E-retail factors for customer activation and retention: A case study from Indian e-commerce customers.

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. The data is collected from the Indian online shoppers. Results indicate the e-retail success factors, which are very much critical for customer satisfaction

In [159…

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

import warnings
warnings.filterwarnings('ignore')
```

In [80]:

```
data = pd.read_excel('customer_retention_dataset.xlsx')
data
```

Out[80]:

	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\t	10 What is the operating system (OS) of your device? \t\t\t\t	...	Longer time to get logged in (promotion, sales period)	Longer tin in displayir graphics ar phot (promotio sales perio
0	Male	31-40 years	Delhi	110009	Above 4 years	31-40 times	Dial-up	Desktop	Others	Window/windows Mobile	...	Amazon.in	Amazon.
1	Female	21-30 years	Delhi	110030	Above 4 years	41 times and above	Wi-Fi	Smartphone	4.7 inches	IOS/Mac	...	Amazon.in, Flipkart.com	Myntra.co
2	Female	21-30 years	Greater Noida	201308	3-4 years	41 times and above	Mobile Internet	Smartphone	5.5 inches	Android	...	Myntra.com	Myntra.co
3	Male	21-30 years	Karnal	132001	3-4 years	Less than 10 times	Mobile Internet	Smartphone	5.5 inches	IOS/Mac	...	Snapdeal.com	Myntra.cor Snapdeal.co
4	Female	21-30 years	Bangalore	530068	2-3 years	11-20 times	Wi-Fi	Smartphone	4.7 inches	IOS/Mac	...	Flipkart.com, Paytm.com	Paytm.co
...	...	...	...	...	...	...	...	...	...	...	...	...	
264	Female	21-30 years	Solan	173212	1-2 years	Less than 10 times	Mobile Internet	Smartphone	5.5 inches	Android	...	Amazon.in	Amazon.
265	Female	31-40 years	Ghaziabad	201008	1-2 years	31-40 times	Mobile Internet	Smartphone	Others	Android	...	Flipkart.com	Flipkart.co
266	Female	41-50 yaers	Bangalore	560010	2-3 years	Less than 10 times	Mobile internet	Laptop	Others	Window/windows Mobile	...	Amazon.in	Snapdeal.co

267	Female	Less than 20 years	Solan	173229	2-3 years	Less than 10 times	Wi-Fi	Smartphone	5.5 inches	Android	...	Amazon.in	Amazon.i Myntra.co Snapdeal.co
268	Female	41-50 yaers	Ghaziabad	201009	2-3 years	31-40 times	Mobile Internet	Smartphone	5.5 inches	Android	...	Amazon.in	Amazon.

269 rows × 71 columns

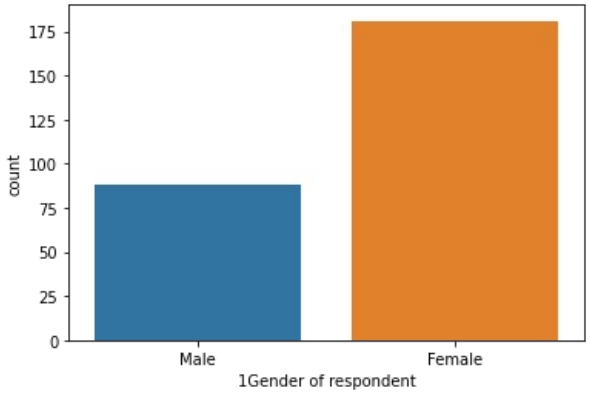
In [81]:
```
data.columns
```

Out[81]:
```
Index(['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\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?
',
       '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 payment) your shopping ca
rt?\t\t\t\t\t\t\t                                                ',
       '17 Why did you abandon the “Bag”, “Shopping Cart”?\t\t\t\t\t
',
       '18 The content on the website must be easy to read and understand',
       '19 Information on similar product to the one highlighted  is important for product comparison',
       '20 Complete information on listed seller and product being offered is important for purchase decision.',
       '21 All relevant information on listed products must be stated clearly',
       '22 Ease of navigation in website', '23 Loading and processing speed',
       '24 User friendly Interface of the website',
       '25 Convenient Payment methods',
       '26 Trust that the online retail store will fulfill its part of the transaction at the stipulated time',
       '27 Empathy (readiness to assist with queries) towards the customers',
       '28 Being able to guarantee the privacy of the customer',
       '29 Responsiveness, availability of several communication channels (email, online rep, twitter, phone etc.
)',
       '30 Online shopping gives monetary benefit and discounts',
       '31 Enjoyment is derived from shopping online',
       '32 Shopping online is convenient and flexible',
       '33 Return and replacement policy of the e-tailer is important for purchase decision',
       '34 Gaining access to loyalty programs is a benefit of shopping online',
       '35 Displaying quality Information on the website improves satisfaction of customers',
       '36 User derive satisfaction while shopping on a good quality website or application',
       '37 Net Benefit derived from shopping online can lead to users satisfaction',
       '38 User satisfaction cannot exist without trust',
       '39 Offering a wide variety of listed product in several category',
       '40 Provision of complete and relevant product information',
       '41 Monetary savings',
       '42 The Convenience of patronizing the online retailer',
       '43 Shopping on the website gives you the sense of adventure',
       '44 Shopping on your preferred e-tailer enhances your social status',
       '45 You feel gratification shopping on your favorite e-tailer',
       '46 Shopping on the website helps you fulfill certain roles',
       '47 Getting value for money spent',
       'From the following, tick any (or all) of the online retailers you have shopped from;
',
       'Easy to use website or application',
       'Visual appealing web-page layout', 'Wild variety of product on offer',
       'Complete, relevant description information of products',
       'Fast loading website speed of website and application',
       'Reliability of the website or application',
       'Quickness to complete purchase',
       'Availability of several payment options', 'Speedy order delivery ',
       'Privacy of customers’ information',
       'Security of customer financial information',
       'Perceived Trustworthiness',
       'Presence of online assistance through multi-channel',
       'Longer time to get logged in (promotion, sales period)',
       'Longer time in displaying graphics and photos (promotion, sales period)',
       'Late declaration of price (promotion, sales period)',
       'Longer page loading time (promotion, sales period)',
       'Limited mode of payment on most products (promotion, sales period)',
       'Longer delivery period', 'Change in website/Application design',
       'Frequent disruption when moving from one page to another',
```

```
 'Website is as efficient as before',
 'Which of the Indian online retailer would you recommend to a friend?'],
dtype='object')
```

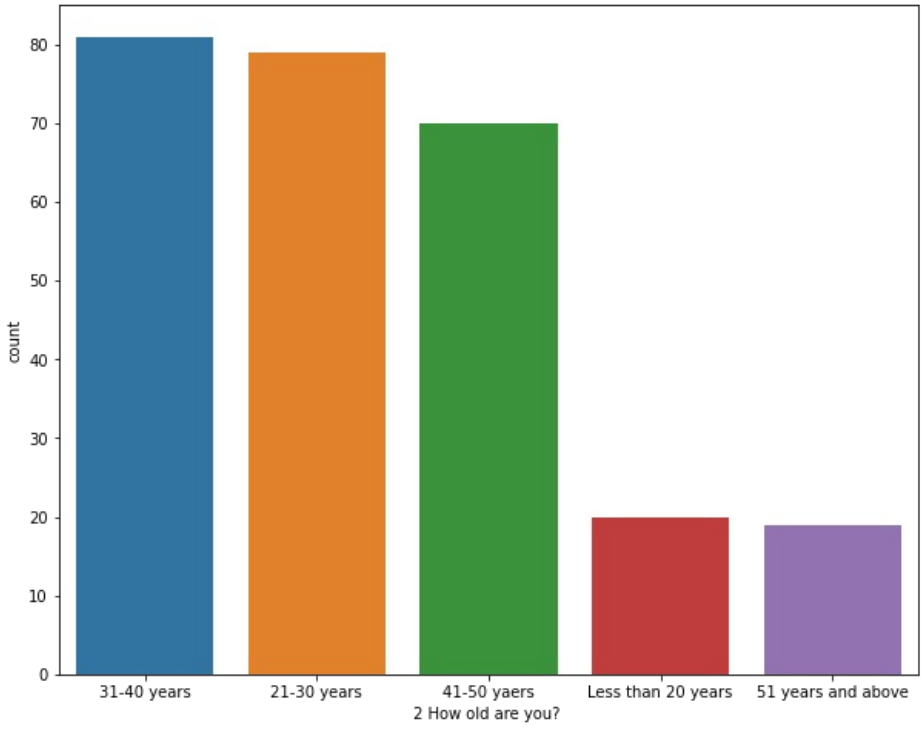
In [82]:
```
ax= sns.countplot(x='1Gender of respondent',data = data)
print(data['1Gender of respondent'].value_counts())
```

```
Female    181
Male       88
Name: 1Gender of respondent, dtype: int64
```



In the data we can see clearly that there females are more who shpping more than Males

In [83]:
```
plt.figure(figsize=(10,8))
ax= sns.countplot(x='2 How old are you? ',data = data)
```

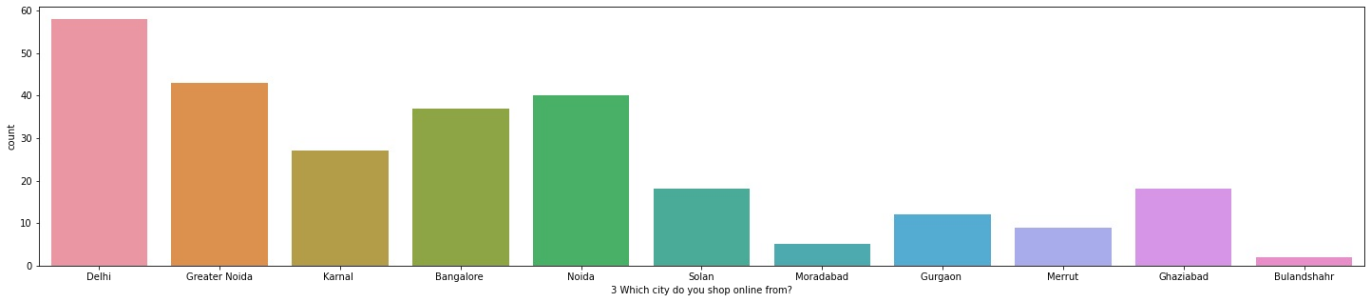


Mostly people who are in the age from 21 to 50 years shoppings more as compared to teenagers and more than 51 years

In [140…
```
plt.figure(figsize=(25,5))
ax= sns.countplot(x='3 Which city do you shop online from?',data = data)
print(data['3 Which city do you shop online from?'].value_counts())
```

```
Delhi            58
Greater Noida    43
Noida            40
Bangalore        37
Karnal           27
Solan            18
Ghaziabad        18
```

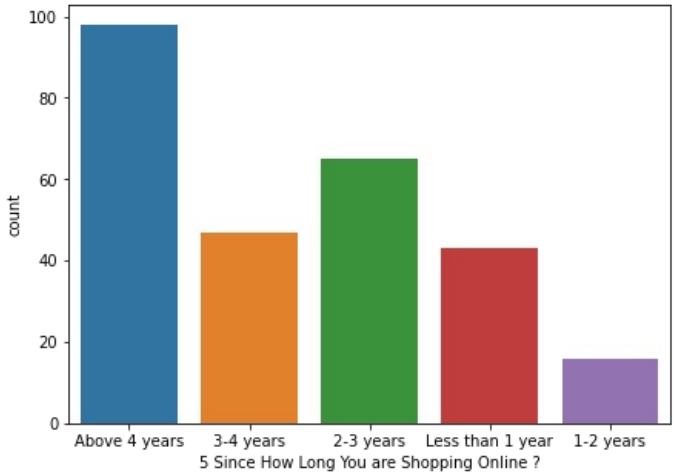
```
Gurgaon          12
Merrut            9
Moradabad         5
Bulandshahr       2
Name: 3 Which city do you shop online from?, dtype: int64
```



People from Delhi or metropolitian city doing shoppings more online

In [88]:
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='5 Since How Long You are Shopping Online ?',data = data)
print(data['5 Since How Long You are Shopping Online ?'].value_counts())
```

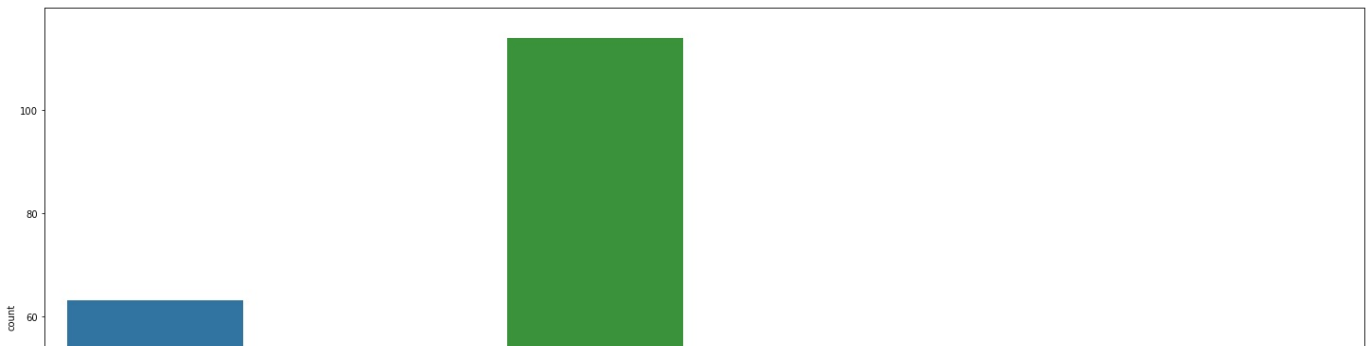
```
Above 4 years       98
2-3 years           65
3-4 years           47
Less than 1 year    43
1-2 years           16
Name: 5 Since How Long You are Shopping Online ?, dtype: int64
```

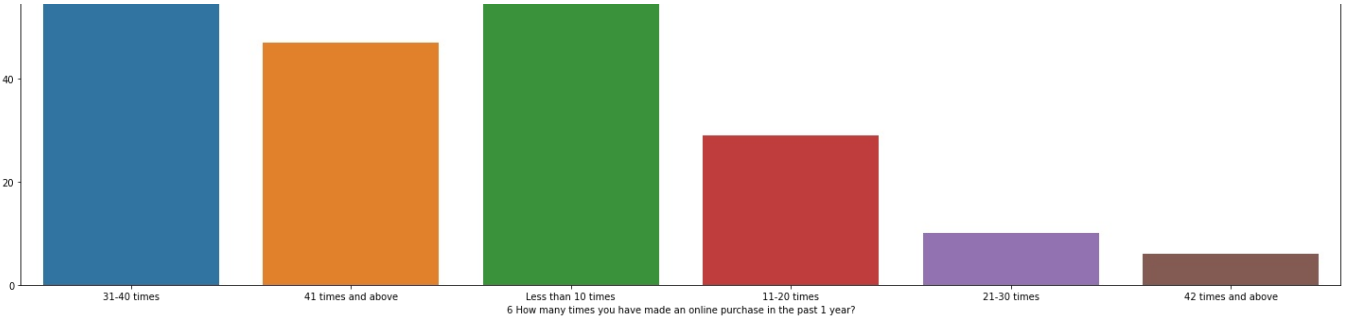


There are abt 98 people as the data shows which are maximum from the dataset who loves shopping online since more than 4 years

In [141…
```
plt.figure(figsize=(25,12))
ax= sns.countplot(x='6 How many times you have made an online purchase in the past 1 year?',data = data)
print(data['6 How many times you have made an online purchase in the past 1 year?'].value_counts())
```

```
Less than 10 times    114
31-40 times            63
41 times and above     47
11-20 times            29
21-30 times            10
42 times and above      6
Name: 6 How many times you have made an online purchase in the past 1 year?, dtype: int64
```



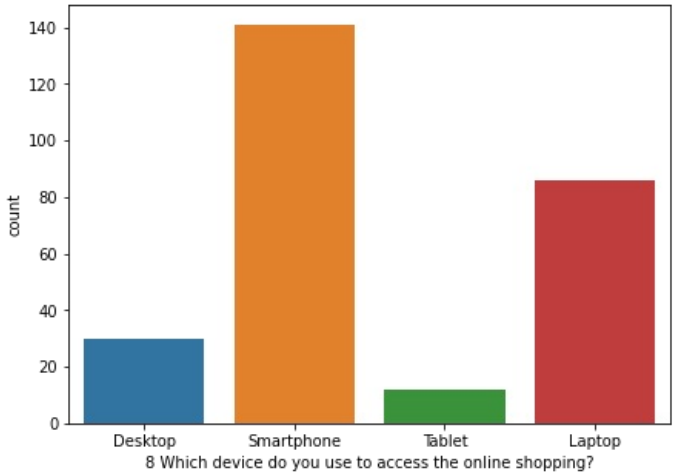


There are max people(114) who purchased (Less than 10 times) online in the past 1 year however there are 120+ people who purchased more than 31 items in a year

In [90]:

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='8 Which device do you use to access the online shopping?',data = data)
print(data['8 Which device do you use to access the online shopping?'].value_counts())
```

```
Smartphone    141
Laptop         86
Desktop        30
Tablet         12
Name: 8 Which device do you use to access the online shopping?, dtype: int64
```

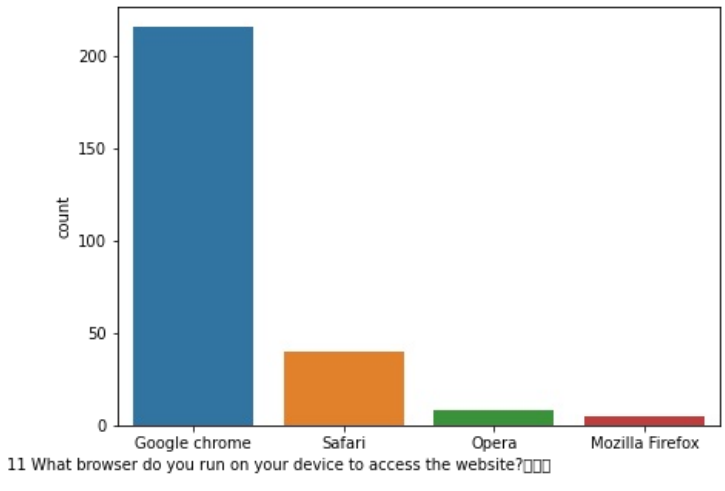


Mostly people uses their phones or lapies for online shopping

In [92]:

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='11 What browser do you run on your device to access the website?\t\t\t
print(data['11 What browser do you run on your device to access the website?\t\t\t
```

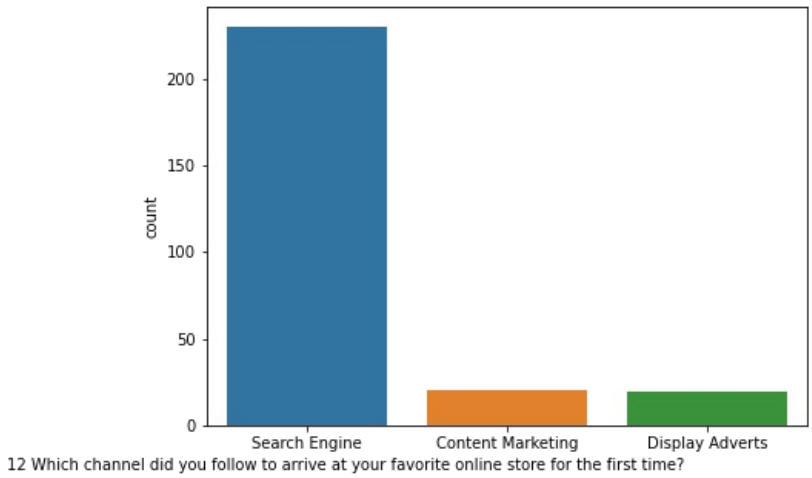
```
Google chrome      216
Safari              40
Opera                8
Mozilla Firefox      5
Name: 11 What browser do you run on your device to access the website?\t\t\t
, dtype: int64
```



Most people using Google chrome browser to access the website

In [94]:
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='12 Which channel did you follow to arrive at your favorite online store for the first time?
print(data['12 Which channel did you follow to arrive at your favorite online store for the first time?
```

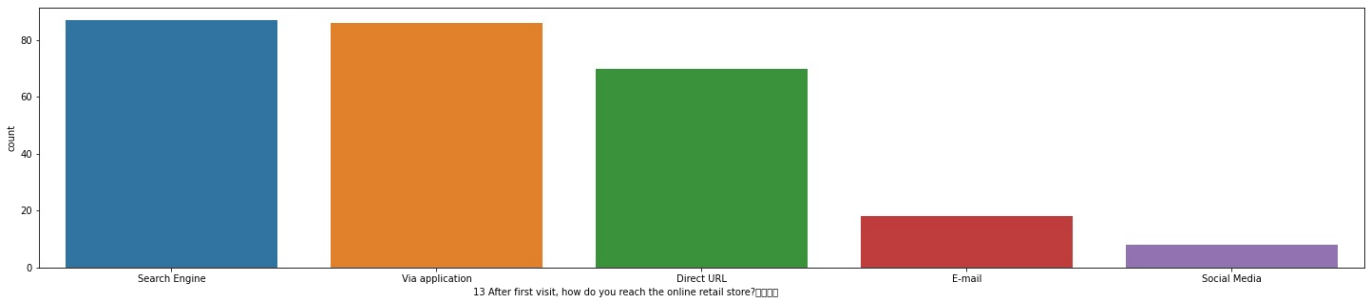
```
Search Engine        230
Content Marketing     20
Display Adverts       19
Name: 12 Which channel did you follow to arrive at your favorite online store for the first time?
, dtype: int64
```



Maximum people followed Search Engine to arrive at their favorite online store for the first time

In [95]:
```
plt.figure(figsize=(25,5))
ax= sns.countplot(x='13 After first visit, how do you reach the online retail store?\t\t\t\t
print(data['13 After first visit, how do you reach the online retail store?\t\t\t\t
```

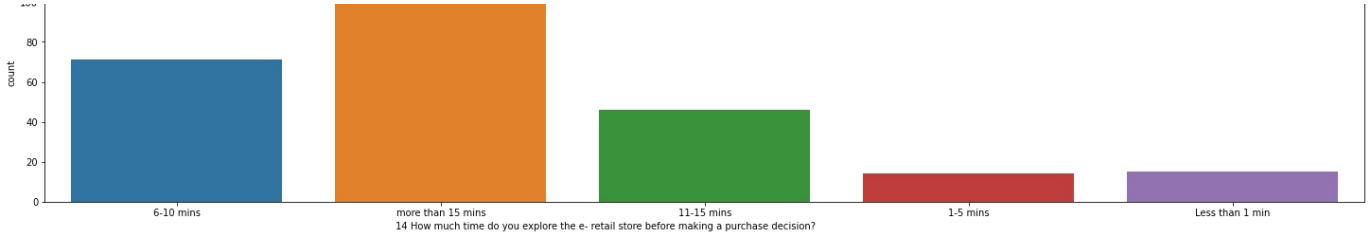
```
Search Engine      87
Via application    86
Direct URL         70
E-mail             18
Social Media        8
Name: 13 After first visit, how do you reach the online retail store?\t\t\t\t
, dtype: int64
```



Most people who once reached the website then after that they mostly download the app or again they searched from search engine

In [96]:
```
plt.figure(figsize=(25,5))
ax= sns.countplot(x='14 How much time do you explore the e- retail store before making a purchase decision?
print(data['14 How much time do you explore the e- retail store before making a purchase decision?
```

```
more than 15 mins    123
6-10 mins             71
11-15 mins            46
Less than 1 min       15
1-5 mins              14
Name: 14 How much time do you explore the e- retail store before making a purchase decision?
, dtype: int64
```

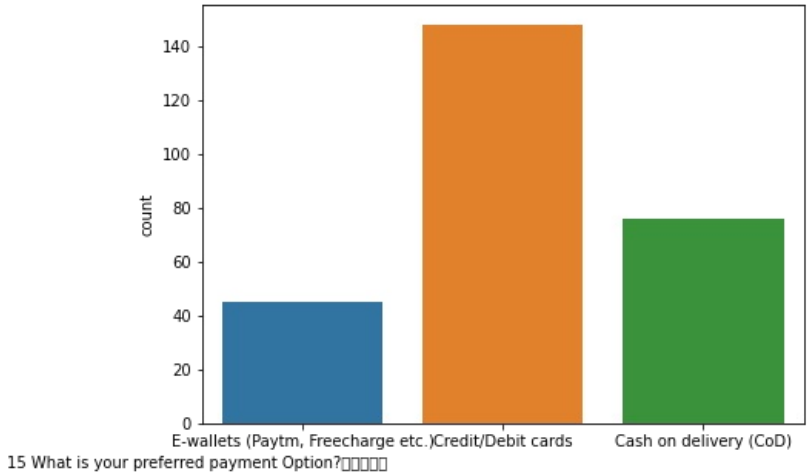


Max public took more than 15 min before making a purchase decision on the e-retail store

In [97]:

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='15 What is your preferred payment Option?\t\t\t\t\t
print(data['15 What is your preferred payment Option?\t\t\t\t\t
```

```
Credit/Debit cards                   148
Cash on delivery (CoD)                76
E-wallets (Paytm, Freecharge etc.)    45
Name: 15 What is your preferred payment Option?\t\t\t\t\t
, dtype: int64
```

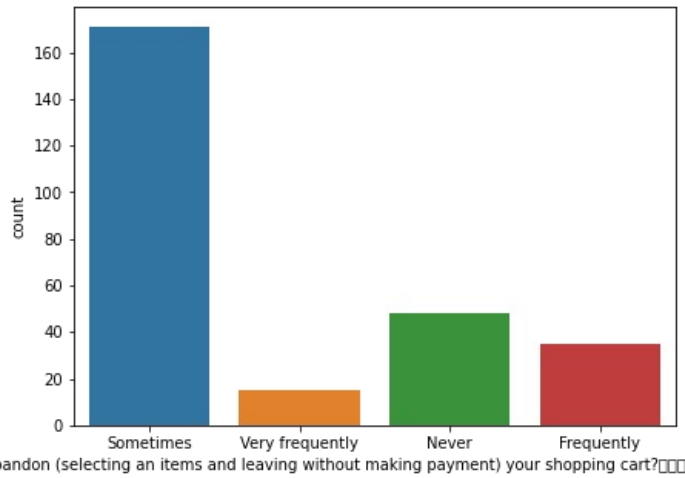


Maximum people used Credit cards/Debit cards as the preferred paymnet mode on the e-retail store and half of them used Cod

In [98]:

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='16 How frequently do you abandon (selecting an items and leaving without making payment) you
print(data['16 How frequently do you abandon (selecting an items and leaving without making payment) your shoppin
```

```
Sometimes          171
Never               48
Frequently          35
Very frequently     15
Name: 16 How frequently do you abandon (selecting an items and leaving without making payment) your shopping cart
?\t\t\t\t\t\t\t                                                    , dtype: int64
```

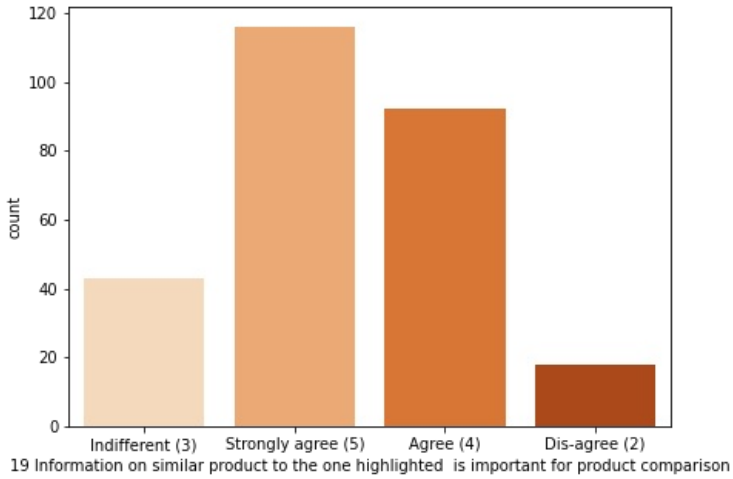


Max people on the e-retail store are those who Sometimes abondon their cart

Max people on the e-retail store are those who sometimes abondon their cart

In [154…
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='19 Information on similar product to the one highlighted  is important for product comparisc
print(data['19 Information on similar product to the one highlighted  is important for product comparison'].value
```

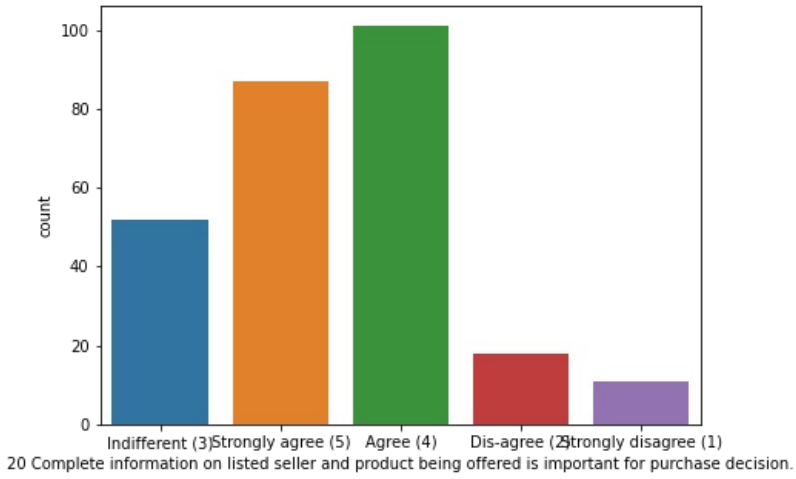
```
Strongly agree (5)    116
Agree (4)              92
Indifferent (3)        43
Dis-agree (2)          18
Name: 19 Information on similar product to the one highlighted  is important for product comparison, dtype: int64
```



Max people are Strongly agree and Agree about the fact that the Information on similar product to the one highlighted is important for product comparison

In [101…
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='20 Complete information on listed seller and product being offered is important for purchase
print(data['20 Complete information on listed seller and product being offered is important for purchase decisior
```

```
Agree (4)                101
Strongly agree (5)        87
Indifferent (3)           52
Dis-agree (2)             18
Strongly disagree (1)     11
Name: 20 Complete information on listed seller and product being offered is important for purchase decision., dty
pe: int64
```

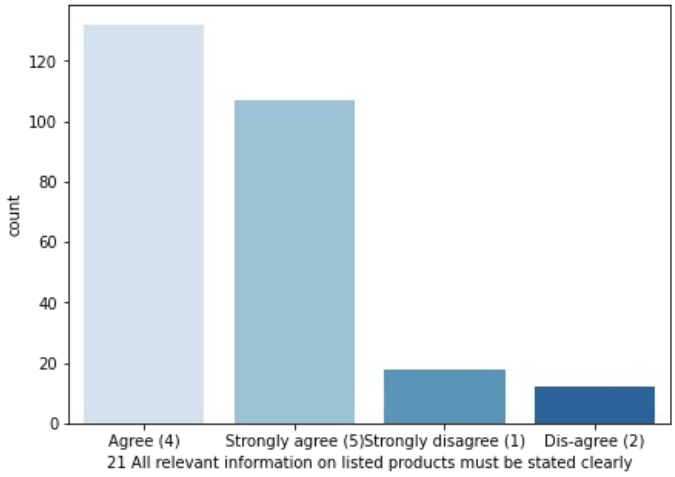


Max People are Agree on the fact that Complete information on listed seller and product being offered is important for purchase decision.

In [155…
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='21 All relevant information on listed products must be stated clearly',data = data,palette =
print(data['21 All relevant information on listed products must be stated clearly'].value_counts())
```

```
Agree (4)                132
Strongly agree (5)       107
Strongly disagree (1)     18
Dis-agree (2)             12
```

```
Name: 21 All relevant information on listed products must be stated clearly, dtype: int64
```

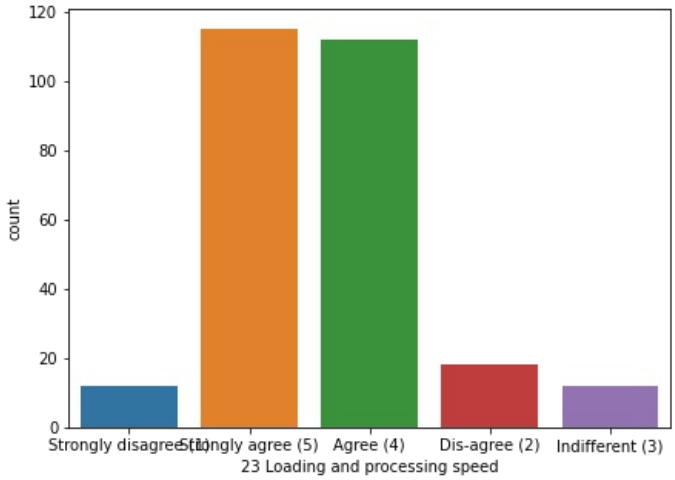


Max people are Agree on that All relevant information on listed products must be stated clearly

In [103…

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='23 Loading and processing speed',data = data)
print(data['23 Loading and processing speed'].value_counts())
```

```
Strongly agree (5)       115
Agree (4)                112
Dis-agree (2)             18
Strongly disagree (1)     12
Indifferent (3)           12
Name: 23 Loading and processing speed, dtype: int64
```

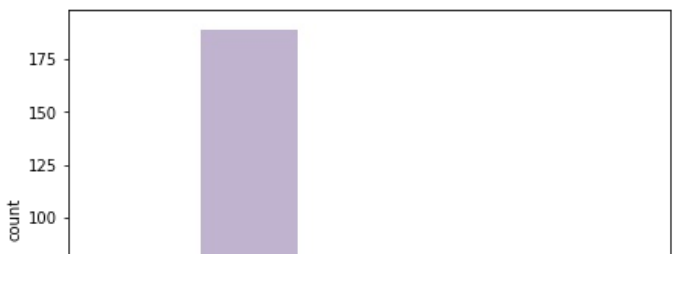


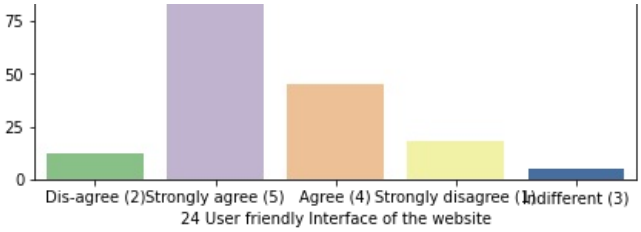
There are very less Difference in the people who are Agree and Strongly agree on the Loading andprocessing speed

In [156…

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='24 User friendly Interface of the website',data = data,palette = 'Accent')
print(data['24 User friendly Interface of the website'].value_counts())
```

```
Strongly agree (5)       189
Agree (4)                 45
Strongly disagree (1)     18
Dis-agree (2)             12
Indifferent (3)            5
Name: 24 User friendly Interface of the website, dtype: int64
```



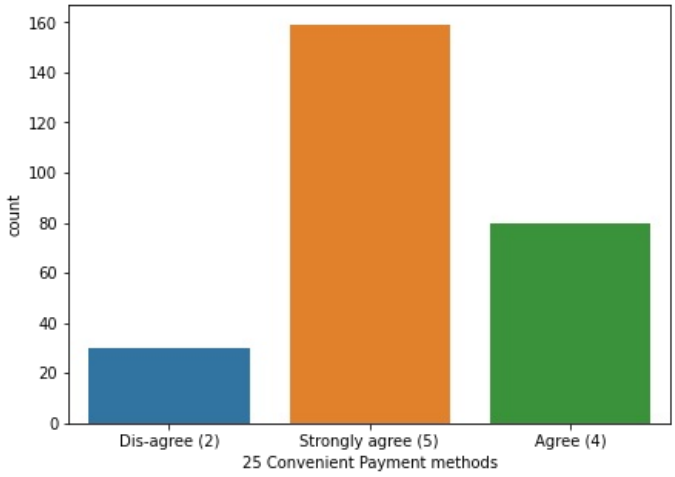


Max people are Strongly Agree on the fact the website is User friendly Interface

In [105…

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='25 Convenient Payment methods',data = data)
print(data['25 Convenient Payment methods'].value_counts())
```

```
Strongly agree (5)    159
Agree (4)              80
Dis-agree (2)          30
Name: 25 Convenient Payment methods, dtype: int64
```

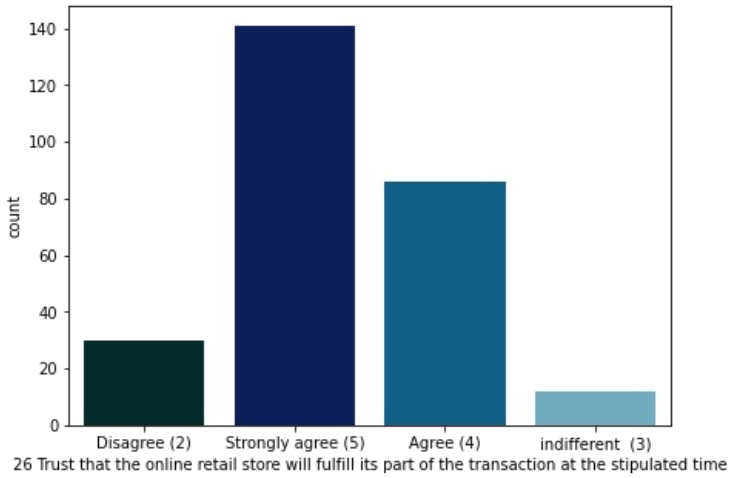


max people are Strongly agree on the methods used by the websites for payments are convinient

In [157…

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='26 Trust that the online retail store will fulfill its part of the transaction at the stipul
print(data['26 Trust that the online retail store will fulfill its part of the transaction at the stipulated time
```

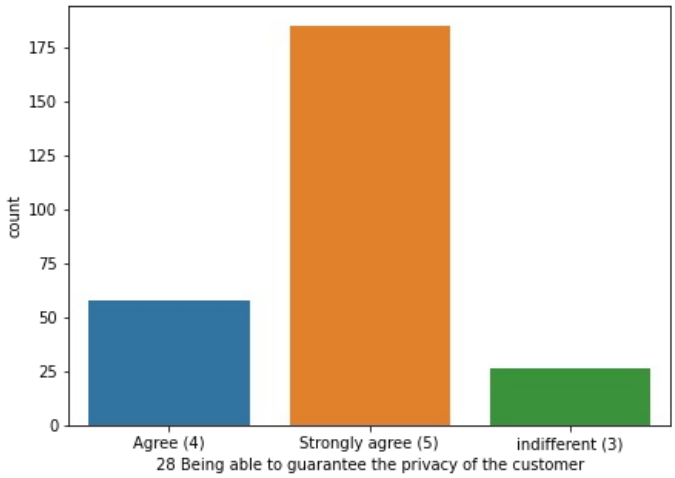
```
Strongly agree (5)    141
Agree (4)              86
Disagree (2)           30
indifferent  (3)       12
Name: 26 Trust that the online retail store will fulfill its part of the transaction at the stipulated time, dtyp
e: int64
```



ABout 140 people who are Strongly Agree on the Trust that the online retail store will fulfill its part of the transaction at the stipulated time

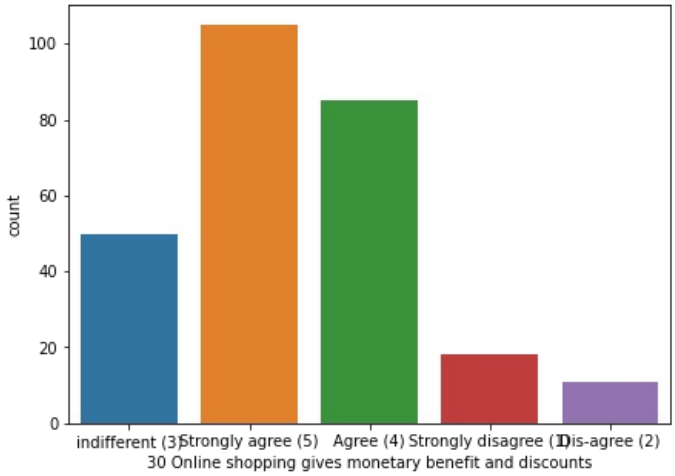
In [107…
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='28 Being able to guarantee the privacy of the customer',data = data)
print(data['28 Being able to guarantee the privacy of the customer'].value_counts())
```

```
Strongly agree (5)    185
Agree (4)              58
indifferent (3)        26
Name: 28 Being able to guarantee the privacy of the customer, dtype: int64
```



In [108…
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='30 Online shopping gives monetary benefit and discounts',data = data)
print(data['30 Online shopping gives monetary benefit and discounts'].value_counts())
```

```
Strongly agree (5)       105
Agree (4)                 85
indifferent (3)           50
Strongly disagree (1)     18
Dis-agree (2)             11
Name: 30 Online shopping gives monetary benefit and discounts, dtype: int64
```



There a lot of people who thimks since Online Shopping came it gives people monetary benefit and discounts

In [109…
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='31 Enjoyment is derived from shopping online',data = data)
print(data['31 Enjoyment is derived from shopping online'].value_counts())
```

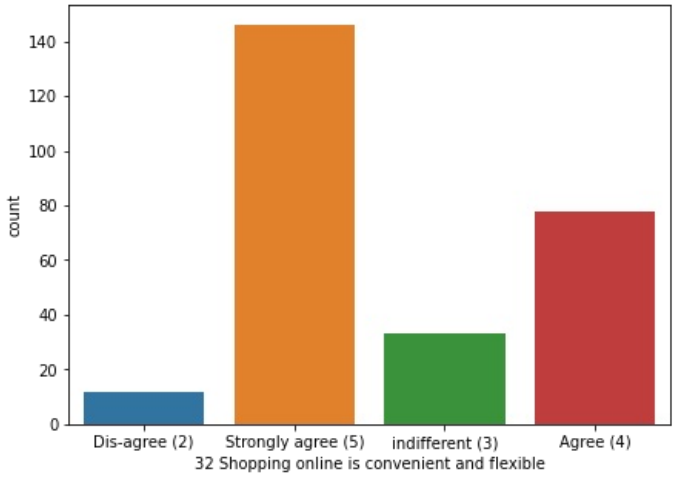
```
Strongly agree (5)       86
indifferent (3)          75
Agree (4)                59
Strongly disagree (1)    30
Dis-agree (2)            19
Name: 31 Enjoyment is derived from shopping online, dtype: int64
```

There are a lot of people who are Strongly agree on the fact that Enjoyment is derived from shopping online but there are approximately equal indifferent people who thinks not

In [110…

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='32 Shopping online is convenient and flexible',data = data)
print(data['32 Shopping online is convenient and flexible'].value_counts())
```

```
Strongly agree (5)    146
Agree (4)              78
indifferent (3)        33
Dis-agree (2)          12
Name: 32 Shopping online is convenient and flexible, dtype: int64
```

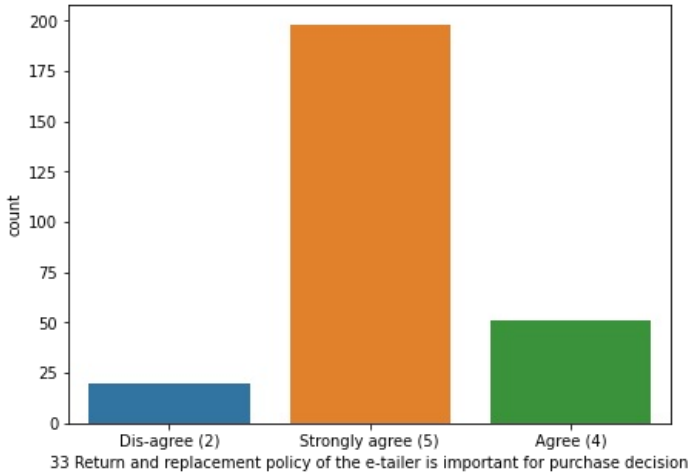


As we know that the technology makes life easier and the people in the data also shows that max people are Strongly agree on the fact that Shopping online is convenient and flexible

In [111…

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='33 Return and replacement policy of the e-tailer is important for purchase decision',data =
print(data['33 Return and replacement policy of the e-tailer is important for purchase decision'].value_counts())
```

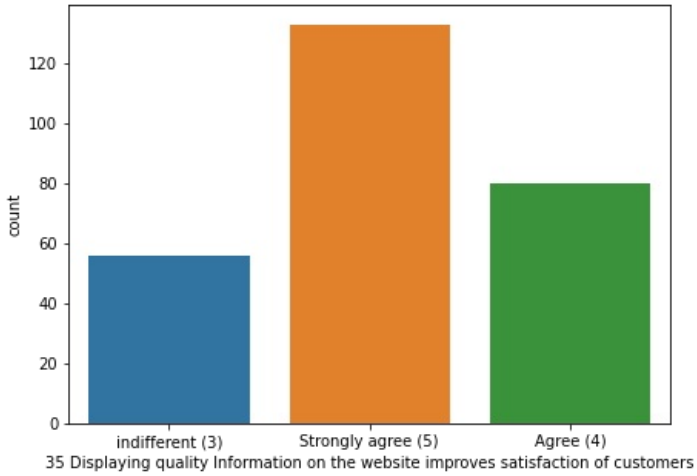
```
Strongly agree (5)    198
Agree (4)              51
Dis-agree (2)          20
Name: 33 Return and replacement policy of the e-tailer is important for purchase decision, dtype: int64
```



Max people are strongly agree on the Return and replacement policy of the e-tailer is important for purchase decision

In [145…
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='35 Displaying quality Information on the website improves satisfaction of customers',data =
print(data['35 Displaying quality Information on the website improves satisfaction of customers'].value_counts())
```

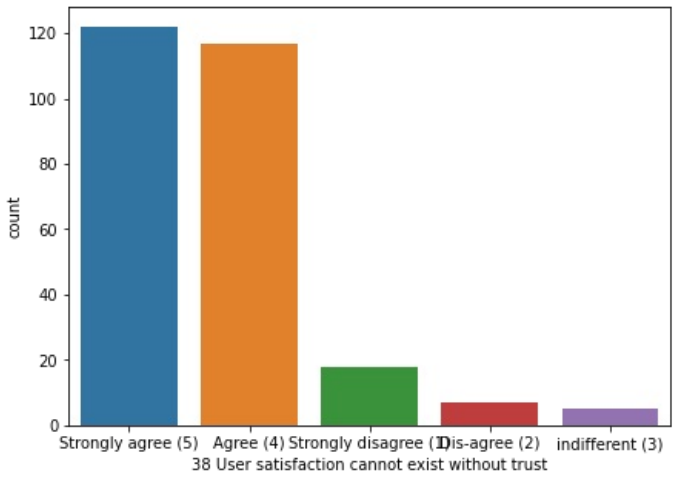
```
Strongly agree (5)    133
Agree (4)              80
indifferent (3)        56
Name: 35 Displaying quality Information on the website improves satisfaction of customers, dtype: int64
```



Satisfaction is the most important function in the terms of any buisness to satisfied the customer and hence Max people in the data are Strongly agree in Displaying quality Information on the website improves satisfaction of customers

In [114…
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='38 User satisfaction cannot exist without trust',data = data)
print(data['38 User satisfaction cannot exist without trust'].value_counts())
```

```
Strongly agree (5)       122
Agree (4)                117
Strongly disagree (1)     18
Dis-agree (2)              7
indifferent (3)            5
Name: 38 User satisfaction cannot exist without trust, dtype: int64
```

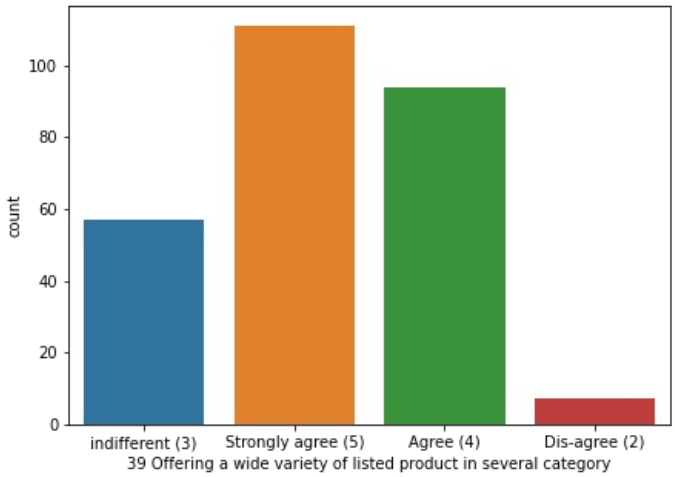


A lot of people Thinks and its also a fact tht the people whio are strongly agree about that User satisfaction cannot exist without trust

In [115…
```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='39 Offering a wide variety of listed product in several category',data = data)
print(data['39 Offering a wide variety of listed product in several category'].value_counts())
```

```
Strongly agree (5)    111
Agree (4)              94
indifferent (3)        57
```

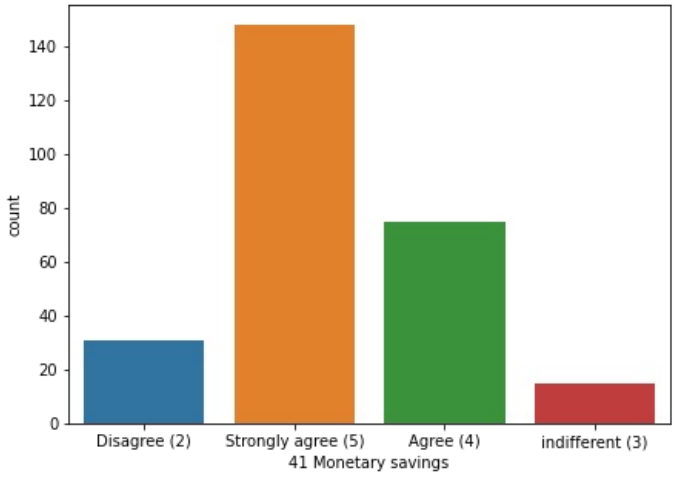
```
Dis-agree (2)          7
Name: 39 Offering a wide variety of listed product in several category, dtype: int64
```



In [116…

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='41 Monetary savings',data = data)
print(data['41 Monetary savings'].value_counts())
```

```
Strongly agree (5)    148
Agree (4)              75
Disagree (2)           31
indifferent (3)        15
Name: 41 Monetary savings, dtype: int64
```

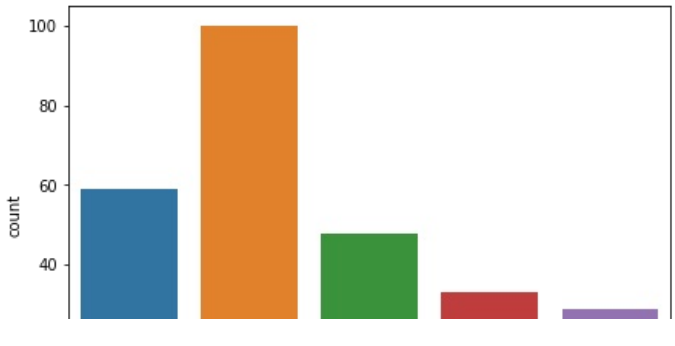


Max people thinks that online shoppimg is a Monetary savings

In [117…

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='44 Shopping on your preferred e-tailer enhances your social status',data = data)
print(data['44 Shopping on your preferred e-tailer enhances your social status'].value_counts())
```

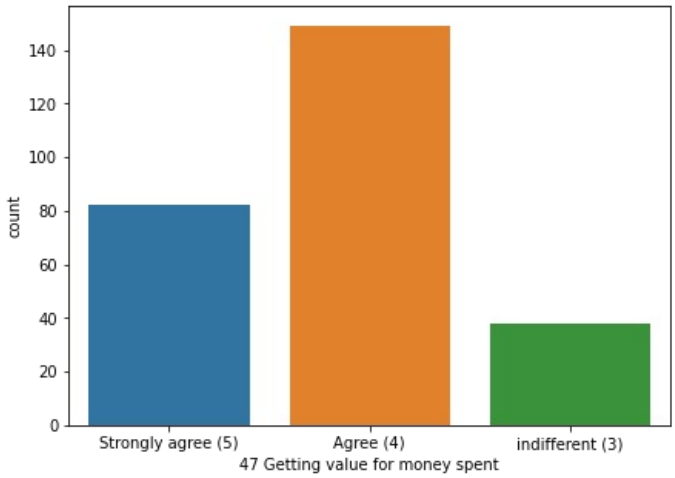
```
indifferent (3)          100
Agree (4)                 59
Strongly agree (5)        48
Strongly disagree (1)     33
Dis-agree (2)             29
Name: 44 Shopping on your preferred e-tailer enhances your social status, dtype: int64
```



In [118…

```
plt.figure(figsize=(7,5))
ax= sns.countplot(x='47 Getting value for money spent',data = data)
print(data['47 Getting value for money spent'].value_counts())
```

```
Agree (4)             149
Strongly agree (5)     82
indifferent (3)        38
Name: 47 Getting value for money spent, dtype: int64
```

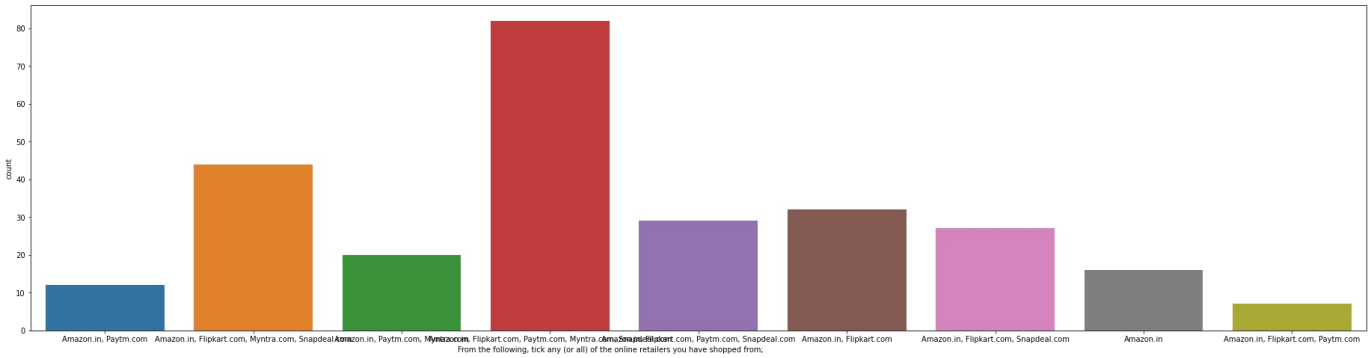


Max people are Agree that they are Getting value for money spent

In [120…

```
plt.figure(figsize=(32,8))
ax= sns.countplot(x='From the following, tick any (or all) of the online retailers you have shopped from;
print(data['From the following, tick any (or all) of the online retailers you have shopped from;
```

```
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com    82
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com               44
Amazon.in, Flipkart.com                                         32
Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com                29
Amazon.in, Flipkart.com, Snapdeal.com                           27
Amazon.in, Paytm.com, Myntra.com                                20
Amazon.in                                                       16
Amazon.in, Paytm.com                                            12
Amazon.in, Flipkart.com, Paytm.com                               7
Name: From the following, tick any (or all) of the online retailers you have shopped from;
, dtype: int64
```

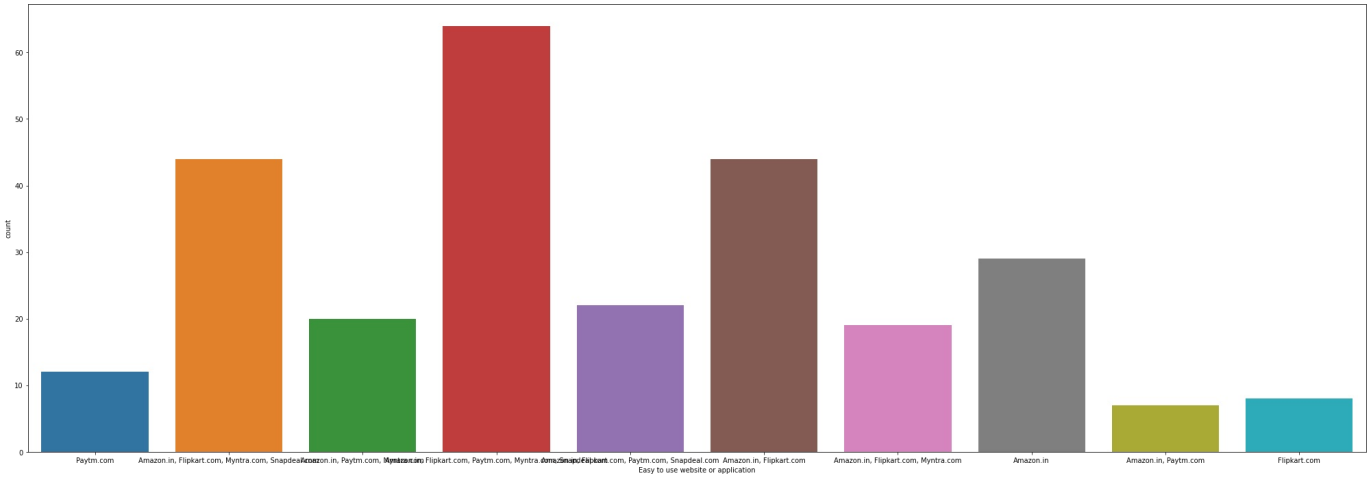


Maximum people are those who ticks on the online retailers they have shopped from Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com

In [121…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Easy to use website or application',data = data)
print(data['Easy to use website or application'].value_counts())
```

```
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com    64
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com               44
Amazon.in, Flipkart.com                                         44
Amazon.in                                                       29
Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com                22
Amazon.in, Paytm.com, Myntra.com                                20
Amazon.in, Flipkart.com, Myntra.com                             19
Paytm.com                                                       12
Flipkart.com                                                     8
Amazon.in, Paytm.com                                             7
Name: Easy to use website or application, dtype: int64
```

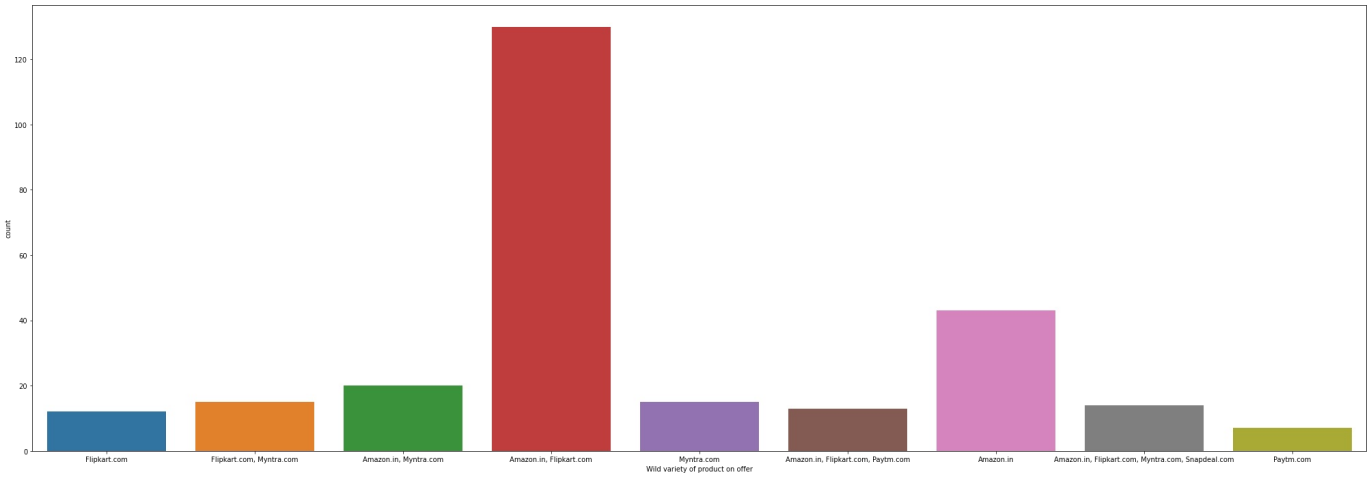


MAx people said that they feel easy to use all website or applications

In [122…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Wild variety of product on offer',data = data)
print(data['Wild variety of product on offer'].value_counts())
```

```
Amazon.in, Flipkart.com                             130
Amazon.in                                            43
Amazon.in, Myntra.com                                20
Flipkart.com, Myntra.com                             15
Myntra.com                                           15
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com    14
Amazon.in, Flipkart.com, Paytm.com                   13
Flipkart.com                                         12
Paytm.com                                             7
Name: Wild variety of product on offer, dtype: int64
```



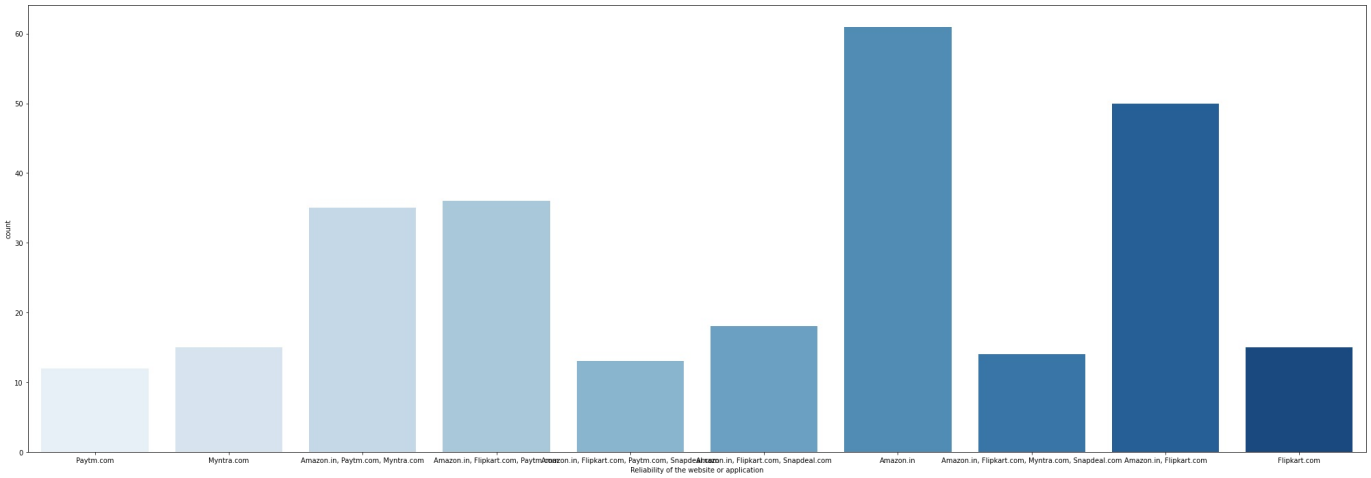
Max people gives suggestions that there are a wide vaiety of products on offer on Amazon.in, Flipkart.com

In [153…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Reliability of the website or application',data = data,palette = 'Blues')
print(data['Reliability of the website or application'].value_counts())
```

```
Amazon.in                                   61
Amazon.in, Flipkart.com                     50
Amazon.in, Flipkart.com, Paytm.com          36
Amazon.in, Paytm.com, Myntra.com            35
Amazon.in, Flipkart.com, Snapdeal.com       18
```

```
Myntra.com                                          15
Flipkart.com                                        15
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com   14
Amazon.in, Flipkart.com, Paytm.com, Snapdeal.com    13
Paytm.com                                           12
Name: Reliability of the website or application, dtype: int64
```

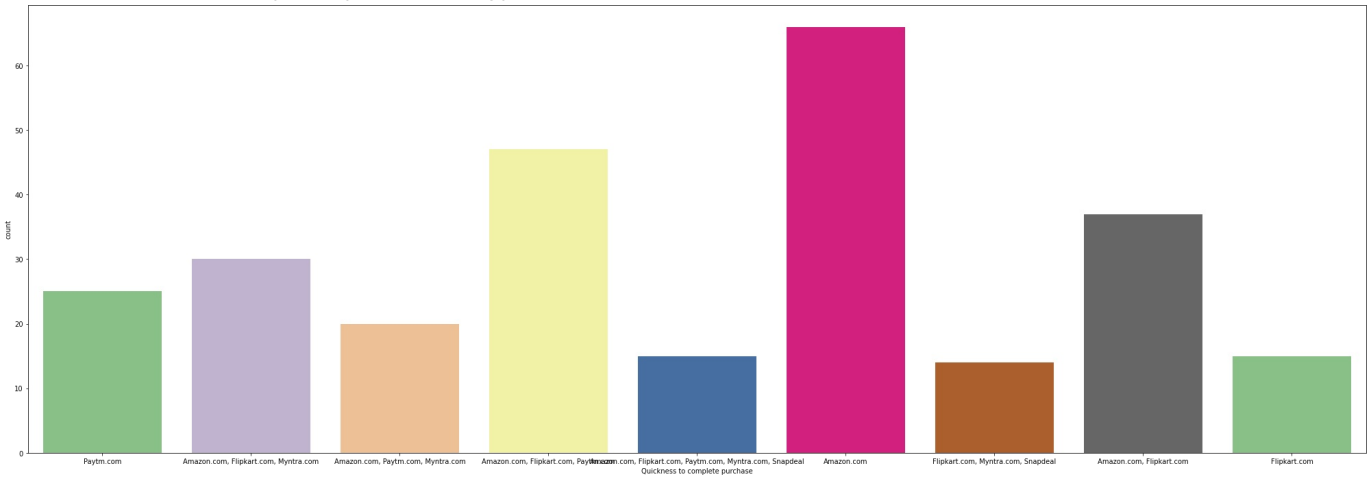


MAX people thinks that Amazon and flipkart are the most Reliable website or application

In [152…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Quickness to complete purchase',data = data,palette = 'Accent')
print(data['Quickness to complete purchase'].value_counts())
```

```
Amazon.com                                                66
Amazon.com, Flipkart.com, Paytm.com                       47
Amazon.com, Flipkart.com                                  37
Amazon.com, Flipkart.com, Myntra.com                      30
Paytm.com                                                 25
Amazon.com, Paytm.com, Myntra.com                         20
Amazon.com, Flipkart.com, Paytm.com, Myntra.com, Snapdeal 15
Flipkart.com                                              15
Flipkart.com, Myntra.com, Snapdeal                        14
Name: Quickness to complete purchase, dtype: int64
```

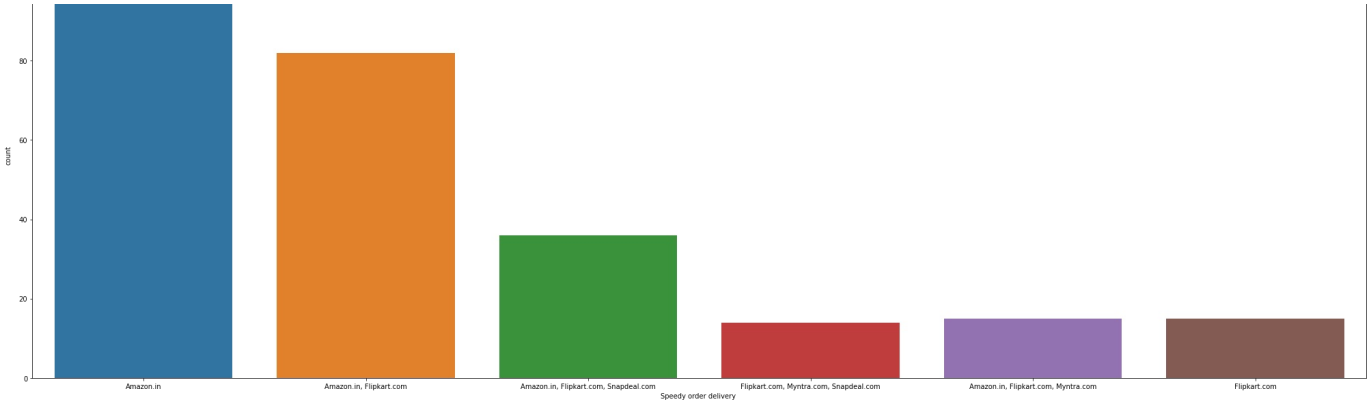


Amazon.com e-store is the Quicker store to complete purchase by max people

In [125…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Speedy order delivery ',data = data)
print(data['Speedy order delivery '].value_counts())
```

```
Amazon.in                                107
Amazon.in, Flipkart.com                   82
Amazon.in, Flipkart.com, Snapdeal.com     36
Amazon.in, Flipkart.com, Myntra.com       15
Flipkart.com                              15
Flipkart.com, Myntra.com, Snapdeal.com    14
Name: Speedy order delivery , dtype: int64
```

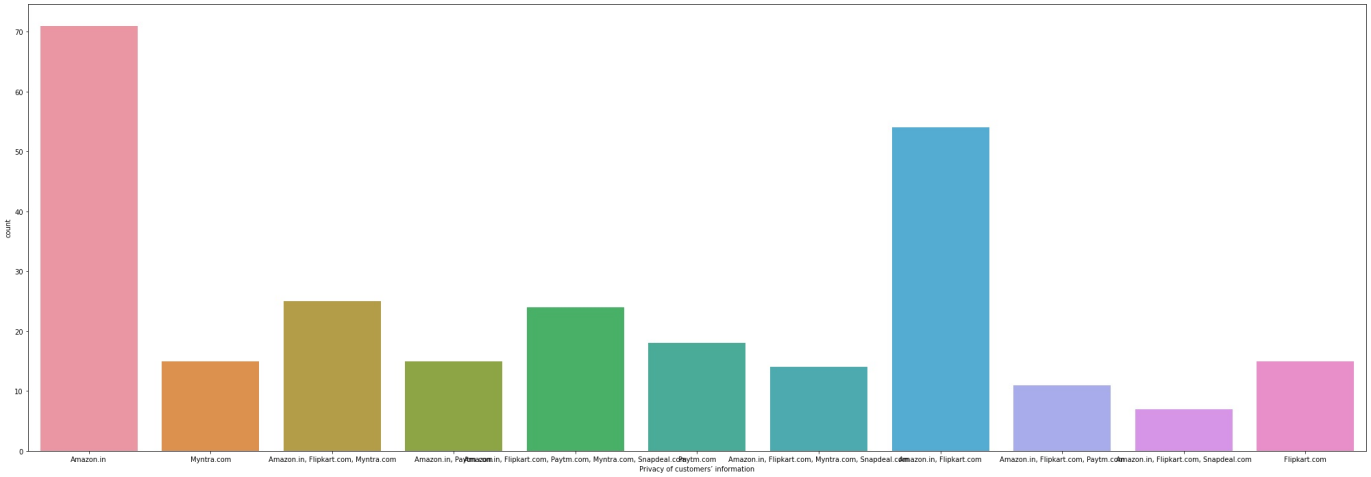


A lot of people htinks that amzon is the superfast in the terms of deleivering our products

In [126…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Privacy of customers’ information',data = data)
print(data['Privacy of customers’ information'].value_counts())
```

```
Amazon.in                                                  71
Amazon.in, Flipkart.com                                    54
Amazon.in, Flipkart.com, Myntra.com                        25
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com    24
Paytm.com                                                  18
Myntra.com                                                 15
Amazon.in, Paytm.com                                       15
Flipkart.com                                               15
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com          14
Amazon.in, Flipkart.com, Paytm.com                         11
Amazon.in, Flipkart.com, Snapdeal.com                       7
Name: Privacy of customers’ information, dtype: int64
```

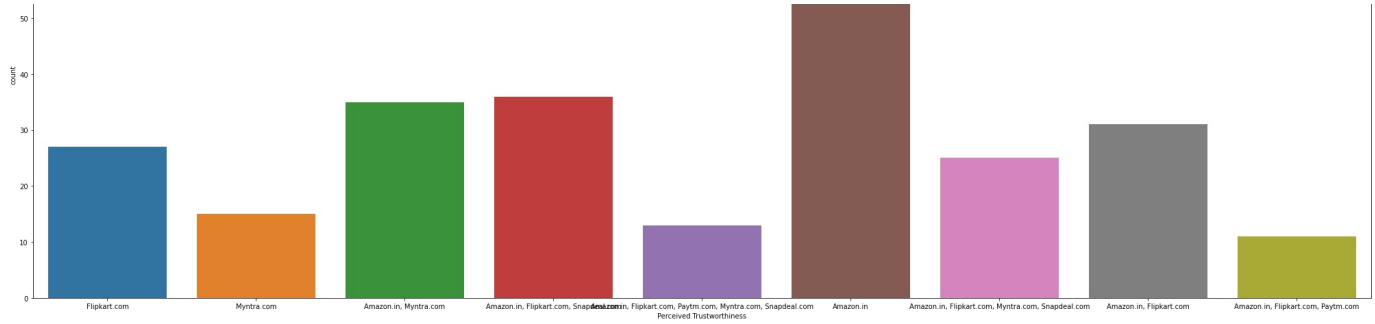


Amazon gives Privacy of customers’ information maximum

In [127…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Perceived Trustworthiness',data = data)
print(data['Perceived Trustworthiness'].value_counts())
```

```
Amazon.in                                                  76
Amazon.in, Flipkart.com, Snapdeal.com                      36
Amazon.in, Myntra.com                                      35
Amazon.in, Flipkart.com                                    31
Flipkart.com                                               27
Amazon.in, Flipkart.com, Myntra.com, Snapdeal.com          25
Myntra.com                                                 15
Amazon.in, Flipkart.com, Paytm.com, Myntra.com, Snapdeal.com    13
Amazon.in, Flipkart.com, Paytm.com                         11
Name: Perceived Trustworthiness, dtype: int64
```

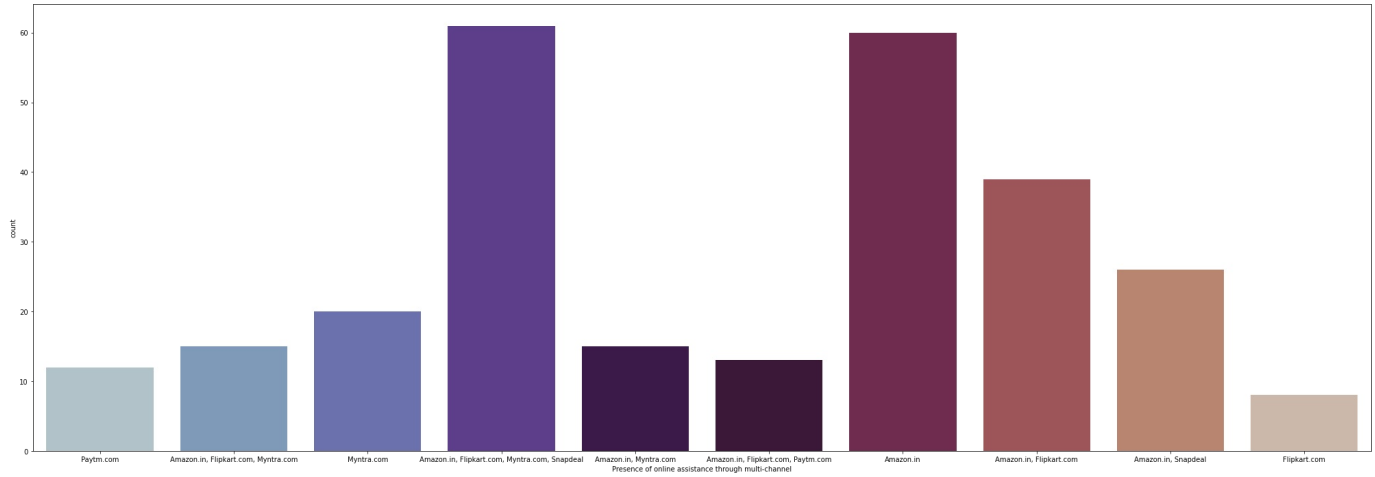


Amazon Perceived Trustworthiness from the customers as they thinks it is most trustworthy website or application

In [148…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Presence of online assistance through multi-channel',data = data,palette = 'twilight')
print(data['Presence of online assistance through multi-channel'].value_counts())
```

```
Amazon.in, Flipkart.com, Myntra.com, Snapdeal    61
Amazon.in                                        60
Amazon.in, Flipkart.com                          39
Amazon.in, Snapdeal                              26
Myntra.com                                       20
Amazon.in, Flipkart.com, Myntra.com              15
Amazon.in, Myntra.com                            15
Amazon.in, Flipkart.com, Paytm.com               13
Paytm.com                                        12
Flipkart.com                                      8
Name: Presence of online assistance through multi-channel, dtype: int64
```

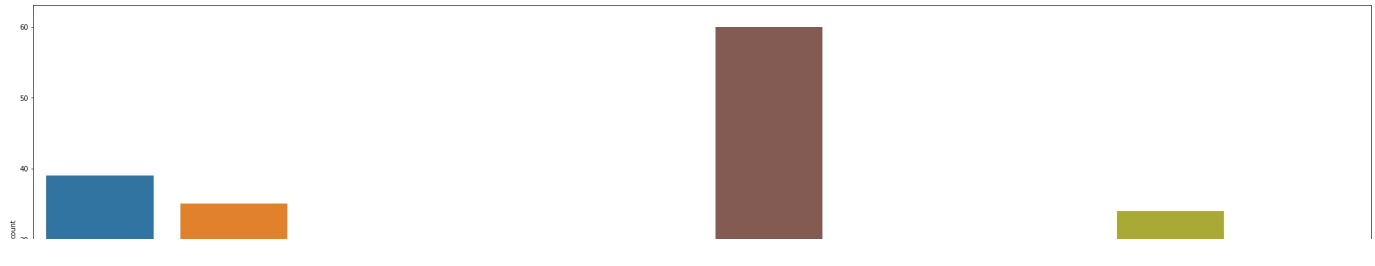


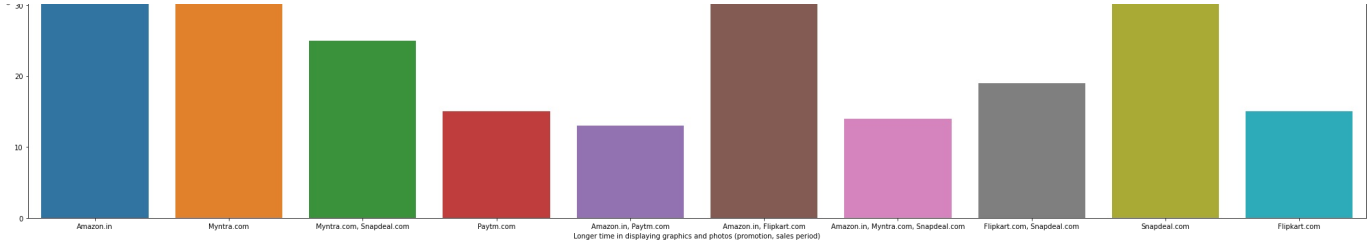
max people suggests that Amazon.in, Flipkart.com, Myntra.com, Snapdeal e -store has online assistance through multi-channel

In [129…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Longer time in displaying graphics and photos (promotion, sales period)',data = data)
print(data['Longer time in displaying graphics and photos (promotion, sales period)'].value_counts())
```

```
Amazon.in, Flipkart.com                60
Amazon.in                              39
Myntra.com                             35
Snapdeal.com                           34
Myntra.com, Snapdeal.com               25
Flipkart.com, Snapdeal.com             19
Paytm.com                              15
Flipkart.com                           15
Amazon.in, Myntra.com, Snapdeal.com    14
Amazon.in, Paytm.com                   13
Name: Longer time in displaying graphics and photos (promotion, sales period), dtype: int64
```



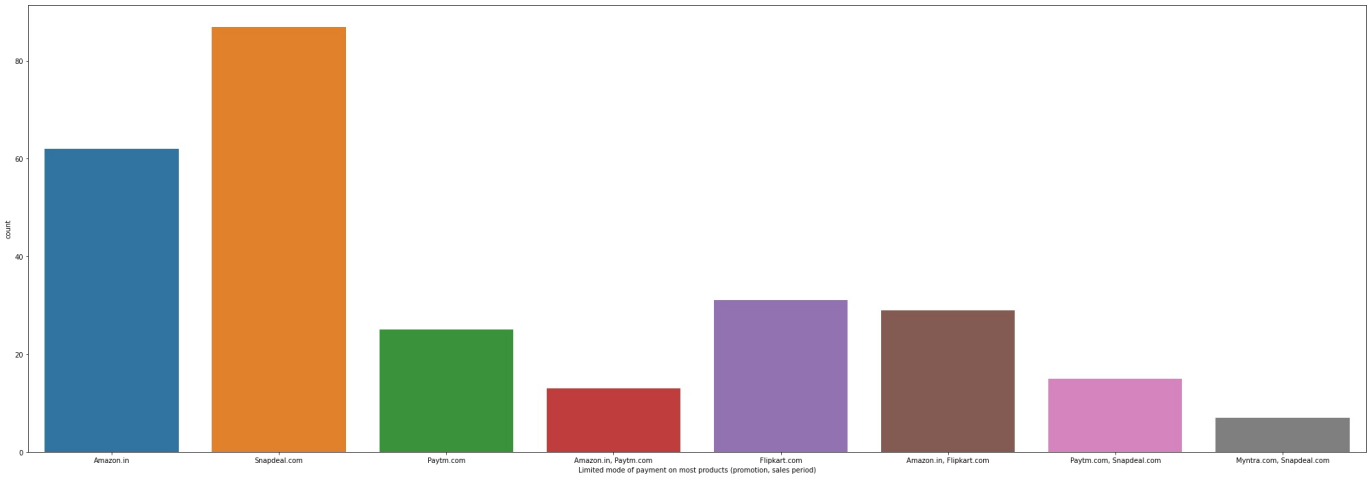


Amazon.in, Flipkart.com have Longer time in displaying graphics and photos (promotion, sales period

In [130…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Limited mode of payment on most products (promotion, sales period)',data = data)
print(data['Limited mode of payment on most products (promotion, sales period)'].value_counts())
```

```
Snapdeal.com                87
Amazon.in                   62
Flipkart.com                31
Amazon.in, Flipkart.com     29
Paytm.com                   25
Paytm.com, Snapdeal.com     15
Amazon.in, Paytm.com        13
Myntra.com, Snapdeal.com     7
Name: Limited mode of payment on most products (promotion, sales period), dtype: int64
```

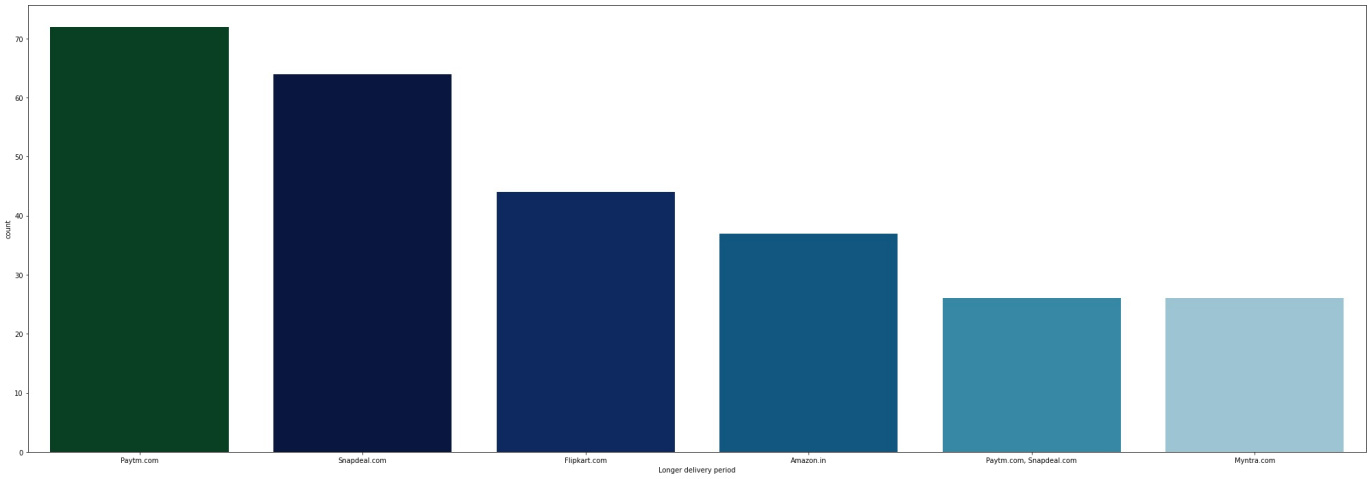


Max customers suggests that Snapdeal.com have Limited mode of payment on most products (promotion, sales period)

In [147…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Longer delivery period',data = data,palette = 'ocean')
print(data['Longer delivery period'].value_counts())
```

```
Paytm.com                   72
Snapdeal.com                64
Flipkart.com                44
Amazon.in                   37
Paytm.com, Snapdeal.com     26
Myntra.com                  26
Name: Longer delivery period, dtype: int64
```

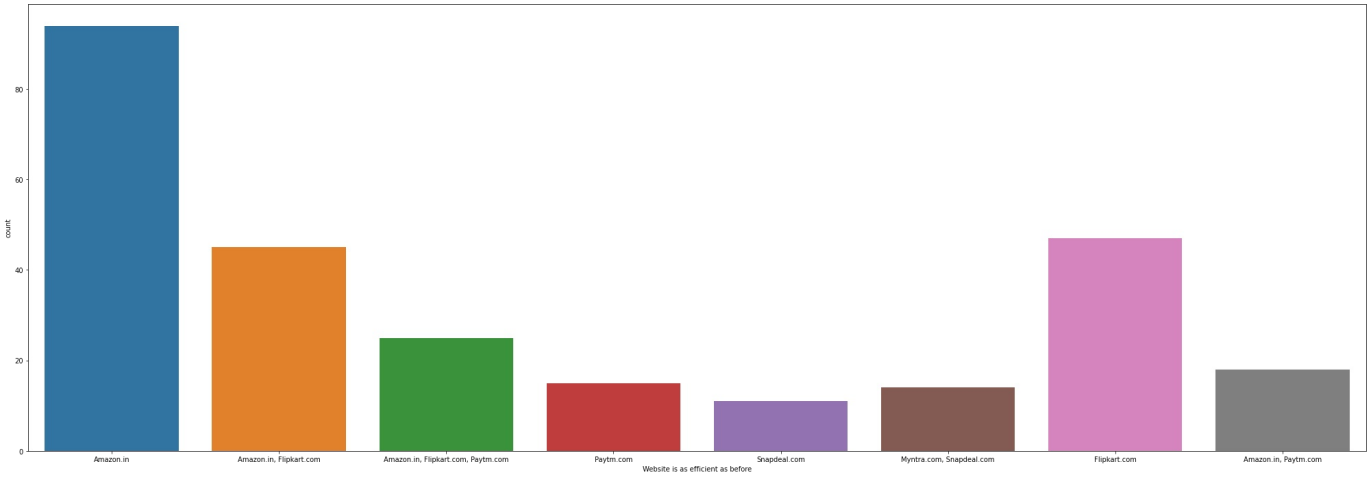


Paytm.com gives Longer delivery period as max customer suggest whereas Myntra.com have very less longer period

In [132…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Website is as efficient as before',data = data)
print(data['Website is as efficient as before'].value_counts())
```

```
Amazon.in                              94
Flipkart.com                           47
Amazon.in, Flipkart.com                45
Amazon.in, Flipkart.com, Paytm.com     25
Amazon.in, Paytm.com                   18
Paytm.com                              15
Myntra.com, Snapdeal.com               14
Snapdeal.com                           11
Name: Website is as efficient as before, dtype: int64
```

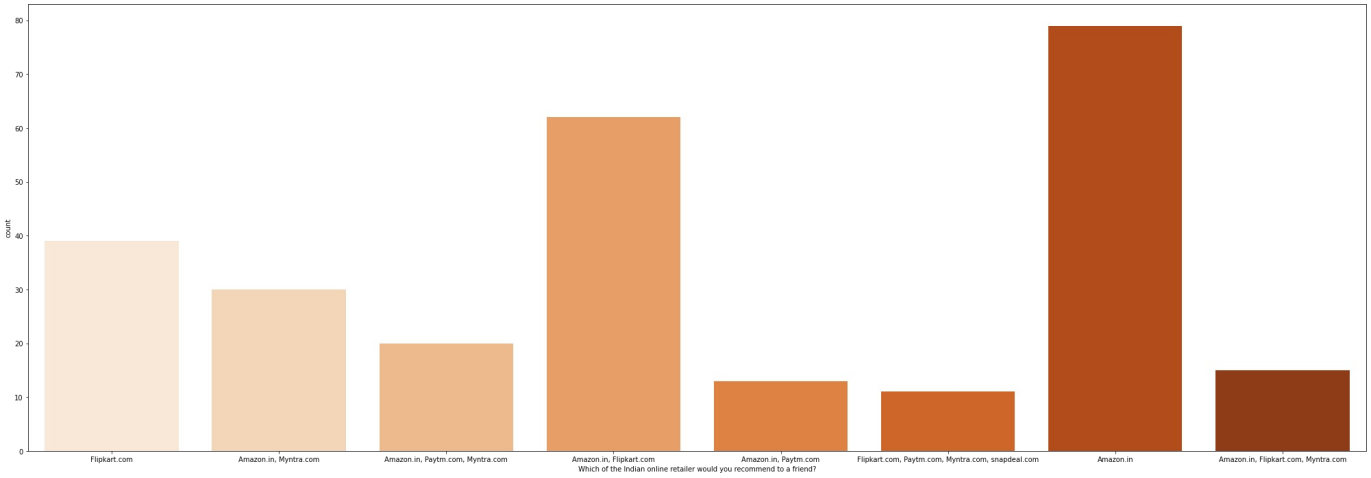


Max customers thinks that Amazon.in is the Website is as efficient as before

In [151…

```
plt.figure(figsize=(35,12))
ax= sns.countplot(x='Which of the Indian online retailer would you recommend to a friend?',data = data,palette =
print(data['Which of the Indian online retailer would you recommend to a friend?'].value_counts())
```

```
Amazon.in                                          79
Amazon.in, Flipkart.com                            62
Flipkart.com                                       39
Amazon.in, Myntra.com                              30
Amazon.in, Paytm.com, Myntra.com                   20
Amazon.in, Flipkart.com, Myntra.com                15
Amazon.in, Paytm.com                               13
Flipkart.com, Paytm.com, Myntra.com, snapdeal.com  11
Name: Which of the Indian online retailer would you recommend to a friend?, dtype: int64
```



AS the above analysis from the customers feedback it clearly gives that the Amazon is the best online store however Flipkart also have

good reviews from the customers feedback but the Amazon is on the Top of the list in every categories

BUt Amazon is the Foreign retailer, if i want to suggest an Indian retailer to my friend so I ll suggest Flipkart.com because it is an Indian as well as it have also best reviews(nearly equals as amazon) from the dataset