

```
In [94]: from selenium import webdriver

from selenium.webdriver.common.by import By
from selenium.webdriver.common.keys import Keys
from selenium.webdriver.chrome.service import Service
from selenium.webdriver.support.ui import WebDriverWait
from selenium.webdriver.support import expected_conditions as EC
import matplotlib.pyplot as plt
```

```
In [97]: driver = webdriver.Chrome(executable_path='C:\\Users\\Sumit\\.wdm\\drivers\\chromedr
driver
```

<ipython-input-97-fcee1684294e>:1: DeprecationWarning: executable\_path has been deprecated, please pass in a Service object

```
driver = webdriver.Chrome(executable_path='C:\\Users\\Sumit\\.wdm\\drivers\\chrome
driver\\win32\\95.0.4638.69\\chromedriver')
```

```
Out[97]: <selenium.webdriver.chrome.webdriver.WebDriver (session="39a62f09821da9f4b2a816b1992
72c78")>
```

```
In [98]: # open instagram page
driver.get("https://www.instagram.com/")
```

```
In [99]: # 1. fill username password and login
username = driver.find_element(By.NAME, "username")
password = driver.find_element(By.NAME, "password")
submit = driver.find_element(By.XPATH, '//*[@type="submit"]')
username.send_keys("sumitdimshu@gmail.com")
password.send_keys("arichwal")
submit.click()
```

```
In [101... # click Not now to not save the password in popup window
driver.implicitly_wait(10)
not_now_btn = driver.find_elements(By.XPATH, '//*[@type="button"]')
for i in not_now_btn:
    if i.text == 'Not Now':
        i.click()
        break
```

```
In [102... # 2. print search results of "food"
search_text = driver.find_element(By.XPATH, '//*[@aria-label="Search Input"]')
search_text.clear()
search_text.send_keys("food")
search_result = driver.find_elements(By.XPATH, '//*[@role="none"]/a')
links = []
for i in search_result[:11]:
    href_attribute = i.get_attribute("href")
    if "tags/" in href_attribute:
        continue
    print(i.get_attribute("href").split("/")[3])
    links.append(i.get_attribute("href"))
```

```
karnatakafoodadda
73.food_promo55
dulsefoodie
bangalore_food_girl
food_lunatic
```

food\_hippies95  
 food  
 foodie\_incarnate  
 bangalorefoodiee  
 food.darzee

In [103...

```
followers_dict = {}
for i in links:
    driver.get(i)
    driver.implicitly_wait(5)
    followers_e = driver.find_element(By.XPATH, '//a[contains(@href, "followers")] / spa
    followers = int(followers_e.get_attribute("title").replace(', ', ''))
    followers_dict[i] = followers
    print(followers)
```

14833  
 2692  
 948270  
 13556  
 125834  
 1789  
 153172  
 917196  
 57383  
 153534

In [104...

```
# 1.1 Top 5 handles by number of followers
followers_dict = {k: v for k, v in sorted(followers_dict.items(), key=lambda item: i
count = 0
for i in followers_dict.keys():
    if count>5:
        break
    print(i.split("/") [3], followers_dict[i])
    count+=1
```

dilsefoodie 948270  
 foodie\_incarnate 917196  
 food.darzee 153534  
 food 153172  
 food\_lunatic 125834  
 bangalorefoodiee 57383

In [105...

```
followers_dict
```

Out[105...

```
{'https://www.instagram.com/dilsefoodie/': 948270,
 'https://www.instagram.com/foodie_incarnate/': 917196,
 'https://www.instagram.com/food.darzee/': 153534,
 'https://www.instagram.com/food/': 153172,
 'https://www.instagram.com/food_lunatic/': 125834,
 'https://www.instagram.com/bangalorefoodiee/': 57383,
 'https://www.instagram.com/karnatakafoodadda/': 14833,
 'https://www.instagram.com/bangalore_food_girl/': 13556,
 'https://www.instagram.com/73.food_promo55/': 2692,
 'https://www.instagram.com/food_hippies95/': 1789}
```

In [ ]:

```
# 1.2 Now Find the number of posts these handles have done in the previous 3 days
count=0
words_dict = {}
for i in followers_dict.keys():
    if count==5:
        break
    driver.get(i)
    words_post_link_dict = {}
    words_dict[i] = words_post_link_dict
```

```

post_link_e = driver.find_elements(By.XPATH,"//a[contains(@href,'/p/')]")
post_links = []
for p in post_link_e[:10]:
    post_links.append(p.get_attribute("href"))
for p in post_links:
    driver.get(p)
    content = driver.find_element(By.XPATH,"//div[@class='C4VMK']")
    words_post_link_dict[p] = content.text
    count+=1
words_dict

```

In [38]:

```

#2.1 scrape the content of 5 handle's first 10 posts
count=0
words_dict = {}
for i in followers_dict.keys():
    if count==5:
        break
    driver.get(i)
    words_post_link_dict = {}
    words_dict[i] = words_post_link_dict
    post_link_e = driver.find_elements(By.XPATH,"//a[contains(@href,'/p/')]")
    post_links = []
    for p in post_link_e[:10]:
        post_links.append(p.get_attribute("href"))
    for p in post_links:
        driver.get(p)
        content = driver.find_element(By.XPATH,"//div[@class='C4VMK']")
        words_post_link_dict[p] = content.text
        count+=1
words_dict

```

```

['https://www.instagram.com/p/CXbHDFWICeL/', 'https://www.instagram.com/p/CXX2-b5KGak/', 'https://www.instagram.com/p/CXTtGBjoJhJ/', 'https://www.instagram.com/p/CXOPC1fI0xH/', 'https://www.instagram.com/p/CXLg1pWIVc-/', 'https://www.instagram.com/p/CXIU2uroIHd/', 'https://www.instagram.com/p/CXEPwgcVJqJ/', 'https://www.instagram.com/p/CXDeOD1oJbj/', 'https://www.instagram.com/p/CXA_8_0qqg9/', 'https://www.instagram.com/p/CW-NIGyIXtr/']
['https://www.instagram.com/p/CXYB1fNfCI6/', 'https://www.instagram.com/p/CXX1ubRBpGf/', 'https://www.instagram.com/p/CXVCI15B6zz/', 'https://www.instagram.com/p/CXSxWYnhiB3/', 'https://www.instagram.com/p/CXSka5ht3o5/', 'https://www.instagram.com/p/CXP6TAys6eb/', 'https://www.instagram.com/p/CXNu7RQBikf/', 'https://www.instagram.com/p/CXNTzYqlufY/', 'https://www.instagram.com/p/CXLERlqLTzj/', 'https://www.instagram.com/p/CXIfj3Jh-w3/']
['https://www.instagram.com/p/CXbCC4dlSmu/', 'https://www.instagram.com/p/CXaojIILGWZ/', 'https://www.instagram.com/p/CXV3PZ1NiNa/', 'https://www.instagram.com/p/CXVaS8FuL0F/', 'https://www.instagram.com/p/CXTUcPnP2Gp/', 'https://www.instagram.com/p/CXS_o8HFbzx/', 'https://www.instagram.com/p/CXQsvVbFwVZ/', 'https://www.instagram.com/p/CXQXE0bFMFE/', 'https://www.instagram.com/p/CXOIQESPUOT/', 'https://www.instagram.com/p/CXN2YXbsKJm/']
['https://www.instagram.com/p/CXbND4KFiDE/', 'https://www.instagram.com/p/CXZaz1WPRCN/', 'https://www.instagram.com/p/CXWzK6BPCFz/', 'https://www.instagram.com/p/CXQ8OZklP4C/', 'https://www.instagram.com/p/CXCGJtzDhaC/', 'https://www.instagram.com/p/CW-9z6HlFe0/', 'https://www.instagram.com/p/CW9rGjylmBm/', 'https://www.instagram.com/p/CW6uiAmPcqz/', 'https://www.instagram.com/p/CW1Cx56PI8R/', 'https://www.instagram.com/p/CWyMrXklKWo/']
['https://www.instagram.com/p/CXQrXWmrBpf/', 'https://www.instagram.com/p/CXOENG1vHgG/', 'https://www.instagram.com/p/CXLm3qcMkzc/', 'https://www.instagram.com/p/CXLXNr9lBHZ/', 'https://www.instagram.com/p/CXI8k4qAfcI/', 'https://www.instagram.com/p/CXGRyEsr1ji/', 'https://www.instagram.com/p/CXBS-jxBHAc/', 'https://www.instagram.com/p/CW-vK0fBz6Y/', 'https://www.instagram.com/p/CW-PbU0lEz-/', 'https://www.instagram.com/p/CW8FXjtBmA9/']

```

```

Out[38]: {'https://www.instagram.com/dilsefoodie/': {'https://www.instagram.com/p/CXbHDFWICeL/': 'dilsefoodie\nVerified\nLunch With Dad 🍔\n#dilsefoodie\n17h',
'https://www.instagram.com/p/CXX2-b5KGak/': 'dilsefoodie\nVerified\nPeeli Mirch Wa le Chole Kulche At Nai Sadak, Chandni Chowk\n#dilsefoodie #dilsecouple\n2d',

```

'https://www.instagram.com/p/CXTtGBJoJhJ/': 'dilsefoodie\nVerified\nMahender Ji Ke Dahi Bhalla Papdi Chaat At Nai Sadak, Chandni Chowk\n#dilsefoodie #dilsecouple\n3d',

'https://www.instagram.com/p/CXOPC1fI0xH/': 'dilsefoodie\nVerified\nSamosa Lovers \n#dilsefoodie #dilsecouple\n5d',

'https://www.instagram.com/p/CXLg1pWIVC-/': 'dilsefoodie\nVerified\nBhaiyo Bijli Se Kam Nahi Hai Giani ji Ka Rabri Faluda @.\n#dilsefoodie #dilsecouple\n6d',

'https://www.instagram.com/p/CXIU2uroIHd/': 'dilsefoodie\nVerified\nPatna Roll In Patna At Blue Moon\n#dilsefoodie #dilsecouple\n1w',

'https://www.instagram.com/p/CXEPwgcVJqJ/': 'dilsefoodie\nVerified\nVeteran Journalist Vinod Dua Ji Passed Away 😞.\n#The Man Who Actually Started Hosting Food Show - Zaika India Ka and inspired many people.\n#A True #dilsefoodie\n#Deepest Condolences To The Family 🙏\n1w',

'https://www.instagram.com/p/CXDeOD1ojbj/': 'dilsefoodie\nVerified\nDilli Ki Sardi And Pav Bhaji 😍😍😍😍.\n#Chatrasal Stadium Wali Pav Bhaji\n#dilsefoodie #dilsecouple\n1w',

'https://www.instagram.com/p/CXA\_8\_0qqg9/': 'dilsefoodie\nVerified\nRDK - Roshan Di Kulfi, Rajouri Outlet\n#Had this amazing aloo tikki with chole 🍲 with @dilsecouple\n#dilsefoodie #dilsecouple\n1w',

'https://www.instagram.com/p/CW-NIGYIXtr/': 'dilsefoodie\nVerified\nOh Bhaisaab !! ye kya dekh liya 🤩🤩\n#dilsefoodie #dilsecouple\n1w',

'https://www.instagram.com/foodie\_incarnate/': {'https://www.instagram.com/p/CXYB1fNfCI6/': 'foodie\_incarnate\nVerified\nMost Amazing Street Food Ever 🤩🤩\n#Aloo in Boiling Sand 🍲🍲\n.\n#Watch the full video on my YouTube channel. Link is in my bio 🙏\n.\n#foodieincarnate #reelkarofeelkaro #reelitfeelit #reels #reelsinstagram #delhi #mumbai #delhifoodie #mainpuri #aloo #uniquefood #streetfood\n1d',

'https://www.instagram.com/p/CXX1ubRBpGf/': 'foodie\_incarnate\nVerified\nNadda Kebab: this dish disappointed us the most in Nagpur. 🙏🙏\n.\n#foodieincarnate #sodelhi #newdelhi #foodtalkindia #delhigram #indianfood #delhifoodblogger #foodgasm #foodporn #foodpornshare #foodlover #foodgram #foodiesofinstagram #foodie #indianstreetfood #streetfood #delhistreetfood #streetfoodindia #mumbaistreetfood #delhifoodie #foodblogger #indianfoodie #desikhana #indianfoodblogger #indianfoodbloggers #delhi #vadodara #samosa\n3d',

'https://www.instagram.com/p/CXSxWYnhiB3/': 'foodie\_incarnate\nVerified\nIce Cream Barfi 🍦🍦\n.\n#Watch the full video on my YouTube channel. Link is in my bio 🙏🙏\n.\n#Foodieincarnate #Reelitfeelit #reelkarofeelkaro #reelsinstagram #reels #streetfood #icecream #barfi #desserts #chocolate\n3d',

'https://www.instagram.com/p/CXSka5ht3o5/': 'foodie\_incarnate\nVerified\nBreakfast with the backdrop of mighty Himalayas 🏔️🏔️\.\n#If cozy mountain stay is on your mind with the comfort of homely food, head over to Cedar Lodge by @aahma\_hospitality . You won't be disappointed 🙏🙏\n.\n#foodieincarnate #sodelhi #foodtalkindia #delhifoodie #delhifoodblogger #nainital #ramgarh #resort #mountainresort #breakfastgoals #amarsirohi #desifood #staycation #staycations #mumbaifoodblogger #indianfoodbloggers #foodie #foodlover #foodporn #breakfast #mountainfood #foodwithaview #foodstagram #foodblogger #almora #himalayas #delhifoodie #delhifoodbloggers #delhifoodguide #mumbaifoodie\n4d',

'https://www.instagram.com/p/CXP6TAys6eb/': 'foodie\_incarnate\nVerified\nDragon Fried Misal Pav 🍲🍲\n.\n#Kindly watch the full video for location, price & other details 🙏🙏\n.\n#foodieincarnate #sodelhi #newdelhi #foodtalkindia #delhigram #indianfood #delhifoodblogger #foodgasm #foodporn #foodpornshare #foodlover #foodgram #foodiesofinstagram #foodie #indianstreetfood #streetfood #delhistreetfood #streetfoodindia #mumbaistreetfood #delhifoodie #foodblogger #indianfoodie #desikhana #indianfoodblogger #indianfoodbloggers #delhifood #mumbai #delhi #ahmedabad #friedmisal\n5d',

'https://www.instagram.com/p/CXNu7RQBikf/': 'foodie\_incarnate\nVerified\n100% Natural Jaggery Making 🍯🍯\n.\n#Watch the full video on my YouTube channel. Link is in my bio 🙏🙏\n.\n#Foodieincarnate #reelkarofeelkaro #Reelitfeelit #reelsinstagram #reels #indian #ruralindia #streetfood #indianstreetfood #streetfoodindia\n5d',

'https://www.instagram.com/p/CXNTzYqlufY/': "foodie\_incarnate\nVerified\nBhogal's Chole Bhature, one of my favourite chole bhature in Delhi 🍲🍲\n.\n#Located in Scindia House/Janpath in New Delhi, this place is known for it's super delicious chole with kofte and kachalu ka achaar. On my list of top chole bhature places of Delhi, it is

ranked on number 3. Highly Recommended. 🍔🍔\n.\n#foodieincarnate #sodelhi #newdelhi #foodtalkindia #desifood #delhigram #indianfood #eastdelhi #ghaziabad #thali #indian snack #bhature #chole #cholebhature #breakfastporn #breakfastgoals #streetfood #indianstreetfood #delhistreetfood #delhifood #foodie #delhite #indiancuisine #eatfamous #poori #spicyfood #nashta #desikhana #delhi #mumbaistreetfood\n6d",

'https://www.instagram.com/p/CXLERlqLTzj/': 'foodie\_incarnate\nVerified\nKolkata S tyle Jhalmuri in Delhi🍔🍔\n.\nKindly watch the full video for location, price & ot her details🍔🍔\n.\n#foodieincarnate #sodelhi #newdelhi #foodtalkindia #delhigram # indianfood #delhifoodblogger #foodgasm #foodporn #foodpornshare #foodlover #foodgram #foodiesofinstagram #foodie #indianstreetfood #streetfood #delhistreetfood #streetfo odindia #mumbaistreetfood #delhifoodie #foodblogger #indianfoodie #desikhana #indian foodblogger #indianfoodbloggers #delhifood #mumbai #delhi #kolkata #jhalmuri\n6d',

'https://www.instagram.com/p/CXIfj3Jh-w3/': 'foodie\_incarnate\nVerified\nEpic Gaja r Ka Halwa Making🍔🍔\n.\nWatch the full video on my YouTube channel. Link is in my bio🍔🍔\n.\n#Foodieincarnate #Reelitfeelit #reelkarofeelkaro #reelsinstagram #reels #gajarkahalwa #halwa #viralfood #viralvideos #india\n1w'},

'https://www.instagram.com/food.darzee/': {'https://www.instagram.com/p/CXbCC4dlSm u/': "food.darzee\nVerified\nConstantly in search of something to eat? Can't figure out why? Let us help 🍔\n.\n#drsidays #cutthecrap\n.\n#Hungry #AlwaysHungry #fooddarz ee #healthytips #HungerHacks #Hacks #LifeHacks #HealthyFood\n18h",

'https://www.instagram.com/p/CXaojIILGWZ/': 'food.darzee\nVerified\nFood Daree pr ovides healthy meals to your doorstep and no repeated dishes for 30 days. Subscribe n ow on fooddarzee.com.\n.\n#mealsubscription #ketomeals #healthydishes #balancedmeal # healthyfoodtips #fooddarzee\n22h',

'https://www.instagram.com/p/CXV3PZ1NiNa/': 'food.darzee\nVerified\nHere are some health benefits of differnt juices. For more such health benefit tips follow @coache ddarzee\n.\n#healthyfoodtips #healthtips #nutritionmatters #nutritionaltherapy #apple #vitamin #nutritionisimportant #nutritioncoach #nutritioncoach #fitnessforlife #keyt oyournutrition #keytoyourhealth #wearehereforyou #fooddarzee\n2d',

'https://www.instagram.com/p/CXVaS8FuL0F/': 'food.darzee\nVerified\nNew Year, New Healthy You!! Food Darzee provides delicious meals & nutritional plans customised to your lifestyle & body type. Achieve your fitness goals faster than ever before. Subs cribe to Food Darzee now.\n.\n#ketomeals #lowcarbdiet #vegandiet #keytoyournutrition #keytoyourhealth #weightlossdiet #wearehereforyou #healthymeals #fooddarzee\n2d',

'https://www.instagram.com/p/CXTUcPn2Gp/': "food.darzee\nVerified\nIt's #FunFrida ys at Food Darzee and we are giving you the chance to get a subscription to our heal thy meal plan at a special discount offer. Hurry Up and comment now!\n.\n#giveaway #f ooddarzee giveaway #giveawaycontest #foodgiveaway #healthymeals #healthylifestyle #ke tomeals #looseweight #keytoyournutrition #keytoyourhealth #wearehereforyou #fooddarz ee\n3d",

'https://www.instagram.com/p/CXS\_o8HFbxz/': 'food.darzee\nVerified\nTry out this d elicious, easy and quick healthy filler Sweet Potato.\n.\nIngredients:\nBoiled Sweet Potato\nSalt\nPepper\nSesame Seeds\nChilli Flakes\n.\n#potato #sweetpotato #friedswee tpotato #snacks #delicious #yummy #reels #reelsinstagram #explore #fyp #explorepag e #yummybites #healthyfood #trending #trend #viral #healthyfood #tastyfood #foodreel # fooddarzee\n3d',

'https://www.instagram.com/p/CXQsvbFwVZ/': 'food.darzee\nVerified\nFood Darzee pr ovides delicious meals & nutritional plans customised to your lifestyle & body typ e.\n4 meals delivered to your doorstep.\n1) Customised for you\n2) Personal Nutritio nist.\n3) High quality & nutritious\nAchieve your fitness goals faster than ever bef ore. Subscribe to Food Darzee now.\n.\n#ketomeals #lowcarbdiet #vegandiet #keytoyourn utrition #keytoyourhealth #weightlossdiet #wearehereforyou #healthymeals #fooddarzee \n4d',

'https://www.instagram.com/p/CXQXE0bFMFE/': 'food.darzee\nVerified\nCan vegans bui ld muscle? Yess!! Take a minute to think about that and watch this video as @dr.sidd hant.bhargava guides you!\n.\n#vegandiet #vegantips #veganlifestyle #weightloss #heal thytips #factsforall #keytoyournutrition #keytoyourhealth #wearehereforyou #fooddarz ee #fooddarzeereels\n4d',

'https://www.instagram.com/p/CXOIQESPUOT/': 'food.darzee\nVerified\nAre you or you r family member suffering from high blood pressure? This diet plan might help. For a personalised diet plan according to your health preferences sign up on fooddarzee.co m\n.\n#bloodpressure #healthytips #highbloodpressure #dietplan #nutritioncoach #nutri tioncoach #fitnessforlife #keytoyournutrition #keytoyourhealth #wearehereforyou #foo ddarzee\n5d',

'https://www.instagram.com/p/CXN2YXbsKJm/': 'food.darzee\nVerified\nThis instant a nd simple beetroot appe is a healthy way to start your day. Looking at this beetroot appe recipe, you would be surprised how this healthy breakfast idea requires minimal effort when you put into practice. Try this superfood twist, which is packed with vi

tamins and minerals.\nIngredients-\n\nRava (semolina)\nCurd\nBeetroot\nCarrot\nGreen Chillies\nSalt\nPapper\nCumin seeds\nMustard seeds\nCurry leaves\n\n#beetroot #appe #southindianfood #beetrootappe #lovehomemadefood #homemadefood #indianfood #healthy food #tastyfood #foodreel #fooddarzee\n5d'},

'https://www.instagram.com/food/': {'https://www.instagram.com/p/CXbND4KFIDE/': 'food\nLooking for a delicious deal? Our "Holiday Specials" collab with @citizensxsbe continues this week! @food followers receive special discounts and items!\nHow it works..\n1 Visit Citizens Manhattan West\n2 Follow & Tag @food @citizensxsbe\n3 Unlock special discounted items\n\nThis week's specials feature...\n\n🥑Avocado Toast Bowl @plantnationbysbe 12/13\n🥩Sticky Ribs @samotobymorimoto 12/14\n🥩Smoked Pastrami Alla Dario @ciccidicarne 12/15\n🍔The Deluxe Burger @umamiburger 12/16\n🐔Chicken Shawarma Plate @soomsoomfresh 12/17\n🐔The Original Sam's Crispy Chicken Sandwich @samscrispychicken 12/18\n16h',

'https://www.instagram.com/p/CXZaz1WPRCN/': 'food\nThere's no better way to stay warm in the winter than some gooey, melted, hot fondue 🍷\U0001fad5 #friendsoffood @melissamale bringing some warm and cozy vibes from @lafayette380 🍷\n\n#food #foodie #fondue #cheese #cheeselover #winter #holidays #soho #newyorkcity\n1d',

'https://www.instagram.com/p/CXWzK6BPCFz/': 'food\nIf you could only choose one? 🥪\n@lindustriebk dishing out delicious sandwich dilemmas #foodfaves\n\n#food #foodie #sandwich #sandwichporn #sandwichsaturday #brooklyn #newyorkcity\n2d',

'https://www.instagram.com/p/CXQ80ZklP4C/': 'food\nWant a delicious deal? Introducing "Holiday Specials" our latest collab with @citizensxsbe where @food followers receive special discounts and items!\nHow it works..\n1 Visit Citizens Manhattan West\n2 Follow & Tag @food @citizensxsbe\n3 Unlock special discounted items\n\nThis week's specials feature...\n🍷Forever Krispy Rice Box @krispyrice\n🍷Cheesy Potato Tots @umamiburger\n🍪Nutella Swirl Cookie @cindylouscookies\n4d',

'https://www.instagram.com/p/CXCGJtzDhaC/': 'food\nDear @the9wmarket we like everything you make 🍷!\nTag someone who needs these desserts!\n1w',

'https://www.instagram.com/p/CW-9z6HlFe0/': 'food\nIt's a holiday 🥰Celebrate Hanukkah with some next level delicious Potato Latkes from @12chairscafe 🥰🍷#foodfaves\n1w',

'https://www.instagram.com/p/CW9rGjylmBm/': 'food\nPut on your yarmulke it's time to celebrate Hanukkah with some next level delicious Potato Latkes from @12chairscafe 🥰🍷#foodfaves\n\n#food #foodie #foodholiday #hanukkah #hanukkah2021 #latkes #holidays #december\n1w',

'https://www.instagram.com/p/CW6uiAmPcqz/': 'food\nFact: Food tastes even more delicious with an oceanside view. Lunch at one our #foodfaves for Farm to Table fixings @malibufarm 🍷🍷\n\n#food #foodfaves #oceanside #farmtotable #organic #california #malibu\n1w',

'https://www.instagram.com/p/CW1Cx56PI8R/': 'food\nDon't anyone ever tell you that you're too old for hot pizza pockets 🍷Check out one of our Sunday Brunch #foodfaves @trapizziniousa serving iconic Roman pizza pockets filled with classic Italian recipes 🍷\n\n#food #foodie #italianfood #pizza #brunch #sundaybrunch #sundayfunday #lowereastside #newyorkcity #negrioni #icedcoffee\n2w',

'https://www.instagram.com/p/CWYMrXklKWo/': 'food\nThanksgiving might be over but you can still get your pie fix at @deviantdonuts featuring some of the most creative doughnut combinations you'll find 🍷🍷#foodfaves\n\n#food #foodie #thanksgiving #thanksgivingfood #thanksgivingdessert #doughnuts #doughnutlover #pies #festive #fall\n2w'},

'https://www.instagram.com/food\_lunatic/': {'https://www.instagram.com/p/CXQrXWmrBpf/': 'food\_lunatic\nThis is indeed for life.🥰\n\n#FeelItReelIt #ReelsInstagram #Trend #ViralReels #EatSleepTravelRepeat #Travel #Explore #Viralvideos #feelkaroreelkaro #delhi #eatingfortheinsta #delhifoodie #delhi\_igers #foodblogger #all\_shots #Comfortfood #trending #explore #reel #blogger #lifestyleblogger #reels #foodphotography #tasty #foodforlife #sleep\n4d',

'https://www.instagram.com/p/CXOENG1vHgG/': 'food\_lunatic\nCurrently having garama plate of aloo tikki in a perfect weather indeed.🥰🥰\n\n#delhiblogger #indianfood #foodlove #delhifoodie #delhifoodblogger #foodphoto #foodcoma #indianfoodie #foodbloggers #foodoftheday #delhi #delhidiaires #delhi\_igers #streetfood #foodphotography #Picoftheday #indianfoodbloggers #delhistreetfood #winters #dillikisardi\n5d',

'https://www.instagram.com/p/CXLm3qcMkzc/': 'food\_lunatic\nNever thought Payasam could be served like this!!🥰🥰\n\n#feelitreelit #Sweets #Desserts #dessertsofinstagram #tasty #fancy #payasam #explorepage #delhi\_igers #feelkaroreelkaro #delhi #eatingfortheinsta #delhifoodie #all\_shots #Comfortfood #explore #picoftheday #reels #reelsvideo #viralreels #reelsinstagram\n6d',

'https://www.instagram.com/p/CXLXNr9lBHZ/': 'food\_lunatic\nKorean Corn Cheese.🥰\n

Made this snack recently and absolutely loved it. It goes perfect with the drinks, you can have this dip with nachos or crackers. Will be sharing the recipe tomorrow. ✨  
 \n.\n\n#all\_shots #cheese #foodcoma #tasty #corn #comfortfood #korea #indianfoodblogger #recipe #picoftheday #Indianfoodie #foodphoto #cheesy #eatfamous #korean #foodforthought #foodphotography #koreanfood #snacks #explore #explorepages #delhi #delhi\_igers #all\_shots #getinmybelly #foodoftheday #foodporn #cheesy #trending\n6d',

'https://www.instagram.com/p/CXI8k4qAfcI/': 'food\_lunatic\nDay out in Mussoorie. ✨  
 \nStayed at @ahouseinthehills\_ and I must say, the view from this property is mesmerising and so peaceful. ☺️\n\nLandour bake house being the oldest cafe serves some amazing nutella crepes and carrot cake. 🍰\n\nI honestly had the best cold coffee in my life at @cafebytheway, they make it without milk. Yup, they use ice cream to make their cold coffee making it super thick and yum. ☺️\n.\n\n#MiniVlog #mussoorie #Mountains #travel #vlog #landour #dayout #reels #reelsindia #viralreels #delhifoodie #feelitreelit #delhidariaries #reels #foodphotography #all\_shots #eatingfortheinsta #foodcoma #delhiblogger #igfood #foodphoto #foodlovers #delhi\_igers #indianfoodbloggers #delhi #feelkaroreelkaro #foodbloggers #tasty #comfortfood #reelsinstagram #delhifoodblogger\n1w',

'https://www.instagram.com/p/CXGRyEsr1ji/': 'food\_lunatic\nMeine subah se khana na i khaya tha yaar. \U0001f972 🍲\n.\n\n#explorepages #delhi\_igers #feelkaroreelkaro #funny #delhi #eatingfortheinsta #delhifoodie #foodblogger #relatable #all\_shots #relatablememes #feelitreelit #Comfortfood #trending #explore #reel #blogger #picoftheday #lifestyleblogger #reels #foodphotography #tasty #reelsvideo #viralreels #reelsinstagram #fun #wedding #fokatkhana #shaadi #weddingseason\n1w',

'https://www.instagram.com/p/CXBS-jxBHAc/': 'food\_lunatic\nAd\n\nI am hosting the cheesiest party tonight!! ☺️ Yup, I made some super cheesy pizzas and garlic bread. \nWith my favorite baking partner that I found on @amazon, I was able to bake them in minutes. \nIt's that simple!! ☺️\n\nFind this and more of my kitchen appliances recommendations on my page #FoundItOnAmazon\nJust type https://www.amazon.in/shop/food\_lunatic\n@amazondot.in #AmazonFinds ✨\n1w',

'https://www.instagram.com/p/CW-vK0fBz6Y/': 'food\_lunatic\nCurrently having my fav cheesy maggi and chilling in my blanket. ☺️\n\nAll you need to make this is water, maggi masala, veggies, oregano, chilli flakes, cheese, and maggi ofcourse. ☺️\n.\n\n#maggi #delhifoodie #feelitreelit #delhidariaries #reels #foodphotography #all\_shots #eatingfortheinsta #maggirecipes #foodcoma #delhiblogger #igfood #foodphoto #foodlovers #delhi\_igers #indianfoodbloggers #delhi #feelkaroreelkaro #foodbloggers #tasty #cheese #trending #comfortfood #reelsinstagram #delhifoodblogger\n1w',

'https://www.instagram.com/p/CW-PbU01Ez-/': 'food\_lunatic\nWalked for half an hour and waited for another half an hour just to have their Nutella crepes and carrot cake! 🍰 Though, I ended up ordering a lot more. Hehe. 🤪\n.\n\n#delhidariaries #eatingfortheinsta #igfood #delhi\_igers #travelgram #foodbloggers #delhiblogger #travel #all\_shots #foodphotography #mountains #travelblogger #foodcoma #comfortfood #delhifoodie #tasty #indianfoodbloggers #foodphoto #delhi #foodlovers #bakery #delhifoodblogger #landour #mussoorie #traveldiaries #cakes #crepes #nutella #thingstodo\n1w',

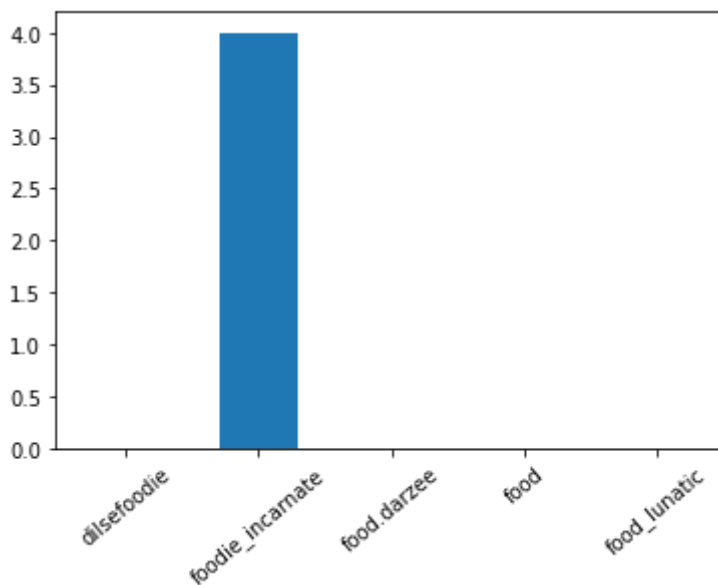
'https://www.instagram.com/p/CW8FXjtBmA9/': 'food\_lunatic\nSachh sachh batao, kaun karta hai aise? 🤔\n.\n\n#oopsididitagain #instagramreels #britneyspears #hotel #hotelroom #feelkaroreelkaro #feelitreelit #relatable #relatablememes #indian #viralreels #trending #blogger #lifestyleblogger #travel #travelblogger #delhi #delhi\_igers #delhifoodblogger #trend #trendingreels\n1w'}}}

In [96]:

```
# 1.2 Now Find the number of posts these handles have done in the previous 3 days.
handles = []
posts_in_3days = []
for i in words_dict.keys():
    handles.append(i.split("/")[3])
    n_posts = 0
    for j in words_dict[i].values():
        content = j
        words = content.split("\n")
        posted_time = int(words[len(words)-1][: -1])
        if posted_time > 3:
            break
    # print(j, content)
    n_posts += 1
    posts_in_3days.append(n_posts)
handles
```



```
posts_in_3days
plt.bar(handles,posts_in_3days,width=0.6)
plt.xticks(rotation=40)
plt.show()
```



```
In [43]: # 2.3 prepare the list of words by frequency
word_frequency_dict = {}
for i in words_dict.keys():
    for j in words_dict[i].values():
        content = j.replace('\n','')
        words = content.split(" ")
        for w in words:
            word_frequency_dict[w] = word_frequency_dict.get(w,0) + 1
word_frequency_dict
```

```
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'@samotobymorimoto': 1,
'12/14🍱': 1,
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'Pastrami': 1,
'Alla': 1,
'Dario': 1,
'@ciccidicarne': 1,
'12/15🍷': 1,
'Deluxe': 1,

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'Burger': 1,  
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'Plate': 1,  
'@soomsoomfresh': 1,  
'12/17💕The': 1,  
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'#sandwichsaturday': 1,  
'#brooklyn': 1,  
'#newyorkcity2d': 1,  
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'Introducing': 1,  
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'where': 1,  
'feature...📺Forever': 1,  
'Krispy': 1,  
'Rice': 1,  
'Box': 1,  
'@krispyrice🍷Cheesy': 1,  
'Potato': 3,  
'Tots': 1,  
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'Swirl': 1,  
'Cookie': 1,  
'@cindylouscookies4d': 1,  
'foodDear': 1,  
'@the9wmarket': 1,

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'Latkes': 2,  
'@12chairscafe': 2,  
'🍷😁#foodfaves1w': 1,  
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'it's': 1,  
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'🍷😁#foodfaves_#food': 1,  
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'#hanukkah2021': 1,  
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'#december1w': 1,  
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'even': 1,  
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'#foodfaves': 3,  
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'@malibufarm': 1,  
'🌻🌻🌻_#food': 1,  
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'#organic': 1,  
'#california': 1,  
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'👉Check': 1,  
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'@trapizzinosa': 1,  
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'Roman': 1,  
'filled': 1,  
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'#italianfood': 1,  
'#pizza': 1,
```

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'#brunch': 1,
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'#lowereastsideside': 1,
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'#icedcoffee2w': 1,
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'can': 2,
'still': 1,
'pie': 1,
'fix': 1,
'@deviantdonuts': 1,
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'you'll': 1,
'find': 1,
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'#thanksgivingfood': 1,
'#thanksgivingdessert': 1,
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'#fall2w': 1,
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'#Trend': 1,
'#ViralReels': 1,
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'#Travel': 1,
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'#blogger': 3,
'#lifestyleblogger': 3,
'#foodphotography': 7,
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'perfect': 2,
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'#foodcoma': 5,
'#foodbloggers': 4,
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'#delhidiaries': 3,
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'#winters': 1,
'#dillikisardi5d': 1,
'food_lunaticNever': 1,

```

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'thought': 1,  
'Payasam': 1,  
'served': 1,  
'this!!😍😌#feelitreelit': 1,  
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'#Desserts': 1,  
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'#fancy': 1,  
'#payasam': 1,  
'#picoftheday': 3,  
'#reelsvideo': 2,  
'#viralreels': 4,  
'#reelsinstagram6d': 1,  
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'have': 2,  
'dip': 1,  
'nachos': 1,  
'crackers.': 1,  
'Will': 1,  
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'recipe': 1,  
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'serves': 1,  
'nutella': 1,  
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'carrot': 2,  
'cake.🍰I': 1,  
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'had': 1,  
'best': 1,  
'cold': 2,
```

```
'coffee': 2,  
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'milk.': 1,  
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'use': 1,  
'ice': 1,  
'crem': 1,  
'their': 2,  
'making': 1,  
'thick': 1,  
'yumm.😋.#MiniVlog': 1,  
'#mussoorie': 2,  
'#Mountains': 1,  
'#travel': 3,  
'#vlog': 1,  
'#landour': 2,  
'#dayout': 1,  
'#reelsindia': 1,  
'#feelitreelit': 4,  
'#delhiblogger': 3,  
'#igfood': 3,  
'#foodlovers': 3,  
'#reelsistagram': 2,  
'#delhifoodblogger1w': 2,  
'food_lunaticMeine': 1,  
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'nai': 1,  
'khaya': 1,  
'tha': 1,  
'yaar.\U0001f972👉.#explorepage': 1,  
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'#wedding': 1,  
'#fokatkakhana': 1,  
'#shaadi': 1,  
'#weddingseason1w': 1,  
'food_lunatic#AdI': 1,  
'am': 1,  
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'cheesiest': 1,  
'party': 1,  
'tonight!!😋': 1,  
'made': 1,  
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'bread.With': 1,  
'favorite': 1,  
'baking': 1,  
'partner': 1,  
'found': 1,  
'@amazon,': 1,  
'was': 1,  
'able': 1,  
'them': 1,  
'minutes.It's': 1,  
'simple!!😍Find': 1,  
'kitchen': 1,  
'appliances': 1,  
'recommendations': 1,  
'page': 1,
```

```
'#FoundItOnAmazonJust': 1,
'type': 1,
'https://www.amazon.in/shop/food_lunatic@amazondotin': 1,
'#AmazonFinds': 1,
'🌟1w': 1,
'fav': 1,
'maggi': 3,
'chilling': 1,
'blanket.😌All': 1,
'need': 1,
'water,': 1,
'masala,': 1,
'veggies,': 1,
'oregano,': 1,
'chilli': 1,
'flakes,': 1,
'cheese,': 1,
'ofcourse.🍝.#maggi': 1,
'#maggirecipes': 1,
'food_lunaticWalked': 1,
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'just': 1,
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'cake!🍰': 1,
'Though,': 1,
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'more.': 1,
'Hehe.😂.#delhidiaries': 1,
'#travelgram': 1,
'#mountains': 1,
'#travelblogger': 2,
'#bakery': 1,
'#traveldiaries': 1,
'#cakes': 1,
'#crepes': 1,
'#nutella': 1,
'#thingstodo1w': 1,
'food_lunaticSachh': 1,
'sachh': 1,
'batao,': 1,
'kaun': 1,
'karta': 1,
'hai': 1,
'aise?🤔.#oopsididitagain': 1,
'#instagramreels': 1,
'#britneyspears': 1,
'#hotel': 1,
'#hotelroom': 1,
'#trendingreels1w': 1}
```

In [52]:

```
# 2.3 Create a csv file with two columns : the word and its frequency
import csv
a_file = open("word_frequency.csv", "w", encoding="utf-8")
writer = csv.writer(a_file)
for key, value in word_frequency_dict.items():
    writer.writerow([key, value])
a_file.close()
```

In [60]:

```
# 2.4 Now, find the hashtags that were most popular among these bloggers
word_frequency_dict_s = {k: v for k, v in sorted(word_frequency_dict.items(), key=la
```



```

count=0
hashtags = []
freqs = []
for key in word_frequency_dict_s.keys():
    if key.startswith("#"):
        if count==5:
            break
        hashtags.append(key)
        freqs.append(word_frequency_dict_s[key])
        print(key,word_frequency_dict_s[key])
        count+=1

```

```

#delhi 15
#delhifoodie 14
#reels 11
#foodie 11
#indianfoodbloggers 9

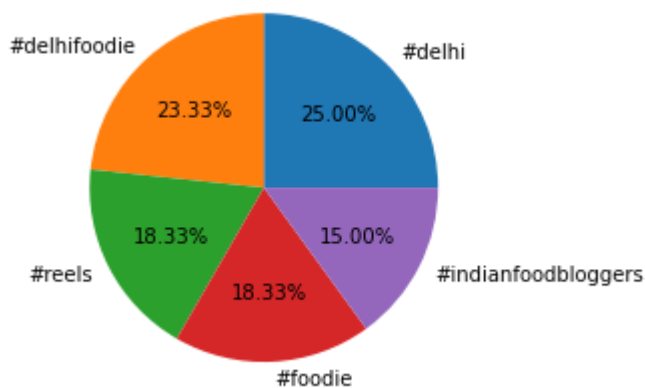
```

In [63]:

```

# 2.5 Plot a Pie Chart of the top 5 hashtags obtained and the number
#of times they were used by these bloggers in the scraped posts.
import matplotlib.pyplot as plt
plt.pie(freqs,labels = hashtags, autopct="%.2f%%")
plt.show()

```



In [115...]

```

# 3.1 Find out the Likes of the top 10 posts of the 5 handles obtained earlier
count=0
handle_likes = {}
for i in followers_dict.keys():
    if count==5:
        break
    driver.get(i)
    handle_likes_post_link_dict = {}
    handle_likes[i] = handle_likes_post_link_dict
    post_link_e = driver.find_elements(By.XPATH,"//a[contains(@href,'/p/')]")
    post_links = []
    for p in post_link_e[:10]:
        post_links.append(p.get_attribute("href"))
    for p in post_links:
        driver.get(p)
        likes_elements = driver.find_elements(By.XPATH,"//a[contains(@href,'liked_by')]")
        likes = 0
        if len(likes_elements)>0:
            likes = int(likes_elements[0].text.replace(',',''))
        handle_likes_post_link_dict[p] = likes
    count+=1
handle_likes

```

```

Out[115... {'https://www.instagram.com/dilsefoodie/': {'https://www.instagram.com/p/CXbHDFWICe
L/': 15325,
'https://www.instagram.com/p/CXX2-b5KGak/': 12546,
'https://www.instagram.com/p/CXTtGBjoJhJ/': 31426,
'https://www.instagram.com/p/CXOPC1fI0xH/': 12177,
'https://www.instagram.com/p/CXLg1pWIVC-/': 13138,
'https://www.instagram.com/p/CXIU2uroIHd/': 39541,
'https://www.instagram.com/p/CXEPwgcVJqJ/': 17692,
'https://www.instagram.com/p/CXDeOD1oJbj/': 6715,
'https://www.instagram.com/p/CXA_8_0qqg9/': 6122,
'https://www.instagram.com/p/CW-NIGYIXtr/': 26493},
'https://www.instagram.com/foodie_incarnate/': {'https://www.instagram.com/p/CXdBu_
ihRLA/': 0,
'https://www.instagram.com/p/CXYB1fNFCi6/': 32005,
'https://www.instagram.com/p/CXX1ubRBpGf/': 25139,
'https://www.instagram.com/p/CXVC1l5B6zz/': 0,
'https://www.instagram.com/p/CXSxwYnhiB3/': 216566,
'https://www.instagram.com/p/CXSka5ht3o5/': 20035,
'https://www.instagram.com/p/CXP6TAys6eb/': 0,
'https://www.instagram.com/p/CXNu7RQBikf/': 77066,
'https://www.instagram.com/p/CXNTzYqlufY/': 24862,
'https://www.instagram.com/p/CXLERlqLTzj/': 0},
'https://www.instagram.com/food.darzee/': {'https://www.instagram.com/p/CXdMm6fFS9
G/': 130,
'https://www.instagram.com/p/CXbCC4dlSmu/': 1241,
'https://www.instagram.com/p/CXaojI1lGWZ/': 181,
'https://www.instagram.com/p/CXV3PZ1NiNa/': 243,
'https://www.instagram.com/p/CXVaS8FuL0F/': 76,
'https://www.instagram.com/p/CXTUcPnP2Gp/': 204,
'https://www.instagram.com/p/CXS_o8HFbxz/': 672,
'https://www.instagram.com/p/CXQsvVbFwVZ/': 292,
'https://www.instagram.com/p/CXQXE0bFMFE/': 839,
'https://www.instagram.com/p/CXOIQESPUOT/': 3070},
'https://www.instagram.com/food/': {'https://www.instagram.com/p/CXbND4KFIDE/': 44
0,
'https://www.instagram.com/p/CXZaz1WPRCN/': 403,
'https://www.instagram.com/p/CXWzK6BPCFz/': 812,
'https://www.instagram.com/p/CXQ8OZk1P4C/': 484,
'https://www.instagram.com/p/CXCGJtzDhaC/': 555,
'https://www.instagram.com/p/CW-9z6HlFe0/': 472,
'https://www.instagram.com/p/CW9rGjylmBm/': 637,
'https://www.instagram.com/p/CW6uiAmPcqz/': 519,
'https://www.instagram.com/p/CW1Cx56PI8R/': 628,
'https://www.instagram.com/p/CWyMrXklKWo/': 767},
'https://www.instagram.com/food_lunatic/': {'https://www.instagram.com/p/CXQrXWmrBp
f/': 1011,
'https://www.instagram.com/p/CXOENG1vHgG/': 0,
'https://www.instagram.com/p/CXLm3qcMkzc/': 742,
'https://www.instagram.com/p/CXLXNr9lBHZ/': 481,
'https://www.instagram.com/p/CXI8k4qAfcI/': 1039,
'https://www.instagram.com/p/CXGRyEsr1ji/': 56056,
'https://www.instagram.com/p/CXBS-jxBHAc/': 1081,
'https://www.instagram.com/p/CW-vKOfBz6Y/': 15529,
'https://www.instagram.com/p/CW-PbU0lEz-/': 741,
'https://www.instagram.com/p/CW8FXjtBmA9/': 369}}

```

```

In [116... # 3.2 Calculate the average likes for a handle
handle_avg_likes = {}
for i in handle_likes.keys():
    sum_likes = 0
    for like_key in handle_likes[i].keys():
        sum_likes+=handle_likes[i][like_key]
    avg_likes = sum_likes/10
    handle_avg_likes[i] = avg_likes
handle_avg_likes

```

```

Out[116... {'https://www.instagram.com/dilsefoodie/': 18117.5,

```

```
'https://www.instagram.com/foodie_incarnate/': 39567.3,
'https://www.instagram.com/food.darzee/': 694.8,
'https://www.instagram.com/food/': 571.7,
'https://www.instagram.com/food_lunatic/': 7704.9}
```

In [122...

```
# 3.3 Divide the average likes obtained from the number of followers
# of the handle to get the average followers:like ratio of each handle
followers_dict
followers_to_likes_ratio_dict = {}
handles_for_ratio = []
like_ratio = []
for i in handle_avg_likes.keys():
    ratio = followers_dict[i] / handle_avg_likes[i]
    followers_to_likes_ratio_dict[i] = ratio
    handles_for_ratio.append(i.split("/")[3])
    like_ratio.append(ratio)
followers_to_likes_ratio_dict
handles_for_ratio
like_ratio
```

Out[122...

```
[52.34000275976266,
 23.180656754441166,
 220.97582037996548,
 267.92373622529294,
 16.331685031603268]
```

In [126...

```
# 3.4 Create a bar graph to depict the above obtained information
plt.bar(handles_for_ratio, like_ratio, width=0.6)
plt.xticks(rotation=40)
plt.show()
```

