FLIP ROBO

Customer Retention

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<u>ACKNOWLEDGMENT</u>

I would like to express my special thanks of gratitude to team of Flip Robo as well as my my mentor Sapna Verma who gave me the excellent opportunity to do this wonderful Data Analysis project 'Customer Retention' , which also helped me in doing a lot of Research and I came to know about so many new things.

I am really thankful to them. Secondly, I would also like to thank Data-Trained Education who helped me a lot in finishing this project within the limited time. Just because of them I was able to create my project and make it a good and enjoyable experience.

There were some errors and problems I faced in between the project solution where I was able to rectify from the internet and different platforms such as google, youtube, kaggle, GitHub etc.

<u>Introduction</u>

"We do not need many customers to buy once, we need one customer to buy many times". That is a very familiar slogan of companies providing products and services. Attracting new customers is important to businesses, but they are not necessarily the best customers. Because if they only buy once and do not come back, the business will not be able to make much profit. That's why businesses need to keep finding a way to hold them back, make them trust the brand and keep buying. That's why customer retention arises.

The customer retention definition in marketing is the process of engaging existing customers to continue buying products or services from your business. The best customer retention tactics enable you to form lasting relationships with consumers who will become loyal to your brand. They might even spread the word within their own circles of influence, which can turn them into brand ambassadors.

Successful e-commerce brands are often the ones that focus on their customer retention rate and keep working to improve it. Take the example of a newly launched online store that sells women's shoes. They launch a social media campaign to get sign-ups from 20,000 women customers. The store then shoots emails and SMS to their list with exclusive discount offers for 'VIP Members'.2,500 Women sign-up for the VIP membership to avail of exclusive discounts on the latest shoes. This new 'VIP Members List' now becomes valuable retained customers for the store.

Business Problem Framing

Customer satisfaction has emerged as one of the most important factors that guarantee the success of online store; it has been posited as a key stimulant of purchase, repurchase intentions and customer loyalty. A comprehensive review of the literature, theories and models have been carried out to propose the models for customer activation and customer retention. Five major factors that contributed to the success of an e-commerce store have been identified as: service quality, system quality, information quality, trust and net benefit. The research furthermore investigated the factors that influence the online customers repeat purchase intention. The combination of both utilitarian value and hedonistic values are needed to affect the repeat purchase intention (loyalty) positively.

Conceptual Background of Domain Problem

In order to succeed at retaining customers who would otherwise abandon the business, marketers and retention experts must be able to (a) predict in advance which customers are going to churn through churn analysis and (b) know which marketing actions will have the greatest retention impact on each particular customer. Armed with this knowledge, a large proportion of customer churn can be eliminated. Given the type of dataset we have, there are only 269 samples and any Machine Learning model will not be able to generalize itself and will be prone to over-fitting.

Mathematical/Analytical Modelling of the problem

- The dataset contains 71 features and 269 rows.
- The dataset contains no NULL values.
- All the attributes are of 'object' type except the PIN code.

Loading the dataset

```
In [3]: dataset = pd.read_excel("customer_retention_dataset.xlsx",sheet_name='datasheet')
dataset.head()
```

	1Gender of respondent	2 How old are you?	3 Which city do you shop online from?	4 What is the Pin Code of where you shop online from?	5 Since How Long You are Shopping Online ?	6 How many times you have made an online purchase in the past 1 year?	7 How do you access the internet while shopping on-line?	8 Which device do you use to access the online shopping?	9 What is the screen size of your mobile device? \t\t\t\t\t	10 What is the operating system (OS) of your device?\t\t\t\t	11 What browser do you run on your device to access the website? \t\t\t	12 Which channel did you follow to arrive at your favorite online store for the first time? \t\t\t
0	Male	31-40 years	Delhi	110009	Above 4 years	31-40 times	Dial-up	Desktop	Others	Window/windows Mobile	Google chrome	Search Engine
1	Female	21-30 years	Delhi	110030	Above 4 years	41 times and above	Wi-Fi	Smartphone	4.7 inches	IOS/Mac	Google chrome	Search Engine
2	Female	21-30 years	Greater Noida	201308	3-4 years	41 times and above	Mobile Internet	Smartphone	5.5 inches	Android	Google chrome	Search Engine
3	Male	21-30 years	Karnal	132001	3-4 years	Less than 10 times	Mobile Internet	Smartphone	5.5 inches	IOS/Mac	Safari	Search Engine

```
In [5]:   # checking shape of dataset
          df.shape

          (269, 71)
```
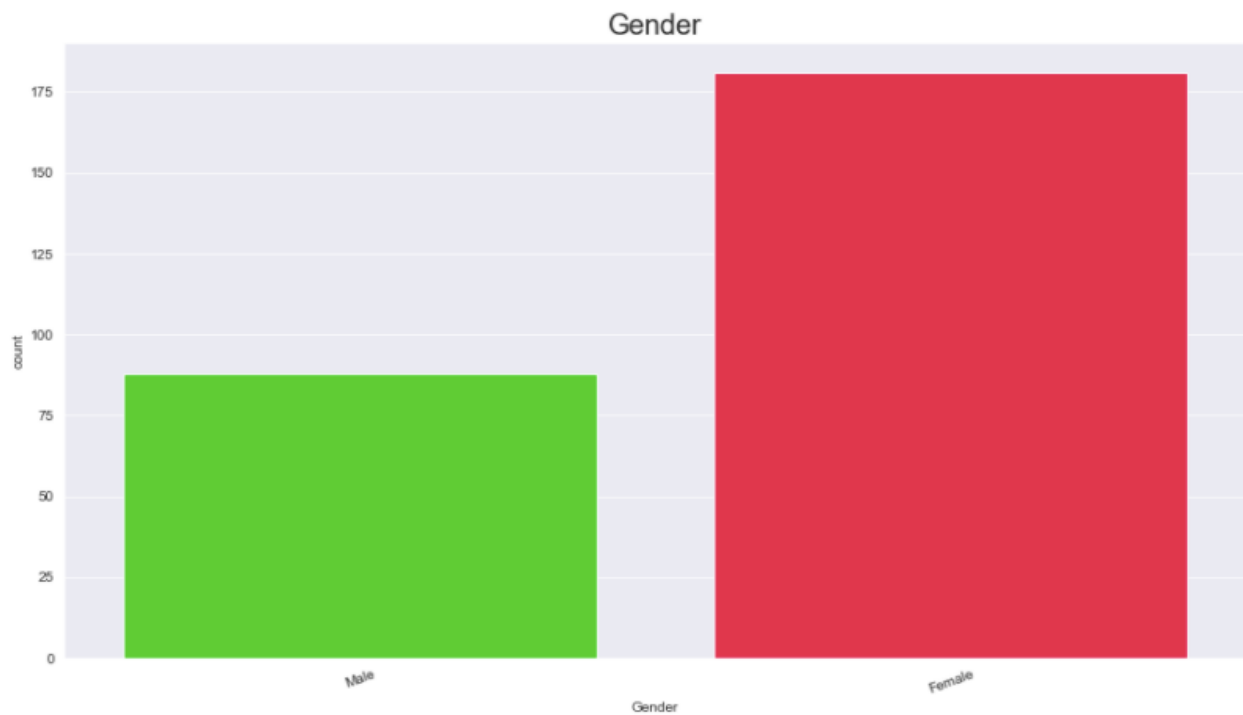
Data-processing Performed

Not much data cleaning is required as the dataset already seems very clean will be just renaming the columns. Now we will proceed to our Analytical modelling.

```
In [7]:   df.rename(columns={'1Gender of respondent':'Gender',
                             '2 How old are you? ':'Age',
                             '3 Which city do you shop online from?':'City',
                      '4 What is the Pin Code of where you shop online from?':'Pincode',
                      '5 Since How Long You are Shopping Online ?' :'No. of years shopping',
                         '6 How many times you have made an online purchase in the past 1 year?':'No of on
                         '7 How do you access the internet while shopping on-line?':'Internet Access',
                         '8 Which device do you use to access the online shopping?':'Device',
                    '9 What is the screen size of your mobile device?\t\t\t\t\t\t
                             '10 What is the operating system (OS) of your device?\t\t\t\t
                             '11 What browser do you run on your device to access the website?\t\t\t
                             '12 Which channel did you follow to arrive at your favorite online store for the
                    '13 After first visit, how do you reach the online retail store?\t\t\t\t
                    '14 How much time do you explore the e- retail store before making a purchase decision?
                             '15 What is your preferred payment Option?\t\t\t\t\t
                             '16 How frequently do you abandon (selecting an items and leaving without making
                             '17 Why did you abandon the "Bag", "Shopping Cart"?\t\t\t\t\t\t
                             '18 The content on the website must be easy to read and understand':'Content on
                             '19 Information on similar product to the one highlighted  is important for prod
                             '20 Complete information on listed seller and product being offered is important
                             '21 All relevant information on listed products must be stated clearly':'Product
                             '22 Ease of navigation in website':'Ease of navigation',
                             '23 Loading and processing speed':'Loading and processing speed',
                             '24 User friendly Interface of the website':'User friendly interface',
                             '25 Convenient Payment methods':'Convinient Payment methods',
                             '26 Trust that the online retail store will fulfill its part of the transaction
                             '27 Empathy (readiness to assist with queries) towards the customers':'Empathy w
                             '28 Being able to guarantee the privacy of the customer':'Customer Privacy',
```
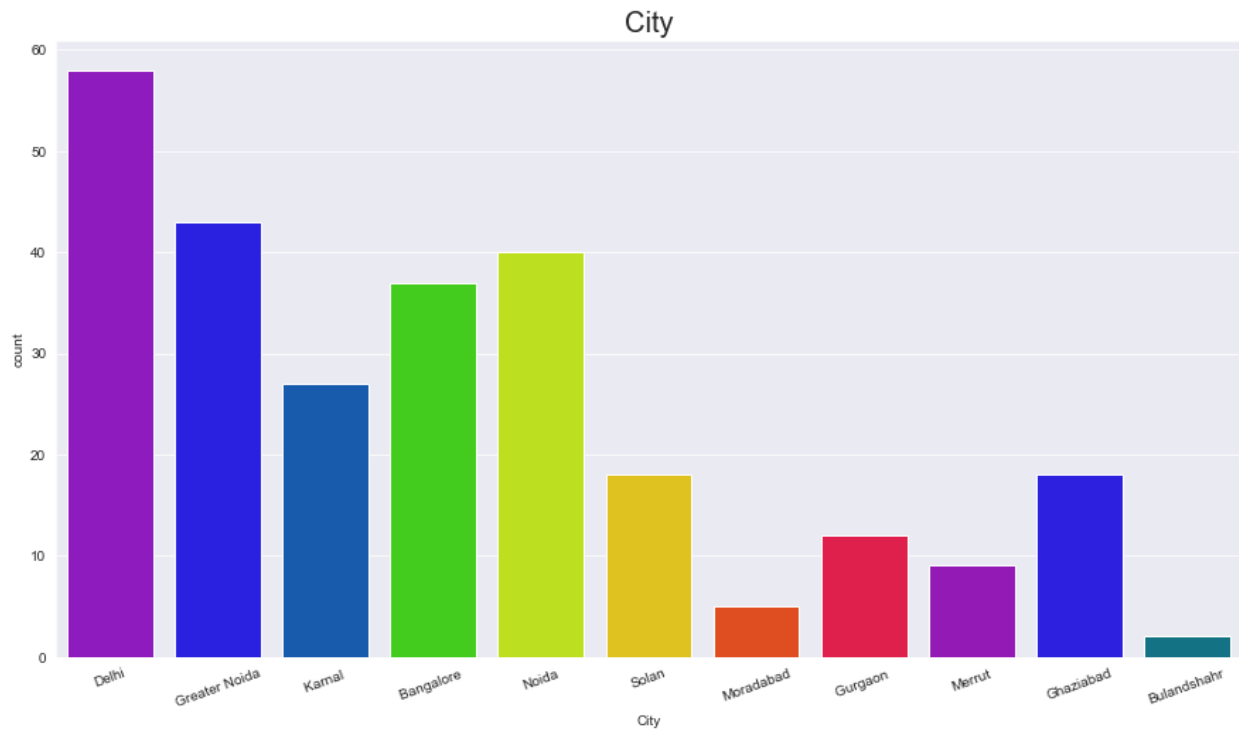
Exploratory Data Analysis

The data is then deeply analysed by finding a relationship between each attribute and the Customer according to given details.
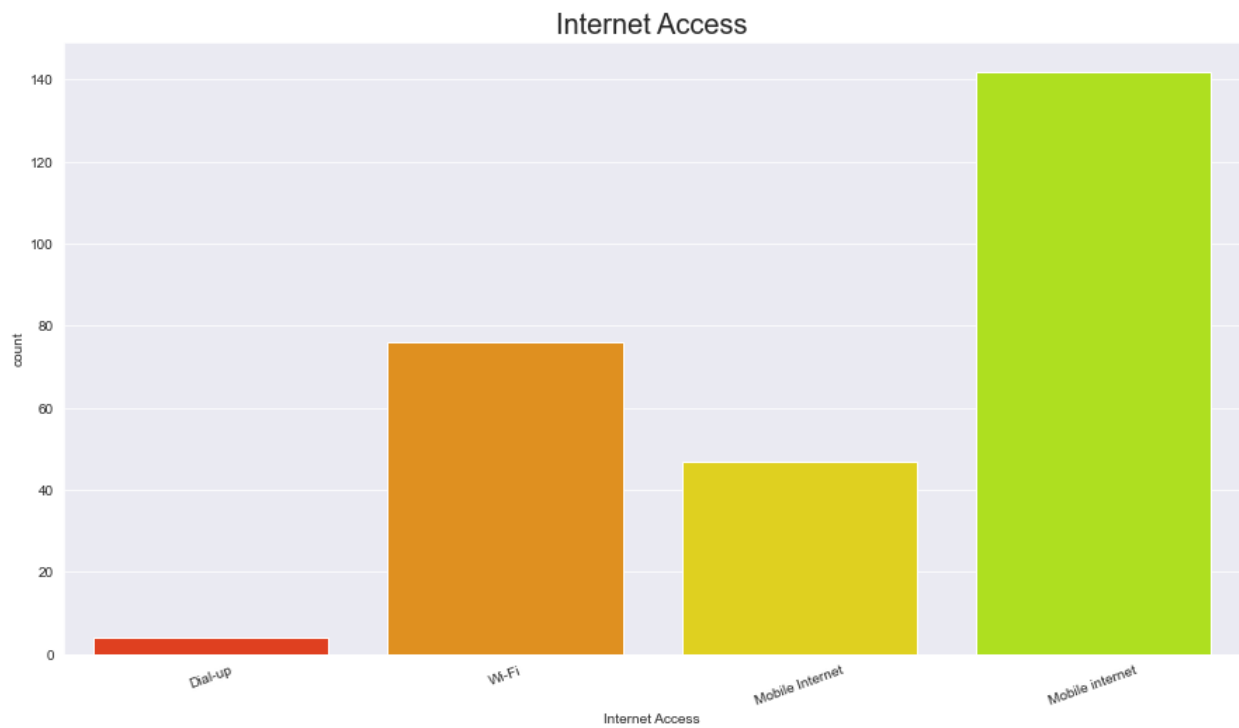

The data shows higher number of females which concludes females are more compulsive shoppers.

Title: Age
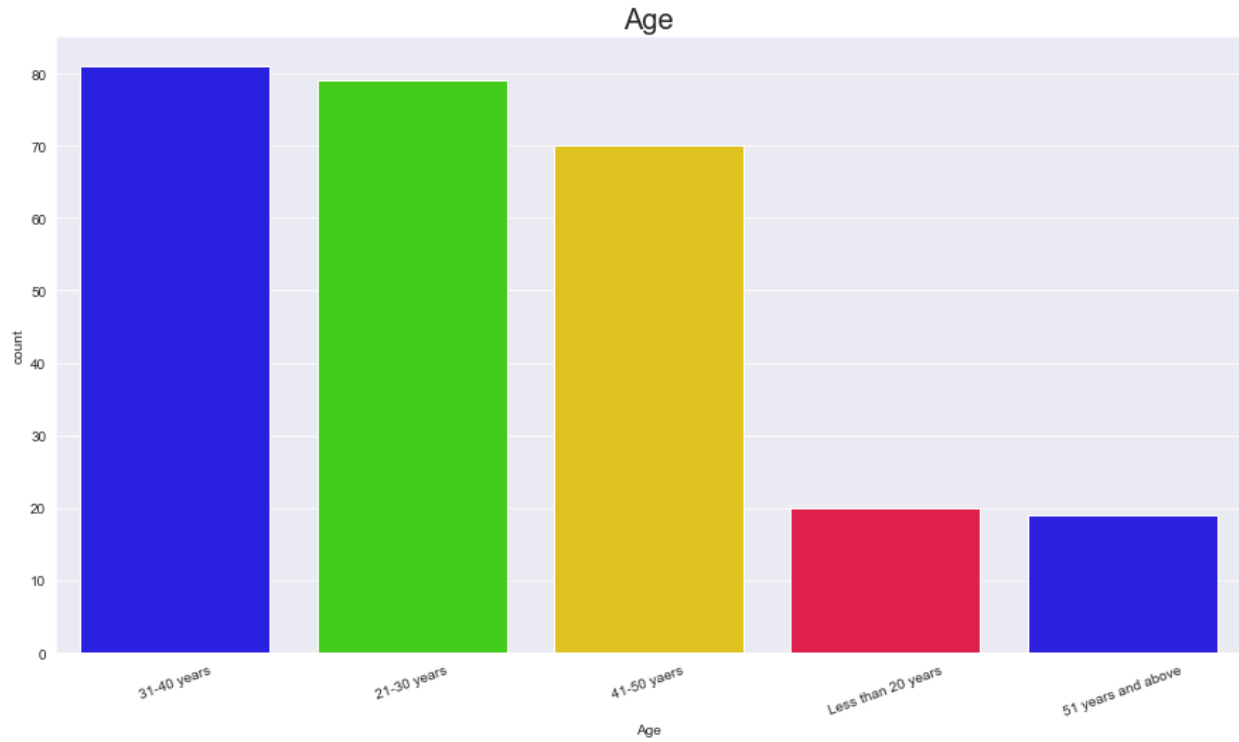
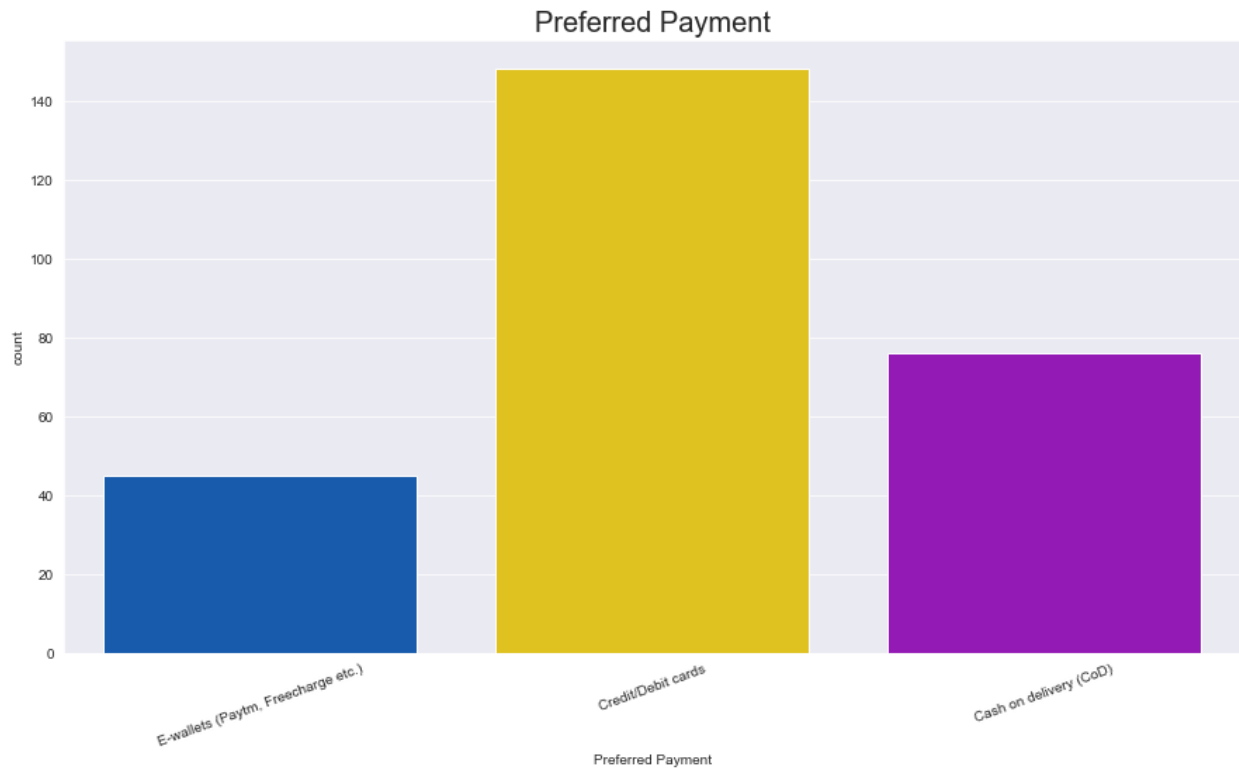People in age group of 31-40 years shop the most and least is done by 51 years age group.

People in metropolitan cities (Delhi, Greater Noida, Bangalore and Noida) do more online shopping.

Most shoppers access the shopping sites through mobile internet, hence implying that majority access the shopping sites through mobile applications.

Time spent on e-retail store

Most of the shoppers spend around more than 15 minutes before purchasing. Very few people are compulsive buyer's.

Preferred Payment

Customers prefer Card payment option followed by COD.

Reason of abandoning item
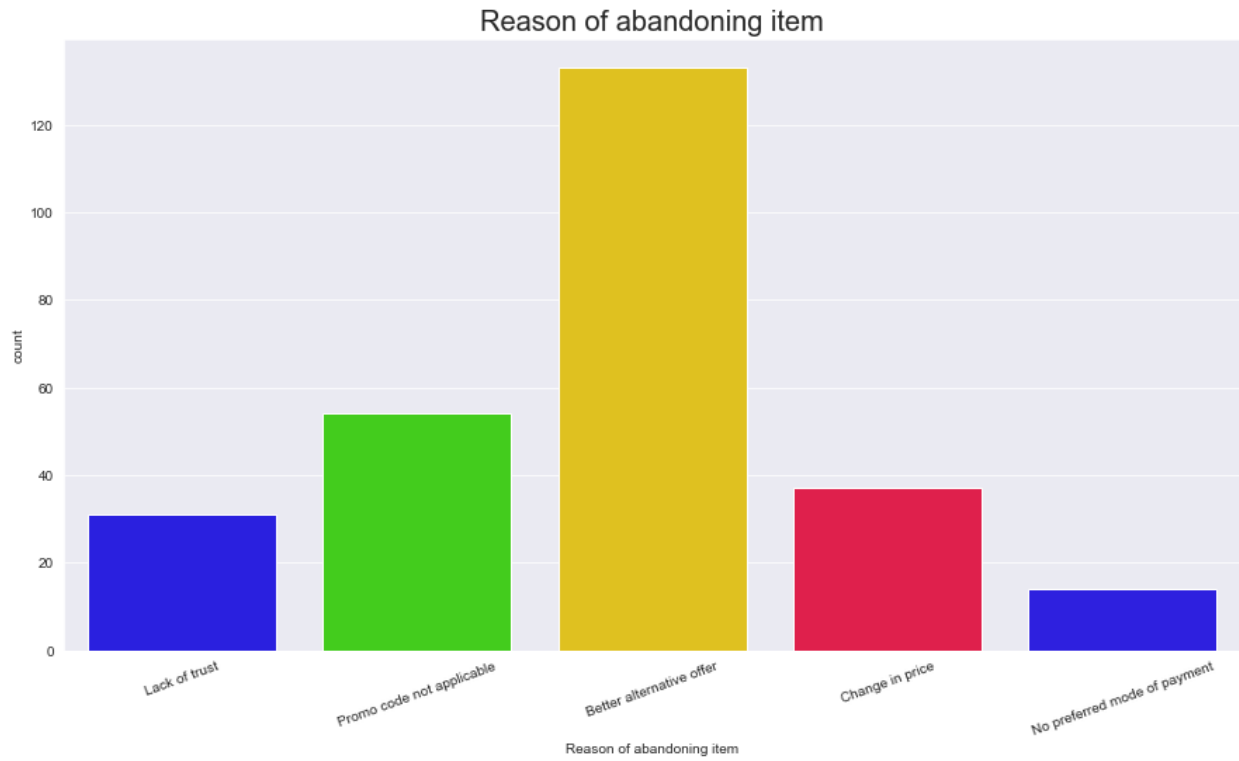
Most of the time people abandon the item in shopping cart because they find better alternative.
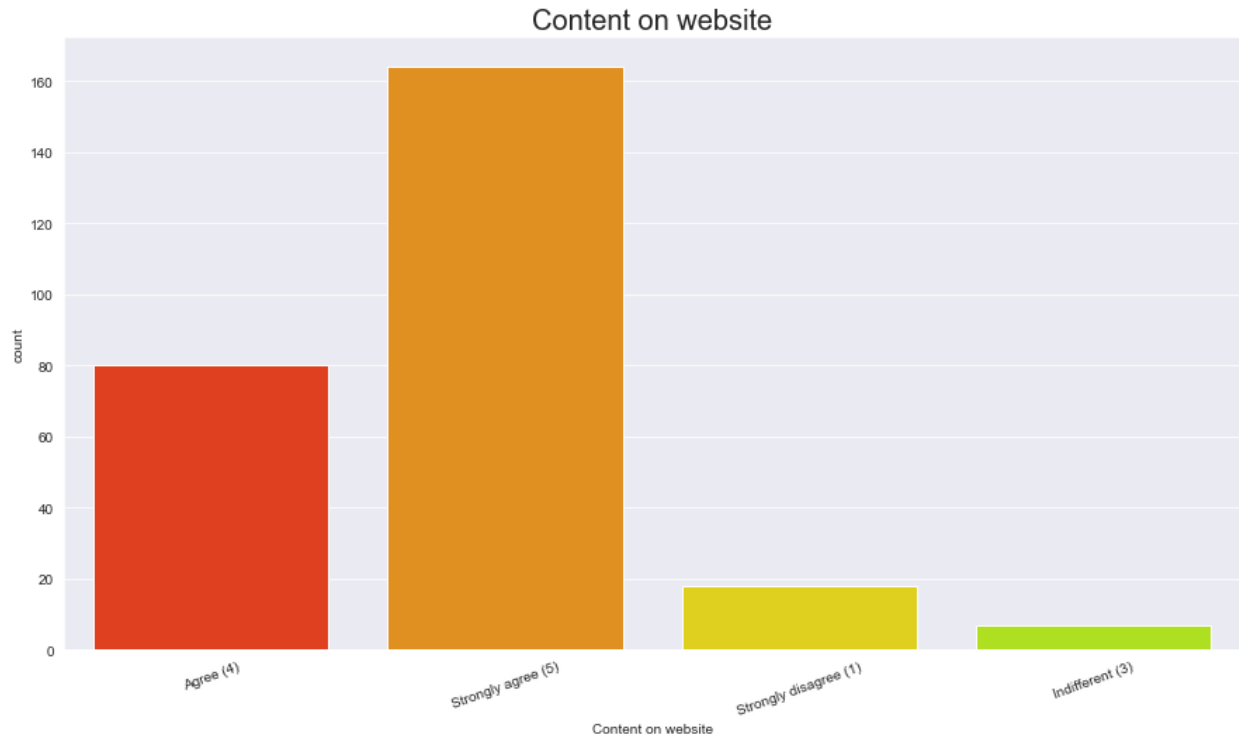
Content on website

Most of the people strongly agree that content on the website must be easy to read and understand, must have all the information on listed seller and product.
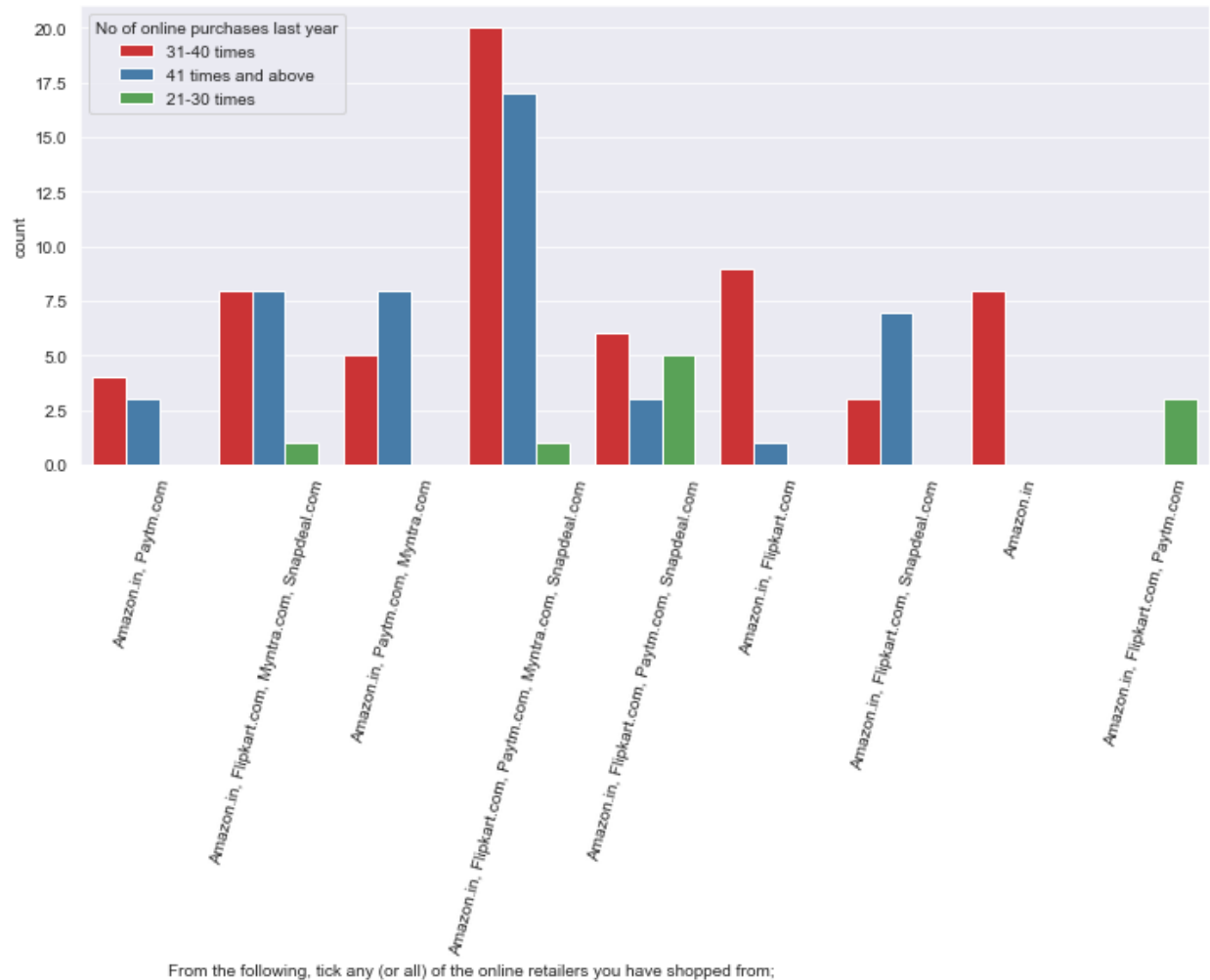
From the following, tick any (or all) of the online retailers you have shopped from;
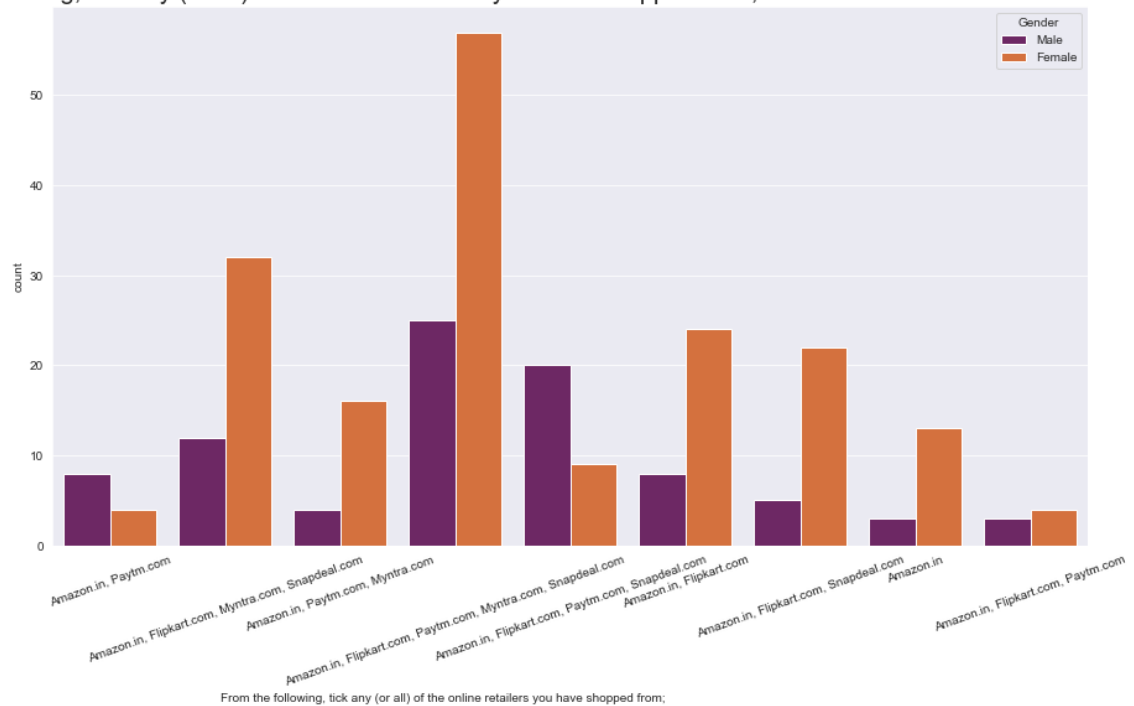
From the following, tick any (or all) of the online retailers you have shopped from;

Most people strongly agree that Amazon.in, Paytm.com and Myntra.com are easy to use and maximum shopping has been done from these websites. Also it has complete and relevant information of products

Visual appealing web-page layout
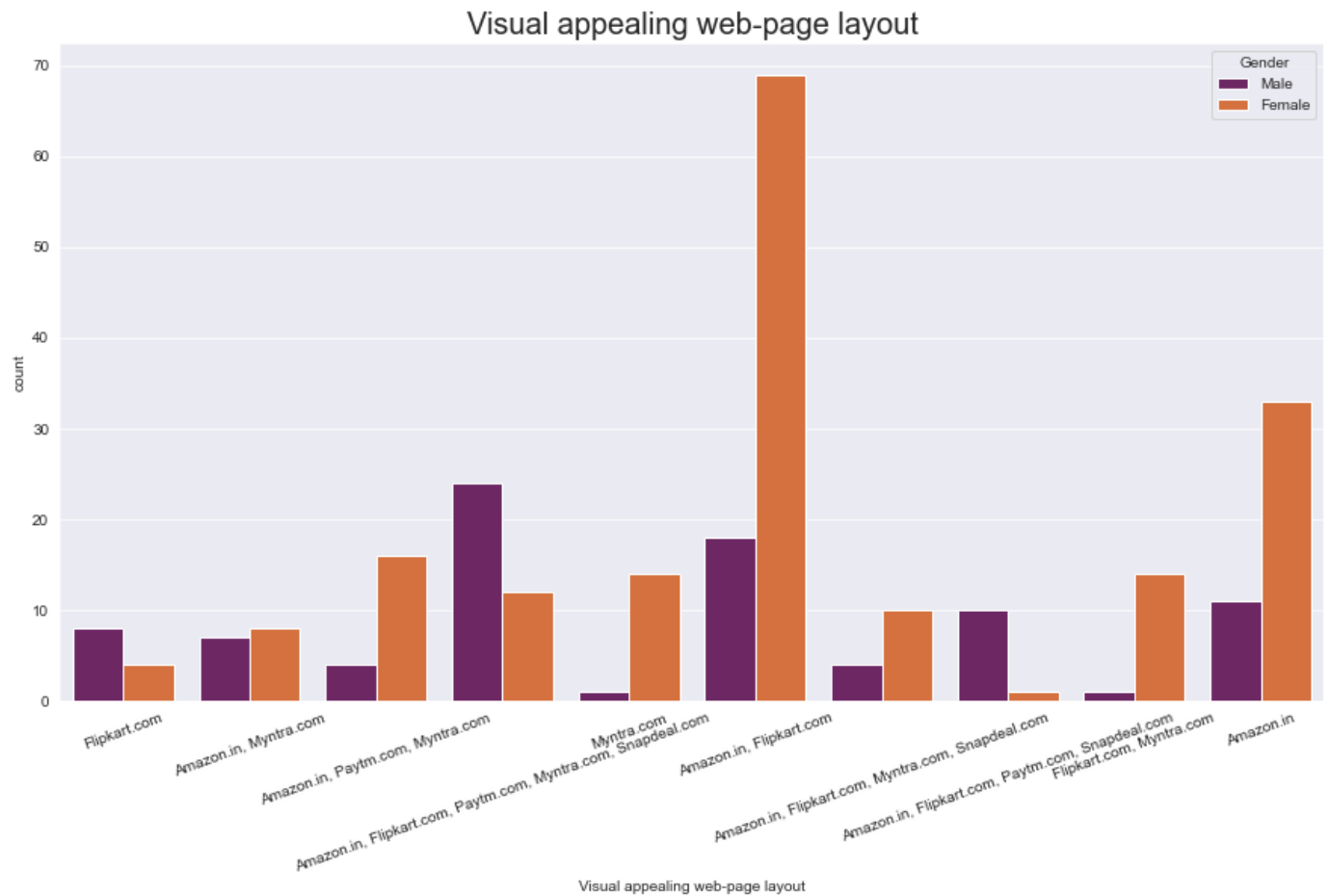
Most people strongly agree that Amazon.in, Flipkart.com, Paytm.com, Myntra.com and Snapdeal.com are visually appealing web page.

No of online purchases last year
- 31-40 times
- 41 times and above
- 21-30 times

X-axis: From the following, tick any (or all) of the online retailers you have shopped from;

Y-axis: count

Categories (left to right):
- Amazon.in, Paytm.com
- Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com
- Amazon.in, Paytm.com, Myntra.com
- Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com
- Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com
- Amazon.in, Flipkart.com
- Amazon.in, Flipkart.com, Snapdeal.com
- Amazon.in
- Amazon.in, Flipkart.com, Paytm.com

Highest number of customers have shopped from Amazon.com, Paytm and Myntra. There is no customer who has not shopped from Amazon, making Amazon the market leader in this domain.
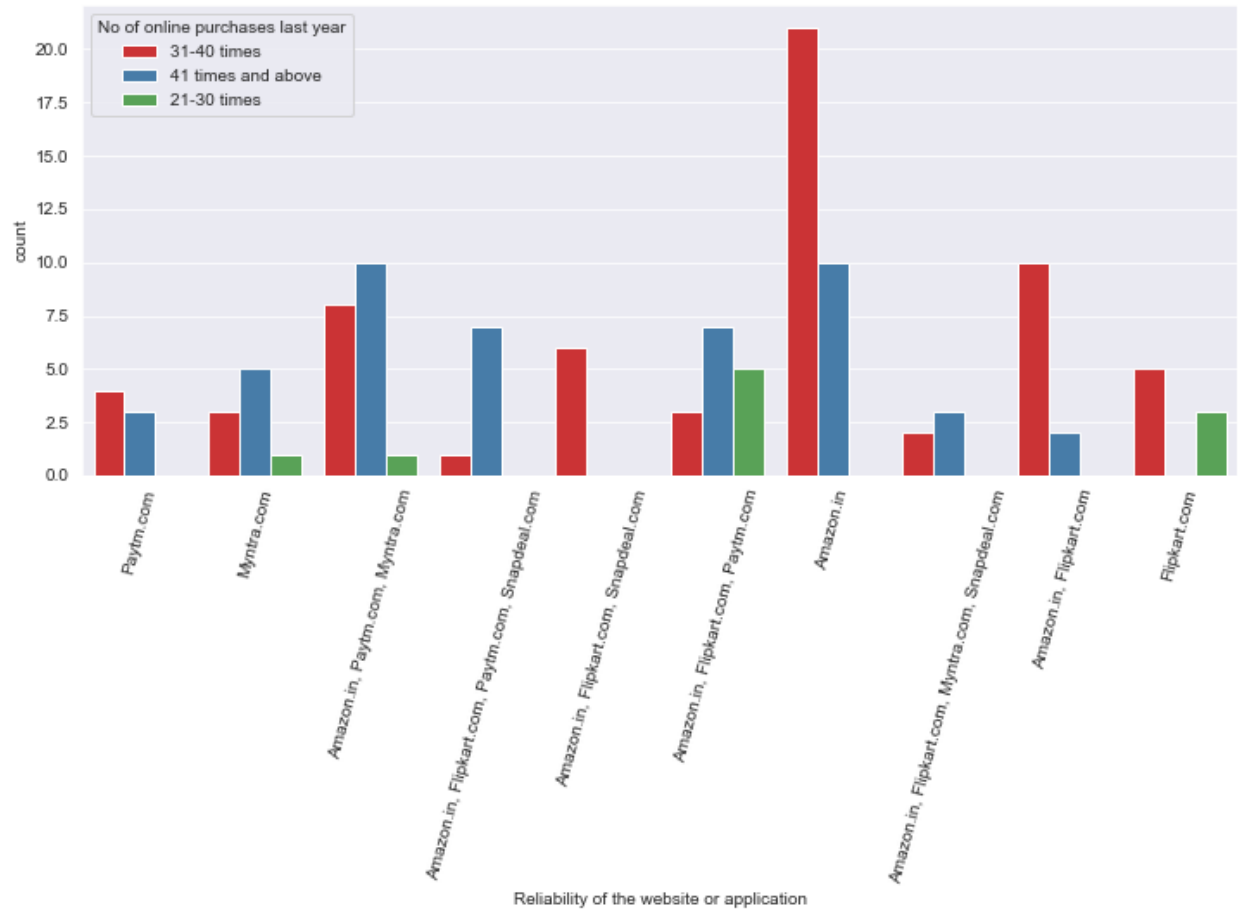
In the case of trustworthiness, Amazon earned a lot of positive points and have outperformed the other companies.

So we can conclude that Amazon has outperformed the other websites in all the aspects of the survey and has clearly maintained its image. It has been able to retain its customers successfully as compared to the others in the market.

Conclusion

1. Females shop more than males, hence they're the target audience.

2. People in age group of 31-40 years shop the most and least is done by 51 years age group.

3. People in metropolitan cities (Delhi, Greater Noida, Bangalore and Noida) exercise more online shopping.

4. Customers prefer Card payment option followed by COD.

5. Most of the shoppers strongly agree that

 - content on the website must be easy to read and understand,

 - Must have all the information on listed seller and product,

 - There must be ease of navigation in website,

 - Must have convenient payment method,

 - must have empathy towards the customers

 - online shopping gives monetary benefit and discounts

 - There must be return and replacement policy of the e-tailer for purchasing

6. Customers agree that they are Getting value for money spent

7. They also strongly agree that Amazon.in,Paytm.com and Myntra.com are easy to use and maximum shopping has been done from these websites, also they have complete and relevant information of products

8. Amazon and flipkart offer wide variety of products Amazon has fastest delivery followed by flipkart and myntra. Also they are highly satisfactory in terms of privacy of customer information.

9. Moreover Amazon website is best since its extremely efficient. Snapdeal provides limited mode of payment and has frequent disruption on moving from one page to other. Most of the people would refer Amazon to others.

10. Females in age group 21-30 years do most of the shopping

11. Females from greater Noida and males from Delhi do maximum shopping

12. Most of the females shop from amazon, flipkart, Paytm, Myntra, Snapdeal as they find it easy to use and find amazon reliable

13. Males find amazon, flipkart and Paytm to be equally reliable.

14. Both male and female agree that amazon is as efficient as before.

15. Moreover they both would recommend amazon to a friend.

16. User friendly Interface of the website: Just like the navigation in a physical store should be easy, same is the case with the online retail store so that the customers do not have to work around much and the overall shopping experience is smooth. The retail stores should invest heavily in creating user friendly apps and websites.

17. Being able to guarantee the privacy of the customer: This also got 68% strongly agree. Everyone is concerned of their privacy. If there is a website that posts about your recent purchase on its social media and tags you without your consent can be a breach of privacy. Imagine buying under wears and being tagged by amazon on Facebook for doing so.

18. Convenient Payment methods: This also had 59% people strongly agreeing. Cash on delivery, online cards and upi, all the methods should be available for the customers to make the transaction.

19. Responsiveness, availability of several communication channels (email, online rep, twitter, phone etc.): In case one channel is not available, customers can reach out to multiple channels which again is an important factor. We have recently

seen customers reaching out to Amazon and Flipkart's Twitter handles and raising issues over there which are readily resolved.