

In [1]:

```
import requests
from bs4 import BeautifulSoup
```

In [2]:

```
url='https://www.amazon.in/Google-Pixel-Black-128GB-Storage/dp/B08CFSZLQ4/ref=sr_1_1?dchild=1&keywords=pixel&qid=1626782918&sr=8-1'
url
```

Out[2]:

```
'https://www.amazon.in/Google-Pixel-Black-128GB-Storage/dp/B08CFSZLQ4/ref=sr_1_1?dchild=1&keywords=pixel&qid=1626782918&sr=8-1'
```

In [3]:

```
5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/91.0.4472.1
```

In [4]:

```
cookie={}
```

In [5]:

```
def Searchasin(asin):
    url="https://www.amazon.in/dp/"+asin
    print(url)
    page=requests.get(url,cookies=cookie,headers=header)
    if page.status_code==200:
        return page
    else:
        return "Error"
```

In [6]:

```
def Searchreviews(review_link):
    url="https://www.amazon.in"+review_link
    print(url)
    page=requests.get(url,cookies=cookie,headers=header)
    if page.status_code==200:
        return page
    else:
        return "Error"
```

In [7]:

```
data_asin = url.split("/dp/")[1]
data_asin = data_asin.split("/")[0]
```

In [8]:

```
data_asin = [data_asin]
```

In [9]:

```
len(data_asin)
```

Out[9]:

1

In [10]:

```
link=[]
for i in range(len(data_asin)):
    response=Searchasin(data_asin[i])
    soup=BeautifulSoup(response.content)
    for i in soup.findAll("a",{ 'data-hook':"see-all-reviews-link-foot"}):
        link.append(i['href'])
```

<https://www.amazon.in/dp/B08CFSZLQ4> (<https://www.amazon.in/dp/B08CFSZLQ4>)

In [11]:

```
pages=50
```

In [12]:

```
time=[]
for j in range(1):
    for k in range(pages):
        response=Searchreviews(link[j]+'&pageNumber='+str(k))
        soup=BeautifulSoup(response.content)
        for i in soup.findAll("span",{ 'data-hook':"review-date"}):
            time.append(i.text)
```

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9)

<https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF>

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=10
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=11
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=12
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=13
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=14
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=15
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=16
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=17
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=18
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=19
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=20
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=21

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=22
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=23
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=24
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=25
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=26
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=27
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=28
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=29
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=30
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=31
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=32
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=33
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=34

[illegible]

geNumber=46)
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=47 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=47)
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=48 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=48)
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=49 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=49)

In [13]:

```
print(len(time))  
print(time)
```

500

['Reviewed in India on 27 October 2020', 'Reviewed in India on 23 October 2020', 'Reviewed in India on 25 October 2020', 'Reviewed in India on 14 April 2021', 'Reviewed in India on 20 December 2020', 'Reviewed in India on 29 December 2020', 'Reviewed in India on 1 March 2021', 'Reviewed in India on 10 April 2021', 'Reviewed in India on 30 June 2021', 'Reviewed in India on 14 September 2021', 'Reviewed in India on 27 October 2020', 'Reviewed in India on 23 October 2020', 'Reviewed in India on 25 October 2020', 'Reviewed in India on 14 April 2021', 'Reviewed in India on 20 December 2020', 'Reviewed in India on 29 December 2020', 'Reviewed in India on 1 March 2021', 'Reviewed in India on 10 April 2021', 'Reviewed in India on 30 June 2021', 'Reviewed in India on 14 September 2021', 'Reviewed in India on 11 January 2022', 'Reviewed in India on 11 May 2021', 'Reviewed in India on 28 December 2020', 'Reviewed in India on 28 November 2020', 'Reviewed in India on 6 September 2021', 'Reviewed in India on 20 November 2020', 'Reviewed in India on 22 March 2021', 'Reviewed in India on 15 May 2021', 'Reviewed in India on 14 November 2021', 'Reviewed in India on 19 January 2022', 'Reviewed in India on 4 March 2022', 'Reviewed in India on 18 December 2021', 'Reviewed in India on 19 April 2022', 'Reviewed in India on 29 July 2021', 'Reviewed in India on 1 March 2021', 'Reviewed in India on 27 April 2021']

In [14]:

```
names=[]
for j in range(1):
    for k in range(5):
        response=Searchreviews(link[j]+'&pageNumber='+str(k))
        soup=BeautifulSoup(response.content)
        for i in soup.find_all("span",class_='a-profile-name'):
            names.append(i.text)
```

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4)

In [15]:

```
cust_name=[]
for i in range(0,len(names)):
    cust_name.append(names[i])
cust_name
```

Out[15]:

```
['Nitish Raj',
 'Amazon Customer',
 'Nitish Raj',
 'Nitish Raj',
 'Richa',
 'Samruddhi',
 'Samruddhi',
 'Yuvraj',
 'Amazon Customer',
 'Rahul Moghe',
 'Sooraj',
 'Eswar',
 'Lakshmikanth C K',
 'Tridha Infosolutions & Resources Pvt Ltd',
 'Nitish Raj',
 'Amazon Customer',
 'Nitish Raj',
 'Nitish Raj',
 'Richa',
 'Samruddhi',
 'Samruddhi',
 'Yuvraj',
 'Amazon Customer',
 'Rahul Moghe',
 'Sooraj',
 'Eswar',
 'Lakshmikanth C K',
 'Tridha Infosolutions & Resources Pvt Ltd',
 'Nitish Raj',
 'Amazon Customer',
 'shailaja',
 'Dhanda Vishal',
 'Sandeep Kumar jain',
 'Rudrapratap Roy',
 'bhavesh',
 'Saiswaran M.',
 'ARUN123',
 'Nitin S.',
 'Amazon Customer',
 'shruti joshi',
 'Nitish Raj',
 'Amazon Customer',
 'Harisundar',
 'Sanu',
 'Screcko',
 'Divya',
 'Padmaja',
 'Sreekanth Reddy',
 'vidya',
 'JOE ANTONY',
 'JOE ANTONY',
 'shubham',
 ^
```

```
'शिव सेना ',  
'Nitish Raj',  
'Amazon Customer',  
'Aditya Karnad',  
'Smital Naringrekar',  
'Smital Naringrekar',  
'Amazon Customer',  
'Lavanya',  
'Basil paul',  
'Basil paul',  
'KOMAL',  
'Gaurav kinra',  
'Nitesh Sutar',  
'shweta',  
'NETRA']
```

In [16]:

```
len(cust_name)
```

Out[16]:

67

In [17]:

```
for j in range(0,6):  
    cust_name.pop(0)  
    cust_name.pop(0)  
print(cust_name)  
len(cust_name)
```

```
['Lakshmikanth C K', 'Tridha Infosolutions & Resources Pvt Ltd', 'Nitish Ra  
j', 'Amazon Customer', 'Nitish Raj', 'Nitish Raj', 'Richa', 'Samruddhi', 'Sa  
mruddhi', 'Yuvraj', 'Amazon Customer', 'Rahul Moghe', 'Sooraj', 'Eswar', 'La  
kshmikanth C K', 'Tridha Infosolutions & Resources Pvt Ltd', 'Nitish Raj',  
'Amazon Customer', 'shailaja', 'Dhanda Vishal', 'Sandeep Kumar jain', 'Rudra  
pratap Roy', 'bhavesh', 'Saiswaran M.', 'ARUN123', 'Nitin S.', 'Amazon Custo  
mer', 'shruti joshi', 'Nitish Raj', 'Amazon Customer', 'Harisundar', 'Sanu',  
'Screcko', 'Divya', 'Padmaja', 'Sreekanth Reddy', 'vidya', 'JOE ANTONY', 'JO  
E ANTONY', 'shubham', 'शिव सेना ', 'Nitish Raj', 'Amazon Customer', 'Aditya Ka  
rnad', 'Smital Naringrekar', 'Smital Naringrekar', 'Amazon Customer', 'Lavan  
ya', 'Basil paul', 'Basil paul', 'KOMAL', 'Gaurav kinra', 'Nitesh Sutar', 's  
hweta', 'NETRA']
```

Out[17]:

55

In [18]:

```
print(len(cust_name))  
print(cust_name)
```

55

```
['Lakshmikanth C K', 'Tridha Infosolutions & Resources Pvt Ltd', 'Nitish Raj', 'Amazon Customer', 'Nitish Raj', 'Nitish Raj', 'Richa', 'Samruddhi', 'Samruddhi', 'Yuvraj', 'Amazon Customer', 'Rahul Moghe', 'Sooraj', 'Eswar', 'Lakshmikanth C K', 'Tridha Infosolutions & Resources Pvt Ltd', 'Nitish Raj', 'Amazon Customer', 'shailaja', 'Dhanda Vishal', 'Sandeep Kumar jain', 'Rudra pratap Roy', 'bhavesh', 'Saiswaran M.', 'ARUN123', 'Nitin S.', 'Amazon Customer', 'shruti joshi', 'Nitish Raj', 'Amazon Customer', 'Harisundar', 'Sanu', 'Screcko', 'Divya', 'Padmaja', 'Sreekanth Reddy', 'vidya', 'JOE ANTONY', 'JOE ANTONY', 'shubham', 'शिव सेना', 'Nitish Raj', 'Amazon Customer', 'Aditya Karnad', 'Smital Naringrekar', 'Smital Naringrekar', 'Amazon Customer', 'Lavan ya', 'Basil paul', 'Basil paul', 'KOMAL', 'Gaurav kinra', 'Nitesh Sutar', 'shweta', 'NETRA']
```

In [19]:

```
title=[]
for j in range(1):
    for k in range(pages):
        response=Searchreviews(link[j]+'&pageNumber='+str(k))
        soup=BeautifulSoup(response.content)
        for i in soup.findAll("a",{ 'data-hook':"review-title"}):
            title.append(i.text)
```

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9)

<https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF>

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=10
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=11
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=12
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=13
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=14
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=15
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=16
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=17
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=18
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=19
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=20
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=21

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=22
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=23
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=24
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=25
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=26
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=27
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=28
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=29
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=30
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=31
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=32
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=33
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=34

[illegible]

```
geNumber=46)
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF
SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumbe
r=47 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-review
s/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pa
geNumber=47)
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF
SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumbe
r=48 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-review
s/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pa
geNumber=48)
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF
SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumbe
r=49 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-review
s/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pa
geNumber=49)
```

In [20]:

```
review_title=[]
for i in range(0,len(title)):
    review_title.append(title[i])
review_title[:]=[titles.lstrip('\n') for titles in review_title]
review_title[:]=[titles.rstrip('\n') for titles in review_title]
review_title

'Good phone',
'Good smartphone in smooth operation',
'Very dissapointed',
'Everything is great except for battery life. Battery life is average.',
'Voice Echo Problem - Useless Phone',
'It's a great Phone, good camera abs and smooth working",
'Difficult to find customer care service, product quantity is so bad ...n
ot recommended to buy',
'It hangs ai',
'Good product but overpriced',
'Google keeps crashing',
'Good...got a genuine product.',
'Photo quality good',
'Value for money',
'Awesome phone',
'Wroth of money',
'Love it!!',

'No nonsense PhOnE',
'Battery tutti',
'Pick the call'
```

In [21]:

```
reviews=[]
for j in range(1):
    for k in range(pages):
        response=Searchreviews(link[j]+'&pageNumber='+str(k))
        soup=BeautifulSoup(response.content)
        for i in soup.findAll("span",{ 'data-hook':"review-body"}):
            reviews.append(i.text)
```

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9)

<https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF>

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=10
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=11
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=12
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=13
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=14
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=15
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=16
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=17
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=18
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=19
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=20
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=21

[illegible]

[illegible]

In [24]:

```
ratings=[]
for j in range(1):
    for k in range(pages):
        response=Searchreviews(link[j]+'&pageNumber='+str(k))
        soup=BeautifulSoup(response.content)
        for i in soup.findAll("i",{ 'data-hook':"review-star-rating"}):
            ratings.append(i.text)
```

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9)

<https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF>

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=10
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=11
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=12
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=13
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=14
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=15
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=16
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=17
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=18
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=19
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=20
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=21

[illegible]

[illegible]

```
geNumber=46)
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF
SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumbe
r=47 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-review
s/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pa
geNumber=47)
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF
SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumbe
r=48 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-review
s/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pa
geNumber=48)
https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF
SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumbe
r=49 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-review
s/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pa
geNumber=49)
```

In [25]:

```
rating=[]
for i in range(len(ratings)):
    rating.append(int(float(ratings[i].split(" ")[0])))
```

In [26]:

```
len(rating)
```

Out[26]:

125

In [27]:

```
upvotes=[]
for j in range(1):
    for k in range(10):
        response=Searchreviews(link[j]+'&pageNumber='+str(k))
        soup=BeautifulSoup(response.content)
        for i in soup.findAll("span",{ 'data-hook': "helpful-vote-statement"}):
            upvotes.append(i.text)
```

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=0)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=1)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=2)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=3)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=4)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=5)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=6)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=7)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=8)

https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CF SZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9 (https://www.amazon.in/Google-Pixel-Black-128GB-Storage/product-reviews/B08CFSZLQ4/ref=cm_cr_dp_d_show_all_btm?ie=UTF8&reviewerType=all_reviews&pageNumber=9)

In [28]:

```
len(upvotes)
```

Out[28]:

61

In [29]:

```
import pandas as pd
rev = {'TimeStamp':time,'ReviewTitle':review_title,'review':review,'ratings':rating}
data = pd.DataFrame.from_dict(rev,orient='index')
df=data.transpose()
```

In [30]:

```
df.head()
```

Out[30]:

	TimeStamp	ReviewTitle	review	ratings
0	Reviewed in India on 27 October 2020	Peerless camera, superb design	The media could not be loa...	5
1	Reviewed in India on 23 October 2020	Loved it!	What a brilliant phone...! Only screen size is...	5
2	Reviewed in India on 25 October 2020	If you're looking for a good android phone , i...	Did not recieved warranty card with this . It'...	4
3	Reviewed in India on 14 April 2021	Please don't buy this phone from Global Trader...	Based on my experience i would request you not...	4
4	Reviewed in India on 20 December 2020	Delivery asap, product has display issues	Delivery - on timeProduct quality - received o...	1

In [31]:

```
import pandas as pd
import numpy as np
import spacy
import string
import seaborn as sns
from nltk import PorterStemmer
from matplotlib.pyplot import imread
from matplotlib import pyplot as plt

from nltk.corpus import stopwords
%matplotlib inline
import re
from textblob import TextBlob
```

In [32]:

```
import nltk
nltk.download('stopwords')
```

```
[nltk_data] Downloading package stopwords to C:\Users\sowmya
[nltk_data]       sandeep\AppData\Roaming\nltk_data...
[nltk_data]   Package stopwords is already up-to-date!
```

Out[32]:

True

In [33]:

```
def deEmojify(inputString):
    return inputString.encode('ascii', 'ignore').decode('ascii')
```

In [34]:

```
STOPWORDS=stopwords.words("english")
```

In [35]:

```
def clean_text(text):
    ps=PorterStemmer()

    text=deEmojify(text) # remove emojis
    text_cleaned="".join([x for x in text if x not in string.punctuation]) # remove punctuation

    text_cleaned=re.sub(' +', ' ', text_cleaned) # remove extra white spaces
    text_cleaned=text_cleaned.lower() # converting to lowercase
    tokens=text_cleaned.split(" ")
    tokens=[token for token in tokens if token not in STOPWORDS] # Taking only those words
    text_cleaned=" ".join([ps.stem(token) for token in tokens])

    return text_cleaned
```

In [36]:

```
df['cleaned_reviews']=df['review'].apply(lambda x:clean_text(x))
```

In [37]:

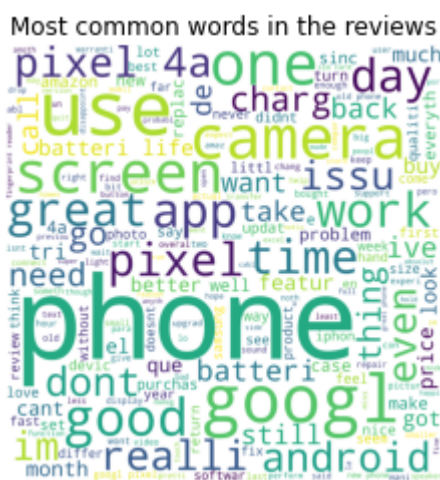
```
df.sample(5)
```

Out[37]:

	TimeStamp	ReviewTitle	review	ratings	cleaned_reviews
54	Reviewed in India on 26 February 2022	Average mobile	Liked screen responsiveness and small form fac...	3	like screen respons small form factor gui good...
356	Reviewed in the United States on 4 December 2020	None	CONS:My main gripe is this phone feels like go...	None	consmi main gripe phone feel like googl drop b...
427	Reviewed in the United States on 24 September ...	None	The pixel 4a is a sleek, modern looking phone ...	None	pixel 4a sleek modern look phone larg bezel mi...
429	Reviewed in the United States on 21 April 2021	None	This is my second Pixel phone, I bought this t...	None	second pixel phone bought replac 3a get memori...
180	Reviewed in Mexico on 16 November 2020	None	Dejo de conectarse a las redes móviles después...	None	dejo de conectars la rede mvile despu de la ac...

In [39]:

```
from wordcloud import WordCloud
wordcloud = WordCloud(height=3000, width=3000, background_color='white')
wordcloud = wordcloud.generate(' '.join(df['cleaned_reviews'].tolist()))
plt.imshow(wordcloud)
plt.title("Most common words in the reviews")
plt.axis('off')
plt.show()
```



In [40]:

```
def getSubjectivity(text):
    return TextBlob(text).sentiment.subjectivity
```

In [41]:

```
def getPolarity(text):  
    return TextBlob(text).sentiment.polarity
```

In [42]:

```
df['Subjectivity']=pd.DataFrame(df.review.apply(lambda x: getSubjectivity(x)))
```

In [43]:

```
df['Polarity']=pd.DataFrame(df.review.apply(lambda x: getPolarity(x)))
```

In [44]:

```
df.head()
```

Out[44]:

	TimeStamp	ReviewTitle	review	ratings	cleaned_reviews	Subjectivity	Polarity
0	Reviewed in India on 27 October 2020	Peerless camera, superb design	The media could not be loa...	5	media could loaded\n\n\nthe mobil light ...	0.735000	0.670000
1	Reviewed in India on 23 October 2020	Loved it!	What a brilliant phone...! Only screen size is...	5	brilliant phone screen size littl smaller xl p...	0.750000	0.203125
2	Reviewed in India on 25 October 2020	If you're looking for a good android phone , i...	Did not recieved warranty card with this . It'...	4	reciev warranti card 3 rd day im use mobil pho...	0.533333	0.602083
3	Reviewed in India on 14 April 2021	Please don't buy this phone from Global Trader...	Based on my experience i would request you not...	4	base experi would request buy product seller r...	0.237500	-0.062500
4	Reviewed in India on 20 December 2020	Delivery asap, product has display issues	Delivery - on timeProduct quality - received o...	1	deliveri timeproduct qualiti receiv one displa...	0.000000	0.000000

In [45]:

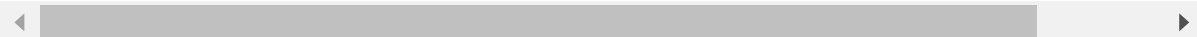
```
def sentiment_category(score):  
    if score >= 0.05:  
        return "positive"  
    elif score <= -0.05:  
        return "negative"  
    else:  
        return "neutral"
```

In [46]:

```
df['review_category']=df['Polarity'].apply(lambda x:sentiment_category(x))
df.sample(5)
```

Out[46]:

	TimeStamp	ReviewTitle	review	ratings	cleaned_reviews	Subjectivity	Polarity	review_category
383	Reviewed in the United States on 20 October 2020	None	Phone glitched after just 2 moths of use.... A...	None	phone glitch 2 moth use black screen error mes...	0.572576	-0.341061	negative
340	Reviewed in the United States on 8 December 2020	None	This is my second smart phone. Fingerprint doe...	None	second smart phone fingerprint doesnt work fac...	0.392163	-0.040437	neutral
28	Reviewed in India on 14 November 2021	Pathetic service within warranty period	First of all, Google Pixel4a is not water resi...	2	first googl pixel4a water resistantin fact ext...	0.486777	0.066942	negative
74	Reviewed in India on 4 January 2022	Good	Value for money	3	valu money	0.000000	0.000000	positive
203	Reviewed in Canada on 29 April 2021	None	Love it. Exactly as expected.	None	love exactli expect	0.500000	0.200000	positive



In [47]:

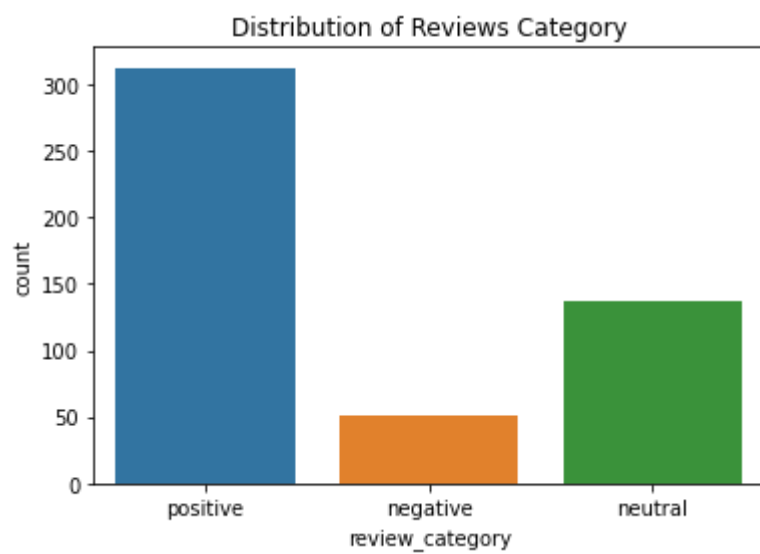
```
sns.countplot(df['review_category']).set_title("Distribution of Reviews Category")
```

C:\Users\sowmya sandeep\anaconda3\lib\site-packages\seaborn_decorators.py:36: FutureWarning: Pass the following variable as a keyword arg: x. From version 0.12, the only valid positional argument will be `data`, and passing other arguments without an explicit keyword will result in an error or misinterpretation.

```
warnings.warn(
```

Out[47]:

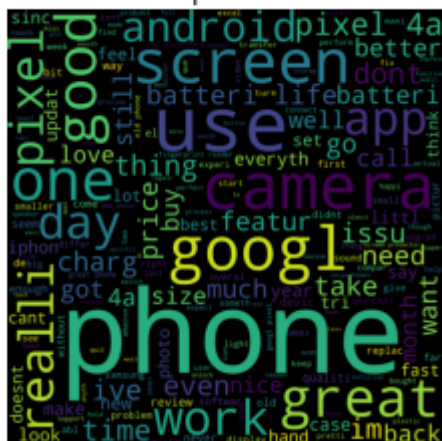
```
Text(0.5, 1.0, 'Distribution of Reviews Category')
```



In [48]:

```
#positive reviews wordcloud
wordcloud = WordCloud(height=2000, width=2000, background_color='black')
wordcloud = wordcloud.generate(' '.join(df.loc[df['review_category']=='positive', 'cleaned_r
plt.imshow(wordcloud)
plt.title("Most common words in positive customer comments")
plt.axis('off')
plt.show()
```

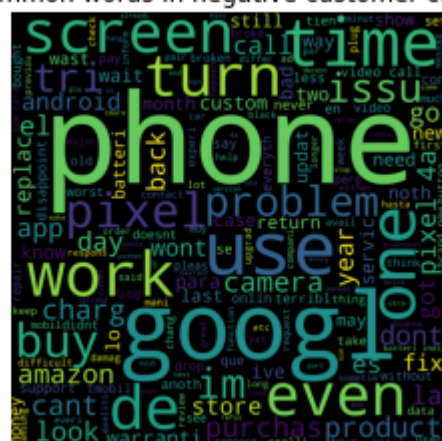
Most common words in positive customer comments



In [49]:

```
#negative reviews wordcloud
wordcloud = WordCloud(height=2000, width=2000, background_color='black')
wordcloud = wordcloud.generate(' '.join(df.loc[df['review_category']=='negative', 'cleaned_r
plt.imshow(wordcloud)
plt.title("Most common words in negative customer comments")
plt.axis('off')
plt.show()
```

Most common words in negative customer comments



In []:

