ultra Bass 3.5mm Jack In-Ear Bud Earphones HeadPhones For Samsung Smartphone PC

Item condition: **New**

Main Color: **- Select -**

Quantity:  More than 10 available  
264 sold / See feedback

Price: **US \$1.58**

**Buy It Now**

**Add to cart**

35 watching

[Add to watch list](#)

[Add to collection](#)

<b>100% buyer satisfaction</b>	264 sold	More than 67% sold
--------------------------------	----------	--------------------

Shipping: **FREE** Economy Shipping from China/Hong Kong/Taiwan to worldwide | See details

**Seller information**

wantasy (7518 ★)

99.2% Positive feedback

[Save this Seller](#)

[Contact seller](#)

[See other items](#)

ebay deals

**New. Deals. All. Day. Long.**

Plus, Free Shipping, as always.


# Showing the best deal on myntra.com

Browser address bar: <https://www.myntra.com/headphones/jbl/jbl-unisex-black-in-ear-head>

Navigation links: [Most Visited](#) [Getting Started](#) [Gift Cards](#) [New](#) [Track Orders](#) [Contact Us](#)

Myntra [Men](#) [Women](#) [Kids](#) [Home & Living](#)


Breadcrumb: [Home](#) / [Accessories](#) / [Unisex Accessories](#) / [Headphones](#) / [JBL Headphones](#) > [More By JBL](#)



**JBL Unisex Black In-Ear Headphones T210**  
~~Rs. 1199~~ (13% OFF)  
**Rs. 1043**  
Additional tax may apply; charged at checkout

[Click for best price](#)

**MORE COLORS**



**SELECT SIZE**

[Onesize](#)

[SAVE](#) [ADD TO BAG](#)

# Output of Scraped data of myntra.com

	A	B	C
1	Product name	Price (Rs.)	Product_Link
2	'Rockerz Headphones'	2394	<a href="https://www.myntra.com/headphones/boat/boat-rockerz-brown-600-wired--wireless-bluetooth-headset-with-mic/1632080/buy">https://www.myntra.com/headphones/boat/boat-rockerz-brown-600-wired--wireless-bluetooth-headset-with-mic/1632080/buy</a>
3	'In-Ear Earphones with Mic'	2194	<a href="https://www.myntra.com/headphones/soundpeats/soundpeats-black-q12-bluetooth-41-wireless-magnetic-in-ear-earphones-with-mic/1746574/buy">https://www.myntra.com/headphones/soundpeats/soundpeats-black-q12-bluetooth-41-wireless-magnetic-in-ear-earphones-with-mic/1746574/buy</a>
4	'BassHeads 225 Headphones'	649	<a href="https://www.myntra.com/headphones/boat/boat-lime-green-black-bassheads-225-in-ear-headphones-8904130841576/2172172/buy">https://www.myntra.com/headphones/boat/boat-lime-green-black-bassheads-225-in-ear-headphones-8904130841576/2172172/buy</a>
5	'ActionFit Sports Headphones'	454	<a href="https://www.myntra.com/headphones/philips/philips-orange-grey-actionfit-sports-in-ear-headphones/1387112/buy">https://www.myntra.com/headphones/philips/philips-orange-grey-actionfit-sports-in-ear-headphones/1387112/buy</a>
6	'Bluetooth Wireless Headphones'	2099	<a href="https://www.myntra.com/headphones/samsung/samsung-blue-level-u-bluetooth-in-ear-wireless-headphones/1950570/buy">https://www.myntra.com/headphones/samsung/samsung-blue-level-u-bluetooth-in-ear-wireless-headphones/1950570/buy</a>
7	'Magnetic Earphone with Mic'	2599	<a href="https://www.myntra.com/headphones/boult/boult-red-audio-curve-neckband-wireless-bluetooth-42-magnetic-earphone-with-mic/1994199/buy">https://www.myntra.com/headphones/boult/boult-red-audio-curve-neckband-wireless-bluetooth-42-magnetic-earphone-with-mic/1994199/buy</a>
8	'Unisex In-Ear Earphones'	499	<a href="https://www.myntra.com/headphones/boat/boat-unisex-black-white-bassheads-220-in-ear-earphones/2211123/buy">https://www.myntra.com/headphones/boat/boat-unisex-black-white-bassheads-220-in-ear-earphones/2211123/buy</a>
9	'Wireless Headset with Mic'	1874	<a href="https://www.myntra.com/headphones/tagg/tagg-black-inferno-wireless-bluetooth-headset-with-mic/1868915/buy">https://www.myntra.com/headphones/tagg/tagg-black-inferno-wireless-bluetooth-headset-with-mic/1868915/buy</a>
10	'Wireless Earphones with Mic'	2194	<a href="https://www.myntra.com/headphones/soundpeats/soundpeats-red-black-q12-bluetooth-41-wireless-in-ear-earphones-with-mic/1676123/buy">https://www.myntra.com/headphones/soundpeats/soundpeats-red-black-q12-bluetooth-41-wireless-in-ear-earphones-with-mic/1676123/buy</a>
11	'In-ear Stereo Headphones'	742	<a href="https://www.myntra.com/headphones/sony/sony-red-in-ear-stereo-headphones-mdr-ex155rqin/2147389/buy">https://www.myntra.com/headphones/sony/sony-red-in-ear-stereo-headphones-mdr-ex155rqin/2147389/buy</a>
12	'Women Rocker 400 Headphones'	1943	<a href="https://www.myntra.com/headphones/boat/boat-women-black-rocker-400-wireless-headphones/1632085/buy">https://www.myntra.com/headphones/boat/boat-women-black-rocker-400-wireless-headphones/1632085/buy</a>
13	'Unisex In-Ear Earphones'	499	<a href="https://www.myntra.com/headphones/boat/boat-unisex-black-red-bassheads-220-in-ear-earphones/2211121/buy">https://www.myntra.com/headphones/boat/boat-unisex-black-red-bassheads-220-in-ear-earphones/2211121/buy</a>
14	'Wireless Bluetooth Earphones'	2599	<a href="https://www.myntra.com/headphones/boult/boult-audio-black-fireball-magnetic-wireless-bluetooth-earphones-ba-fireball/2057386/buy">https://www.myntra.com/headphones/boult/boult-audio-black-fireball-magnetic-wireless-bluetooth-earphones-ba-fireball/2057386/buy</a>
15	'Wired In-Ear Headphones'	559	<a href="https://www.myntra.com/headphones/philips/philips-black-wired-in-ear-headphones-with-mic-she3205bk/2004384/buy">https://www.myntra.com/headphones/philips/philips-black-wired-in-ear-headphones-with-mic-she3205bk/2004384/buy</a>
16	'Bluetooth Headphones'	1345	<a href="https://www.myntra.com/headphones/photron/photron-green-bluetooth-wireless-headphones/1613108/buy">https://www.myntra.com/headphones/photron/photron-green-bluetooth-wireless-headphones/1613108/buy</a>
17	'Waterproof Earphones'	2593	<a href="https://www.myntra.com/headphones/boat/boat-red-black-rockerz-250-waterproof-wireless-earphones-with-mic/1832181/buy">https://www.myntra.com/headphones/boat/boat-red-black-rockerz-250-waterproof-wireless-earphones-with-mic/1832181/buy</a>
18	'In-Ear Headphones'	1199	<a href="https://www.myntra.com/headphones/soundmagic/soundmagic-gold-toned-in-ear-sound-isolating-headphones-pl30c/2243053/buy">https://www.myntra.com/headphones/soundmagic/soundmagic-gold-toned-in-ear-sound-isolating-headphones-pl30c/2243053/buy</a>
19	'Bluetooth Headphones with Mic'	874	<a href="https://www.myntra.com/headphones/flipkart-smart-buy/flipkart-smartbuy-black-wireless-bluetooth-headphones-with-mic/1951397/buy">https://www.myntra.com/headphones/flipkart-smart-buy/flipkart-smartbuy-black-wireless-bluetooth-headphones-with-mic/1951397/buy</a>



# Finding the Cheapest product in myntra.com

	A	B	C
1	'Unisex In-Ear Headphones'	1043	<a href="https://www.myntra.com/headphones/jbl/jbl-unisex-black-in-ear-headphones-t210/2263083/buy">https://www.myntra.com/headphones/jbl/jbl-unisex-black-in-ear-headphones-t210/2263083/buy</a>
2	'INKD In-Ear Headphones'	1104	<a href="https://www.myntra.com/headphones/skullcandy/skullcandy-black-grey-inkd-in-ear-headphones-with-mic-remote/1819175/buy">https://www.myntra.com/headphones/skullcandy/skullcandy-black-grey-inkd-in-ear-headphones-with-mic-remote/1819175/buy</a>
3	'CX 213 Headphones'	1117	<a href="https://www.myntra.com/headphones/sennheiser/sennheiser-blue-cx-213-earphones/1557518/buy">https://www.myntra.com/headphones/sennheiser/sennheiser-blue-cx-213-earphones/1557518/buy</a>
4	'Wired Earphones with Mic'	1119	<a href="https://www.myntra.com/headphones/samsung/samsung-navy-eo-eg920bbegin-in-ear-wired-earphones-with-mic/1950568/buy">https://www.myntra.com/headphones/samsung/samsung-navy-eo-eg920bbegin-in-ear-wired-earphones-with-mic/1950568/buy</a>
5	'ActionFit Sports Earbuds'	1119	<a href="https://www.myntra.com/headphones/philips/philips-orange-white-actionfit-sports-earbuds-with-mic/1387127/buy">https://www.myntra.com/headphones/philips/philips-orange-white-actionfit-sports-earbuds-with-mic/1387127/buy</a>
6	'Bluetooth Headset with Mic'	1124	<a href="https://www.myntra.com/headphones/samsung/samsung-black-hm1950-bluetooth-headset-with-mic/1950566/buy">https://www.myntra.com/headphones/samsung/samsung-black-hm1950-bluetooth-headset-with-mic/1950566/buy</a>
7	'Over-Ear Headphones'	1124	<a href="https://www.myntra.com/headphones/philips/philips-white-over-ear-headphones-shl4600wt/1779415/buy">https://www.myntra.com/headphones/philips/philips-white-over-ear-headphones-shl4600wt/1779415/buy</a>
8	'Over-Ear Headphones'	1124	<a href="https://www.myntra.com/headphones/philips/philips-black-over-ear-headphones-shl4600bk/1779414/buy">https://www.myntra.com/headphones/philips/philips-black-over-ear-headphones-shl4600bk/1779414/buy</a>
9	'Bluetooth Earphones with Mic'	1136	<a href="https://www.myntra.com/headphones/flipekart-smart-buy/flipekart-smartbuy-silver-toned-wireless-bluetooth-in-ear-earphones-with-mic/1951396/buy">https://www.myntra.com/headphones/flipekart-smart-buy/flipekart-smartbuy-silver-toned-wireless-bluetooth-in-ear-earphones-with-mic/1951396/buy</a>
10	'BASS+ Headphones with Mic'	1136	<a href="https://www.myntra.com/headphones/philips/philips-black-over-ear-bass-headphones-with-mic-shl3075bl/2004391/buy">https://www.myntra.com/headphones/philips/philips-black-over-ear-bass-headphones-with-mic-shl3075bl/2004391/buy</a>
11	'BASS+ Headphones with Mic'	1136	<a href="https://www.myntra.com/headphones/philips/philips-white-over-ear-bass-headphones-with-mic-shl3075wt/2004390/buy">https://www.myntra.com/headphones/philips/philips-white-over-ear-bass-headphones-with-mic-shl3075wt/2004390/buy</a>
12	'In-Ear Earphones'	1162	<a href="https://www.myntra.com/headphones/tekfusion/tekfusion-black-twinwoofers-in-ear-headphones-chrome-edition/1625673/buy">https://www.myntra.com/headphones/tekfusion/tekfusion-black-twinwoofers-in-ear-headphones-chrome-edition/1625673/buy</a>
13	'Inkd 2.0 Earbuds with Mic'	1189	<a href="https://www.myntra.com/headphones/skullcandy/skullcandy-blue-inkd-20-earbuds-with-mic/1369302/buy">https://www.myntra.com/headphones/skullcandy/skullcandy-blue-inkd-20-earbuds-with-mic/1369302/buy</a>
14	'Inkd 2 Earbuds with Mic'	1189	<a href="https://www.myntra.com/headphones/skullcandy/skullcandy-black-inkd-2-earbuds-with-mic/1369286/buy">https://www.myntra.com/headphones/skullcandy/skullcandy-black-inkd-2-earbuds-with-mic/1369286/buy</a>
15	'Inkd 2 Earbuds with Mic'	1189	<a href="https://www.myntra.com/headphones/skullcandy/skullcandy-black-red-inkd-2-earbuds-with-mic/1369281/buy">https://www.myntra.com/headphones/skullcandy/skullcandy-black-red-inkd-2-earbuds-with-mic/1369281/buy</a>
16	'Unisex Headphones'	1189	<a href="https://www.myntra.com/headphones/audio-technica/audio-technica-unisex-black-lime-green-headphones-ath-s100/1765086/buy">https://www.myntra.com/headphones/audio-technica/audio-technica-unisex-black-lime-green-headphones-ath-s100/1765086/buy</a>
17	'Unisex Headphones'	1189	<a href="https://www.myntra.com/headphones/audio-technica/audio-technica-unisex-black-headphones-ath-s100-bbl/1765084/buy">https://www.myntra.com/headphones/audio-technica/audio-technica-unisex-black-headphones-ath-s100-bbl/1765084/buy</a>
18	'Unisex Over-Ear Headphones'	1189	<a href="https://www.myntra.com/headphones/audio-technica/audio-technica-unisex-black-over-ear-headphones-ath-s100-bk/1765082/buy">https://www.myntra.com/headphones/audio-technica/audio-technica-unisex-black-over-ear-headphones-ath-s100-bk/1765082/buy</a>
19	'In-Ear Headphones'	1199	<a href="https://www.myntra.com/headphones/soundmagic/soundmagic-gold-toned-in-ear-sound-isolating-headphones-pl30c/2243053/buy">https://www.myntra.com/headphones/soundmagic/soundmagic-gold-toned-in-ear-sound-isolating-headphones-pl30c/2243053/buy</a>

# Output of Scraped data of ebay.com

	A	B	C	D	E	F	G	H	I
1	title	price (\$)	url						
2	Bluedio Turbine Hurricane H Bluetooth 4.1 Wireless Stereo Headphones Headset	11.99	https://www.ebay.com/itm/Bluedio-Turbine-Hurricane-H-Bluetooth-4-1-Wireless-Stereo-Headphones-Headset						
3	Original HIFI Marshall Major Mic Remote Headphones Noise Cancelling Deep Bass	26.09	https://www.ebay.com/itm/Original-HIFI-Marshall-Major-Mic-Remote-Headphones-Noise-Cancelling-Deep-Bass						
4	original Skullcandy Ink'd 2.0 Supreme Sound IN-Ear Headphones Earphone Headset	1.39	https://www.ebay.com/itm/original-Skullcandy-Ink'd-2-0-Supreme-Sound-IN-Ear-Headphones-Earphone-Headset						
5	Bluetooth Headphones Wireless Earbuds Twins Stereo Built-in Mic & Charging Case	241.8	https://pulsar.ebay.com/plsr/clk/0/SADS/9?pld=%7B%22mecs%22%3A%221126275234892ec02d14ebf44						
6	Corpse Cable GraveDigger for Focal Utopia Headphones - 1/8" Stereo Plug - 4ft.	335	https://pulsar.ebay.com/plsr/clk/0/SADS/9?pld=%7B%22mecs%22%3A%22302492043548e844050771f54						
7	Wireless Bluetooth Sports Headphones Microphone Portable Stereo FM Headset P47	8.99	https://www.ebay.com/itm/Wireless-Bluetooth-Sports-Headphones-Microphone-Portable-Stereo-FM-Headset-P47						
8	Skullcandy Smokin' Buds Supreme Sound Headphones Earphone in-ear With Remote Mic	26.59	https://www.ebay.com/itm/Koss-Porta-Pro-PortaPro-Classic-headband-Headset-Headphones-Foldable-headphones						
9	Headphones Earphone Headset Stereo 3.5mm Wired With Mic For Smartphone MP3/4 PC	2.55	https://www.ebay.com/itm/Headphones-Earphone-Headset-Stereo-3-5mm-Wired-With-Mic-For-Smartphone-MP3-4-PC						
10	Wireless Bluetooth 4.2 Earbud In Ear Headphone For Apple iPhone 6 7 8 X Andriod	9.15	https://www.ebay.com/itm/Wireless-Bluetooth-4-2-Earbud-In-Ear-Headphone-For-Apple-iPhone-6-7-8-X-Android						
11	3.5mm In-Ear Piston Stereo Earbuds Earphone Headset Headphone For iPhone Samsung	1.09	https://www.ebay.com/itm/3-5mm-In-Ear-Piston-Stereo-Earbuds-Earphone-Headset-Headphone-For-iPhone-Samsung						
12	Headphones JVC HA-FX1X XTREME XPLOSIVES in-ear HIFI deep bass stereo earphone	3.98	https://www.ebay.com/itm/Headphones-JVC-HA-FX1X-XTREME-XPLOSIVES-in-ear-HIFI-deep-bass-stereo-earphone						
13	New Original Marshall Major Headphones Noise Cancelling Deep Bass Stereo Remote	22.96	https://www.ebay.com/itm/New-Original-Marshall-Major-Headphones-Noise-Cancelling-Deep-Bass-Stereo-Remote						
14	Ultra Bass 3.5mm Jack In-Ear Bud Earphones HeadPhones For Samsung Smartphone PC	1.58	https://www.ebay.com/itm/Ultra-Bass-3-5mm-Jack-In-Ear-Bud-Earphones-HeadPhones-For-Samsung-Smartphone-PC						
15	Apple 7 AirPods Mini Wireless Bluetooth Headphones Headsets In-ear+Charger Box	19.94	https://pulsar.ebay.com/plsr/clk/0/SADS/9?pld=%7B%22mecs%22%3A%2231198987975237bb63a35678						



# Finding the Cheapest product in ebay.com

	A	B	C
1	Ultra Bass 3.5mm Jack In-Ear Bud Earphones HeadPhones For Samsung Smartphone PC	1.58	<a href="https://www.ebay.com/itm/Ultra-Bass-3-5mm-Jack-In-Ear-Bud-Earphones-HeadPhones-For-Samsung-Sr">https://www.ebay.com/itm/Ultra-Bass-3-5mm-Jack-In-Ear-Bud-Earphones-HeadPhones-For-Samsung-Sr</a>
2	3.5mm zipper Luminous Stereo In-Ear Earphones Light Headphones Headset Earbuds	2.12	<a href="https://www.ebay.com/itm/3-5mm-zipper-Luminous-Stereo-In-Ear-Earphones-Light-Headphones-Headset">https://www.ebay.com/itm/3-5mm-zipper-Luminous-Stereo-In-Ear-Earphones-Light-Headphones-Headset</a>
3	Headphones Earphone Headset Stereo 3.5mm Wired With Mic For Smartphone MP3/4 PC	2.55	<a href="https://www.ebay.com/itm/Headphones-Earphone-Headset-Stereo-3-5mm-Wired-With-Mic-For-Smartpho">https://www.ebay.com/itm/Headphones-Earphone-Headset-Stereo-3-5mm-Wired-With-Mic-For-Smartpho</a>
4	Wireless Bluetooth Foldable Headset Stereo Headphone Earphone for iPhone Samsung	2.59	<a href="https://www.ebay.com/itm/Wireless-Bluetooth-Foldable-Headset-Stereo-Headphone-Earphone-for-iPhone">https://www.ebay.com/itm/Wireless-Bluetooth-Foldable-Headset-Stereo-Headphone-Earphone-for-iPhone</a>
5	DJ Foldable Headband Headphone Headset Earphone Music for Android iPhone Phone	2.99	<a href="https://www.ebay.com/itm/DJ-Foldable-Headband-Headphone-Headset-Earphone-Music-for-Android-iPho">https://www.ebay.com/itm/DJ-Foldable-Headband-Headphone-Headset-Earphone-Music-for-Android-iPho</a>
6	Wireless Bluetooth Headset Stereo Headphone Earphone Sport for iPhone Samsung	3.49	<a href="https://www.ebay.com/itm/Wireless-Bluetooth-Headset-Stereo-Headphone-Earphone-Sport-for-iPhone-Sa">https://www.ebay.com/itm/Wireless-Bluetooth-Headset-Stereo-Headphone-Earphone-Sport-for-iPhone-Sa</a>
7	Headphones JVC HA-FX1X XTREME XPLOSIVES in-ear HiFi deep bass stereo earphone	3.98	<a href="https://www.ebay.com/itm/Headphones-JVC-HA-FX1X-XTREME-XPLOSIVES-in-ear-HiFi-deep-bass-ste">https://www.ebay.com/itm/Headphones-JVC-HA-FX1X-XTREME-XPLOSIVES-in-ear-HiFi-deep-bass-ste</a>
8	Universal Sport Wireless Earphone Bluetooth V4.1 In-Ear Headphone for iphone	3.99	<a href="https://www.ebay.com/itm/Universal-Sport-Wireless-Earphone-Bluetooth-V4-1-In-Ear-Headphone-for-iph">https://www.ebay.com/itm/Universal-Sport-Wireless-Earphone-Bluetooth-V4-1-In-Ear-Headphone-for-iph</a>
9	Mini Wireless Bluetooth Stereo Headphones Headset Earphone For iphone Samsung	3.99	<a href="https://www.ebay.com/itm/Mini-Wireless-Bluetooth-Stereo-Headphones-Headset-Earphone-For-iphone-Si">https://www.ebay.com/itm/Mini-Wireless-Bluetooth-Stereo-Headphones-Headset-Earphone-For-iphone-Si</a>
10	Bluetooth Magnet Wireless Sports Earphone Headset Headphone For iPhone Samsung	4.38	<a href="https://www.ebay.com/itm/Bluetooth-Magnet-Wireless-Sports-Earphone-Headset-Headphone-For-iPhone">https://www.ebay.com/itm/Bluetooth-Magnet-Wireless-Sports-Earphone-Headset-Headphone-For-iPhone</a>
11	Wireless Bluetooth Foldable Headset Stereo Headphone Earphone for iPhone Samsung	4.74	<a href="https://www.ebay.com/itm/Wireless-Bluetooth-Foldable-Headset-Stereo-Headphone-Earphone-for-iPhone">https://www.ebay.com/itm/Wireless-Bluetooth-Foldable-Headset-Stereo-Headphone-Earphone-for-iPhone</a>
12	Skullcandy Smokin' Buds Supreme Sound Headphones Earphone in-ear With Remote Mic	8.36	<a href="https://www.ebay.com/itm/Skullcandy-Smokin-Buds-Supreme-Sound-Headphones-Earphone-in-ear-With">https://www.ebay.com/itm/Skullcandy-Smokin-Buds-Supreme-Sound-Headphones-Earphone-in-ear-With</a>
13	Wireless Bluetooth Sports Headphones Microphone Portable Stereo FM Headset P47	8.99	<a href="https://www.ebay.com/itm/Wireless-Bluetooth-Sports-Headphones-Microphone-Portable-Stereo-FM-Heac">https://www.ebay.com/itm/Wireless-Bluetooth-Sports-Headphones-Microphone-Portable-Stereo-FM-Heac</a>
14	JKR 110 3.5MM Plug Foldable Wired Stereo HiFi Music Headphones Headset NEW	8.99	<a href="https://www.ebay.com/itm/JKR-110-3-5MM-Plug-Foldable-Wired-Stereo-HiFi-Music-Headphones-Headse">https://www.ebay.com/itm/JKR-110-3-5MM-Plug-Foldable-Wired-Stereo-HiFi-Music-Headphones-Headse</a>
15	Gold YP106 Neckband Stereo Bluetooth Headphones Headset For Call Phone HuaWei	8.99	<a href="https://www.ebay.com/itm/Gold-YP106-Neckband-Stereo-Bluetooth-Headphones-Headset-For-Call-Phone">https://www.ebay.com/itm/Gold-YP106-Neckband-Stereo-Bluetooth-Headphones-Headset-For-Call-Phone</a>

Crawling flipkart site

# Output of queued data of flipkart.com

<http://ads.flipkart.com/>  
[http://ads.flipkart.com/?otracker=ch\\_vn\\_advertise\\_header](http://ads.flipkart.com/?otracker=ch_vn_advertise_header)  
<http://stories.flipkart.com/>  
[http://stories.flipkart.com/?otracker=undefined\\_footer\\_navlinks](http://stories.flipkart.com/?otracker=undefined_footer_navlinks)  
<http://www.flipkart.com>  
<http://www.flipkart.com/>  
<http://www.flipkart.com/bags-wallets-belts/bags/messenger-bags/pr?sid=reh,ihu,psb>  
<http://www.flipkart.com/bags-wallets-belts/bags/pr?sid=reh,ihu>  
<http://www.flipkart.com/beauty-and-personal-care/fragrances/deodorants/fogg~brand/pr?sid=t06%2Cr3o%2C347>  
<http://www.flipkart.com/eyewear/pr?sid=u73>  
<http://www.flipkart.com/home-decor>  
<http://www.flipkart.com/home-entertainment/televisions/~micromax-smart-tv/pr?sid=ckf,czl>  
<http://www.flipkart.com/home-furnishing/bed-linen/bedsheets/pr?sid=vdm,uj4,64i>  
<http://www.flipkart.com/home-kitchen/home-appliances/fans/pr?sid=j9e,abm,lbz>  
<http://www.flipkart.com/household/lighting/bulbs/eveready~brand/pr?sid=r4l,paf,m99>  
<http://www.flipkart.com/lifestyle/fragrances>  
<http://www.flipkart.com/mens-footwear/shoes/sports-shoes/running-shoes~type/pr?sid=osp%2Ccil%2Cnit%2C1cu>  
[http://www.flipkart.com/mobile-apps?otracker=hp\\_ch\\_vn\\_mobile\\_apps](http://www.flipkart.com/mobile-apps?otracker=hp_ch_vn_mobile_apps)  
<http://www.flipkart.com/mobiles/~6-gb-ram-mobiles/pr?sid=tyy,4io>  
<http://www.flipkart.com/mobiles/~6-inch-mobiles/pr?sid=tyy,4io>  
<http://www.flipkart.com/q/sports-watches>  
<http://www.flipkart.com/q/sweaters>  
<http://www.flipkart.com/s/terms>  
[http://www.flipkart.com/search?otracker=start&q=arrow+formal+trousers&as=off&sid=2oq%2Fs9b%2F9uj&as-show=on&p%5B%5D=facets.discount\\_range\\_v1%255B%255D%3D50%2525+or+More&otracker=bp\\_browse\\_announcement\\_1\\_Min+50%25+Off+--+Arrow+Formal+Trousers\\_sherlock-dea0-46fd-bc31-c5bd0083714b](http://www.flipkart.com/search?otracker=start&q=arrow+formal+trousers&as=off&sid=2oq%2Fs9b%2F9uj&as-show=on&p%5B%5D=facets.discount_range_v1%255B%255D%3D50%2525+or+More&otracker=bp_browse_announcement_1_Min+50%25+Off+--+Arrow+Formal+Trousers_sherlock-dea0-46fd-bc31-c5bd0083714b)  
[http://www.flipkart.com/search?otracker=start&q=laptop&as=off&sid=6bo%2Fb5g&as-show=on&p%5B%5D=facets.discount\\_range\\_v1%255B%255D%3D20%2525+or+More&otracker=bp\\_browse\\_announcement\\_1\\_Min+20%25+Off+--+Laptops\\_sherlock-6162-46ce-8d90-cd00add6117](http://www.flipkart.com/search?otracker=start&q=laptop&as=off&sid=6bo%2Fb5g&as-show=on&p%5B%5D=facets.discount_range_v1%255B%255D%3D20%2525+or+More&otracker=bp_browse_announcement_1_Min+20%25+Off+--+Laptops_sherlock-6162-46ce-8d90-cd00add6117)  
<http://www.flipkart.com/user-profiles/anilanil.sharma705-2290?tab=seller-reviews>  
<http://www.flipkart.com/watches/women>  
<http://www.flipkart.com/womens-clothing/dresses>  
<http://www.flipkart.com/womens-clothing/ethnic-wear/blouses/pr?sid=2oq,c1r,3pj,vx5>  
<http://www.flipkart.com/womens-clothing/ethnic-wear/dupattas/pr?sid=2oq,c1r,3pj,s0u>  
<http://www.flipkart.com/womens-clothing/ethnic-wear/pr?sid=2oq,c1r,3pj>  
<http://www.flipkart.com/womens-clothing/winter-seasonal-wear/ponchos/pr?sid=2oq,c1r,67x,xjo>



# Output of Crawled data of flipkart.com

https://affiliate.flipkart.com?otracker=undefined\_footer\_navlinks  
https://flit.flipkart.com/click?  
bid=8NYWAVRBVW&cid=2HJSE8XXNG&sid=M4VQB0CM7R&t=aHR0cHM6Ly93d3cuZmxpcGthcnQuY29tL29mZmVycy1saXN0L2p1c3QtbGF1bmNoZWQtdHZzP3NjcmVlbj1keW5hbWljJnBrP.  
d1be-434a-8f54-0a0ce6776e4c\_1.8NYWAVRBVW&dc=in&cls=c1&clk\_visit=1&ptp=otracker%3Dhp\_banner\_widget\_0  
https://flit.flipkart.com/click?  
bid=S7XL45I13I&cid=V3KX0UVHWM&sid=M4VQB0CM7R&t=aHR0cHM6Ly93d3cuZmxpcGthcnQuY29tL21vYmJsZXNvR2FsYXh5JTJwSjclMjBQcmItZX5tb2Rlbc9wcj9wJTVCJTVEPWZhY  
d1be-434a-8f54-0a0ce6776e4c\_1.S7XL45I13I&dc=in&cls=c1&clk\_visit=1&ptp=otracker%3Dhp\_banner\_widget\_4  
https://seller.flipkart.com/?utm\_source=flipkart&utm\_medium=website&utm\_campaign=sellbutton  
https://seller.flipkart.com/fiv?otracker=undefined\_footer\_navlinks  
https://stories.flipkart.com/2017/09/  
https://stories.flipkart.com/category/tech/mobiles/  
https://stories.flipkart.com/top-headlines-october/  
https://www.flipkart.com/  
https://www.flipkart.com/3g9-shop-embroidered-women-s/p/itmegza2fbghwhz3?  
pid=LCHEGZA25ZGADVH8&srno=b\_1\_21&otracker=browse&lid=LSTLCHEGZA25ZGADVH8S5BCEV&fm=organic&iid=852ddf3c-3696-4342-  
a78b-65346c8d56f5.LCHEGZA25ZGADVH8.SEARCH  
https://www.flipkart.com/about-us?otracker=undefined\_footer\_navlinks  
https://www.flipkart.com/account/  
https://www.flipkart.com/account/login?ret=/  
https://www.flipkart.com/air-conditioners/hitachi~brand/pr?sid=j9e,abm,c54&otracker=undefined\_footer\_footer  
https://www.flipkart.com/all/mi~brand/pr?sid=all  
https://www.flipkart.com/anklets/pr?sid=mcr,96v,jf9&otracker=undefined\_footer\_footer  
https://www.flipkart.com/apple-iphone-6s-silver-32-gb/p/itmen2yyhbbky4nu?otracker=undefined\_footer\_footer  
https://www.flipkart.com/apple-ipod-touch-16gb-pink-mkgx2hn-a-16-gb/p/itmea8vkkghmynxu?  
pid=AUDEA8VKKWSEHZTR&srno=b\_1\_11&otracker=undefined\_footer\_footer&lid=LSTAUDEA8VKKWSEHZTRCF8ZSZ&fm=organic&iid=8ac20686-8e17-4f21-a35c-  
da5d71ffaee0.AUDEA8VKKWSEHZTR.SEARCH  
https://www.flipkart.com/apple-ipod-touch-6th-generation-2015-edition-a1574-128-gb/p/itmefb3n74shxyq?pid=AUDEBD5HZADBGGZ2  
https://www.flipkart.com/arcant-back-cover-apple-iphone-5s/p/itmemenzf9pubjm?pid=ACCEMENYVHPCH46J&srno=b\_1\_10&otracker=hp\_omu\_Deals%20of%20the%  
20Day\_11\_Just%20%E2%82%B9199\_C3AYYC5PTQ\_0&lid=LSTACCEMENYVHPCH46JCKVEZI&fm=organic&iid=f7aca9d0-cc1a-45d4-  
ab77-2cec53ecf4fe.ACCEMENYVHPCH46J.SEARCH  
https://www.flipkart.com/arcant-back-cover-apple-iphone-6s/p/itmemenzjuv45chj?pid=ACCEMENNJMKD5TFH&srno=b\_1\_14&otracker=hp\_omu\_Deals%20of%20the%  
20Day\_11\_Just%20%E2%82%B9199\_C3AYYC5PTQ\_0&lid=LSTACCEMENNJMKD5TFHMF5XAQ&fm=organic&iid=6973f8e2-bb63-4b60-b32c-

# Output on terminal

```
Thread-8 now crawling https://www.flipkart.com/q/black-sandals?otracker=undefined_footer_footer
Queue 281 | Crawled 1
Thread-1 now crawling https://www.flipkart.com/air-conditioners/blue-star-brand/pr?sid=j9e,abm,c54&otracker=undefined_footer_footer
Queue 281 | Crawled 2
Thread-7 now crawling https://www.flipkart.com/watches/tissot-brand/pr?sid=r18&otracker=undefined_footer_footer
Queue 329 | Crawled 3
Thread-5 now crawling https://www.flipkart.com/churidars/pr?sid=2oq,c1r,3pj,9l3,wu4,9af&otracker=undefined_footer_footer
Queue 424 | Crawled 4
Thread-4 now crawling https://www.flipkart.com/women/kurtas-kurtis/pr?sid=2oq,c1r,3pj,ua6
Queue 596 | Crawled 6
Thread-2 now crawling https://www.flipkart.com/lehenga-cholis/pr?sid=2oq,c1r,3pj,t5i
Queue 777 | Crawled 8
Thread-6 now crawling https://www.flipkart.com/bangles-bracelets-armlets/pr?sid=mcr,96v,fbc&otracker=undefined_footer_footer
Queue 777 | Crawled 8
Thread-8 now crawling https://www.flipkart.com/sunglasses/ray-ban-brand/pr?sid=26x&otracker=undefined_footer_footer
Queue 777 | Crawled 8
Thread-3 now crawling https://www.flipkart.com/q/canon-dslr-cameras?otracker=undefined_footer_footer
Queue 877 | Crawled 9
Thread-1 now crawling https://www.flipkart.com/account/login?ret=/
Queue 922 | Crawled 10
Thread-7 now crawling https://www.flipkart.com/washing-machines/whirlpool-brand/pr?sid=j9e,abm,8qx&otracker=undefined_footer_footer
Queue 986 | Crawled 11
Thread-5 now crawling https://www.flipkart.com/q/40-inches-led-tv?otracker=undefined_footer_footer
Queue 1084 | Crawled 12
```

Live Demo

# Conclusion

- The project is a price comparison engine that aims to facilitate the buyers to compare products from different E-commerce websites and purchase the product with best deal.
- The beauty of this project is that it can be customize for a specific business segment and also can be used.
- It also helps the different E-commerce applications to boost their business by providing them a platform to compete and do business in a more reasonable manner.

# Future Work

- Currently the project can compare different products from two E-Commerce site which can be further extended for n number of sites.
- In the future we can make the add-on of this project and include it in the browser, when the customer visits any E-commerce site for any product the add-on will suggest the best deal.
- In the future, the product aims to include several features like suggesting the user about the expected future changes in prices on products on the basis of business analytic that can predict the situation and demand of the products in the market.

# References

- **Research Papers:**

- <http://ijarcet.org/wp-content/uploads/IJARCET-VOL-4-ISSUE-3-815-820.pdf>
- <http://www.aiktcdspace.org:8080/jspui/bitstream/123456789/1556/1/PE0045.pdf>
- A. Aghamohammadi and A. Eydgahi. A novel defense mechanism against web crawlers intrusion. In Electronics, Computer and Computation (ICECCO), 2013 International Conference on, pages 269–272. IEEE, 2013.

- **Websites:**

- <https://en.wikipedia.org>
- <http://www.stackoverflow.com>
- <https://www.springboard.com/blog/data-mining-python-tutorial/>

- **Reference Book:**

- Computer Networks by Kurose and Ross

Any Questions...?



Thank you!