InstaBot Introduction - Part 1 Your friend has opened a new Food Blogging handle on Instagram and wants to get famous. He wants to follow a lot of people so that he can get noticed quickly but it is a tedious task so he asks you to help him. As you have just learned automation using Selenium, you decided to help him by creating an Instagram Bot. You need to create different functions for each task. In [120... # Importing necessary libraries from selenium import webdriver from selenium.webdriver.common.keys import Keys import time from selenium.webdriver.common.by import By from selenium.webdriver.support.ui import WebDriverWait from selenium.webdriver.support import expected\_conditions as EC from bs4 import BeautifulSoup from selenium.common.exceptions import NoSuchElementException, StaleElementReferenceException In [121... # Connecting to chrome webdriver object driver = webdriver.Chrome(executable\_path="D:\Softwares\Selenium\chromedriver") In [122... # Instagram url url = 'https://www.instagram.com/' def goHomeInsta(): url = 'https://www.instagram.com/' driver.get(url) In [124... goHomeInsta() Task 1: Login to your Instagram Handle 1.1 Submit with sample username and password def login(paraUsername, paraPassword): username = WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.CSS\_SELECTOR, "input[name='username'"))) password = WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.CSS\_SELECTOR, "input[name='password'"))) username.clear() password.clear() username.send\_keys(paraUsername) password.send\_keys(paraPassword) loginBtn = WebDriverWait(driver,10).until(EC.element\_to\_be\_clickable((By.CSS\_SELECTOR, "button[type = 'submit']"))).click() saveLoginInfoNotNowBtn = WebDriverWait(driver,10).until(EC.element\_to\_be\_clickable((By.XPATH, "//button[contains(text(), 'Not Now')]"))).click() notificationNotNowBtn = WebDriverWait(driver,10).until(EC.element\_to\_be\_clickable((By.XPATH, "//button[contains(text(), 'Not Now')]"))).click() print("Login Successful") username = 'sampleUsername' password = 'samplePassword' login(username , password) Login Successful def logout(): In [127... time.sleep(2) profileUrl = f'https://www.instagram.com/{username}/' driver.get(profileUrl) profileIconBtn = WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.XPATH, '//div[@class = "Fifk5"]/span'))).click() logoutBtn = WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.XPATH, '//\*[@id="react-root"]/section/nav/div[2]/div/div/div[3]/div/div[5]/div[2]/div[2]/div[2] print("Logout Successful") In [128.. #logout() Task 2: Type for "food" in search bar and print all the names of the Instagram Handles that are displayed in list after typing "food" Note: Make sure to avoid printing hashtags def getInstaHandles(keyword): In [129.. searchInput = WebDriverWait(driver,10).until(EC.element\_to\_be\_clickable((By.XPATH, '//input[@placeholder = "Search"]'))) time.sleep(2) searchInput.send\_keys(keyword) element = WebDriverWait(driver, 10), until(EC presence of element located((By XPATH,  $\frac{1}{a[@class} = \frac{00T3"}{1}))$ ) handlesWebElements = driver.find\_elements\_by\_xpath('//a[@class = "-qQT3"]') handles = []try: for i in handlesWebElements: soup = BeautifulSoup(i.get\_attribute('outerHTML'), 'html.parser') handle = soup.find(class\_ = '\_7UhW9').text **if** handle[0] != "#": handles.append(handle) except StaleElementReferenceException: print('Please check your keyword') return handles keyword = 'food' print(f"Instagram handles for keyword {keyword} are :") for i in getInstaHandles(keyword): print(i) Instagram handles for keyword food are : foodadikande foodhunter\_sabu foodtalkindia thispagewillmakeuhungry cochinfoodalert eatlikeamaniac food foodrush.recipe kerala.food.diaries breathe\_food\_kochi foodie\_sha\_ keralafood refillyourtummy theindianfoodblogger delhi\_streets\_food yourfoodlab food\_era\_ foodward\_fyz foodrider\_ cochinfooddiaries foodiemenon salmanthefoodie foodie\_raavanen foodencyclopediatrivandrum kozhikodenfoodies bisckoo foodie\_incarnate kochin\_food\_blogger rahulsfoodscenes food\_wackadoos villagefoodchannel\_official foodaholic\_malluboy foodzaara foodchrome food\_\_destinations\_ foodie\_she foodiekanyatales mumbaifoodie foodzeee calicut\_foodmaniac wayward\_gourmet hungrycochin foodsanyasi foodie\_sisters.om food.branthan keralafoodie buzzforfood zeugar\_foods the.food.busters Food Craft Institute, Kalamassery dying\_for\_food Task 3: Searching and Opening a profile 3.1 Open profile of "So Delhi" def openProfile(handle): In [131... try: searchInput = WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.XPATH, '//input[@placeholder = "Search"]'))) searchInput.clear() searchInput.send\_keys(handle) time.sleep(1) searchInput.send\_keys(Keys.ENTER) searchInput.send\_keys(Keys.ENTER) return True except NoSuchElementException: print('No Such Instagram Profile found') return False handle = "sodelhi" if openProfile(handle) == True: print("Profile opened") Profile opened Going to HomePage time.sleep(5) In [133... url = 'https://www.instagram.com/' driver.get(url) Task 4: Follow/Unfollow given handle 4.1 Open the Instagram Handle of "So Delhi" 4.2 Start following it. Print a message if you are already following 4.3 After following, unfollow the instagram handle. Print a message if you have already unfollowed. def followProfile(handle): In [134... try: if openProfile(handle) == True: time.sleep(2) if driver.find\_elements\_by\_xpath('//button[contains(text(), "Follow")]'): driver.find\_element\_by\_xpath('//button[contains(text(), "Follow")]').click() print(f'You are now following {handle}') else: print(f'You are already following {handle}') except e: print(e) def unfollowProfile(handle): In [135... if openProfile(handle) == True: time.sleep(2) if driver.find\_elements\_by\_xpath('//button[contains(text(), "Follow")]'): print(f'You are not following {handle}') else: driver.find\_element\_by\_xpath('//button[@class = "\_5f5mN -fzfL \_6VtSN yZn4P "]').click() WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.XPATH, "//button[contains(text(), 'Unfollow')]"))).click() print(f'You unfollowed {handle}') except e: print(e) followProfile('sodelhi') In [136... You are now following sodelhi Going to HomePage time.sleep(5) url = 'https://www.instagram.com/' driver.get(url) unfollowProfile('sodelhi') In [138... You unfollowed sodelhi Task 5 : Like/Unlike posts 5.1 Liking the top 30 posts of the 'dilsefoodie'. Print message if you have already liked it. 5.2 Unliking the top 30 posts of the 'dilsefoodie'. Print message if you have already unliked it. def firstPost(handle): In [139... if openProfile(handle) == True: driver.refresh() WebDriverWait(driver,10).until(EC.element\_to\_be\_clickable((By.CLASS\_NAME, 'kIKUG'))).click() def likePost(ipost): In [140... likeBtn = WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.CLASS\_NAME, 'fr66n'))) soup = BeautifulSoup(likeBtn.get\_attribute('innerHTML'), 'html.parser') if (soup.find('svg')['aria-label'] == 'Like'): likeBtn.click() print(f"Post {ipost} liked") else: print(f"Already liked post {ipost}") def unlikePost(ipost): In [141... unlikeBtn = WebDriverWait(driver,10).until(EC.element\_to\_be\_clickable((By.CLASS\_NAME, 'fr66n'))) soup = BeautifulSoup(unlikeBtn.get\_attribute('innerHTML'), 'html.parser') if (soup.find('svg')['aria-label'] == 'Unlike'): unlikeBtn.click() print(f"Post {ipost} unliked") else: print(f"Already unliked post {ipost}") In [142... def nextPost(): time.sleep(2) try: nexPos = WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.CLASS\_NAME, 'coreSpriteRightPaginationArrow'))) return nexPos except NoSuchElementException: return 0 def continueLiking(numPostsToBeLiked,ipost): In [143... while(True and numPostsToBeLiked>1): nextEle = nextPost() if nextEle != False : nextEle.click() ipost+=1 likePost(ipost) numPostsToBeLiked-=1 else : print("not found") break def continueUnliking(numPostsToBeUnliked,ipost): while(True and numPostsToBeUnliked>1): nextEle = nextPost() if nextEle != False : nextEle.click() ipost+=1 unlikePost(ipost) numPostsToBeUnliked-=1 print("not found") break Liking Posts time.sleep(5) handle = 'dilsefoodie' In [146... numPostsToBeLiked = 30 ipost = 1goHomeInsta() firstPost(handle) likePost(ipost) continueLiking(numPostsToBeLiked,ipost) Post 1 liked Post 2 liked Post 3 liked Post 4 liked Post 5 liked Post 6 liked Post 7 liked Post 8 liked Post 9 liked Post 10 liked Post 11 liked Post 12 liked Post 13 liked Post 14 liked Post 15 liked Post 16 liked Post 17 liked Post 18 liked Post 19 liked Post 20 liked Post 21 liked Post 22 liked Post 23 liked Post 24 liked Post 25 liked Post 26 liked Post 27 liked Post 28 liked Post 29 liked Post 30 liked **Unliking Posts** handle = 'dilsefoodie' In [147... numPostsToBeUnliked = 30 ipost = 1goHomeInsta() firstPost(handle) unlikePost(ipost) continueUnliking(numPostsToBeUnliked,ipost) Post 1 unliked Post 2 unliked Post 3 unliked Post 4 unliked Post 5 unliked Post 6 unliked Post 7 unliked Post 8 unliked Post 9 unliked Post 10 unliked Post 11 unliked Post 12 unliked Post 13 unliked Post 14 unliked Post 15 unliked Post 16 unliked Post 17 unliked Post 18 unliked Post 19 unliked Post 20 unliked Post 21 unliked Post 22 unliked Post 23 unliked Post 24 unliked Post 25 unliked Post 26 unliked Post 27 unliked Post 28 unliked Post 29 unliked Post 30 unliked Task 6: Extract list of followers 6.1 Extract the usernames of the first 500 followers of 'foodtalkindia' and 'sodelhi'. 6.2 Now print all the followers of "foodtalkindia" that you are following but those who don't follow you. def getFollowersList(countOfUsernames, handle): In [148... goHomeInsta() openProfile(handle) WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.XPATH, '//li[@class = "Y8-fY "]'))) driver.find\_elements\_by\_xpath("//li[@class = 'Y8-fY ']")[1].click() WebDriverWait(driver, 10).until(EC.presence\_of\_all\_elements\_located((By.XPATH, "//div[@class = 'isgrP']"))) print(f"The First {countOfUsernames} Followers of handle {handle} are :") followersPanel = driver.find\_element\_by\_xpath('//div[contains(@class,"isgrP")]') currentScrollPos, newHeight = 0,1 i = 0handleFollowersList = [] while i < countOfUsernames:</pre> try: follower = driver.find\_elements\_by\_xpath("//div[@class = 'PZuss']/li")[i] print(i+1, follower.text.split()[0]) handleFollowersList.append(follower.text.split()[0]) i = i+1except IndexError : speed = 50currentScrollPos = newHeight newHeight = driver.execute\_script("return arguments[0].scrollHeight", followersPanel) #print(currentScrollPos, newHeight) while currentScrollPos <= newHeight:</pre> currentScrollPos += speed driver.execute\_script("arguments[0].scrollTo(0, arguments[1])", followersPanel, currentScrollPos) time.sleep(2) return handleFollowersList handle = 'foodtalkindia' In [149... countOfUsernames = 100 handleFollowersList = getFollowersList(countOfUsernames, handle) The First 100 Followers of handle foodtalkindia are : 1 kokaresushama 2 kishore\_murugan143 3 pr\_adeep4830 4 moni\_piya 5 born\_\_kaur 6 thefoodiefashionista12 7 <u>\_\_tale\_of\_yum\_\_</u> 8 franbizx 9 vikrantj09 10 neeraj\_shinde 11 prajwal8321 12 nilofer.e 13 s\_k\_singh\_patel 14 fastfood\_network 15 akash\_kumar8299 16 \_\_junni\_\_thakur\_\_ 17 akash\_\_2209 18 annie\_kaur95 19 brilliant\_virat 20 yash.kasotia 21 thecookingterror 22 sharukpathan6118 23 poooja\_verma\_ 24 yasirkhan8301 25 nandita.sanjeevi 26 thepasteleriablog 27 kashishmakeovers\_ 28 kritika\_sinha 29 onerelaxingpage 30 sheshnathrajesh 31 agnelo\_v 32 raaz\_shauk\_01 33 supreetkaur3707 34 mmaztroking 35 anshita\_dawar 36 hoorain9069 37 mystriousgirl9876 38 mr\_jameer\_420\_official 39 kishpreet 40 \_\_xteen\_ 41 piyush\_katare\_22 42 devikahsharma 43 vijihari18 44 sanjugupta3807 45 rahul2rahul1984 46 surajsinhjankat 47 foodie\_stall 48 shivam\_wafgaonkar 49 ravish1776 50 awomanwiththecamera 51 pranavobhrai 52 revathiyellapu 53 automobiles.ds 54 javed\_\_\_ali\_\_72 55 c.o.l.l.e.c.t.v.e\_\_world 56 supremekitchen21 57 jyoti\_.setia 58 highonganache 59 f\_i\_g\_h\_t\_e\_rhuzaifa 60 bearbigshow 61 sahiti\_palem 62 vaishnavipatil.277 63 nd 538 64 lohiashalini 65 madhura\_shettyy 66 sreejanbarman 67 \_tanyaa07\_ 68 makeover\_by\_paramesh 69 indira\_gandhi\_123 70 animeshnayak90 71 jovonstrudel 72 aishhwarya\_\_ 73 syedasadali7 74 pepper.mumbai 75 cuty.megha26 76 preetik299 77 gunvirrana 78 foodiefreak22 79 ilakkiyapandian2912 80 inikitarathod 81 jayaak2602 82 amlandutta05 83 food\_is\_fule 84 drdetoxifier 85 pshikha1007 86 ashmithashetty 87 suchitra\_abbireddy 88 nikita.a.d 89 daastan\_musafir 90 pop.culture.queen 91 mmpugal 92 simonaincantalupo 93 tale\_of\_yummy\_food 94 raju.bollaram.14 95 saumya1223 96 monu\_sb\_9999 97 cravingsbyvarsha 98 kanchi.shah11 99 woodsvchef 100 varishsahu In [150... handle = 'sodelhi' countOfUsernames = 100 sodelhiFollowersList = getFollowersList(countOfUsernames, handle) The First 100 Followers of handle sodelhi are : 1 saranyaujit 2 m\_r\_dhruv\_001 3 karishma\_archit\_dwivedi 4 tania\_\_max 5 kavita.tayade 6 honey shahid ali 7 amruthsama 8 \_.rashmmii.\_ 9 jagu\_rane\_94 10 asif\_as\_if 11 monishasharma46 12 kanojia5533 13 jhalki\_ 14 pink diamond. 15 jimmybaby2309 16 khushiii grover 17 anuragg018 18 journeywithashish 19 afshanaamir1997 20 divyaa\_nebhnani 21 anu\_\_0607 22 \_asmita\_pawar\_\_ 23 \_rakhi\_nagar 24 tejaschevli 25 charles\_5649 26 heemanshusuri 27 pavanku\_0009 28 munazzar\_hassan 29 digvijay\_talan 30 anaar\_dana \_\_mr.failure\_ 32 ansaf\_sahib\_\_parayil 33 ameperdue90 34 \_priya\_40\_40\_\_ 35 asif.voa 36 sunima1788 37 rav\_mtl 38 asadgs6 39 khaidem\_vinita 40 sahityakadam 41 firestone\_sky\_ 42 makwana\_242 43 apoorvaverma\_\_\_ 44 \_.sutho\_op 45 guptavineet88 46 vidhiagrawal30 47 jaanu\_jaan001\_s 48 aashnashah.\_ 49 pr.iyanshu9739 50 mahesh\_\_orcas 51 urmilasharki36 52 faizan\_shk19 53 jeevikagambhir10 54 mdmoin\_k 55 abhiram\_sathyan16 56 raghujagannathan 57 imanatrandhawa 58 mani\_98587 59 saurabh.damale.1 60 meenaz⊥ 61 indiagreatkitchen 62 hashim arafath 63 this\_is\_suni 64 sanket.mestry.19 65 shitu550 66 tarunn shahdadpuri 67 sejal\_\_\_60 68 mehakgupta014 69 amandeepkaurchabbra 70 gupta.pooja44 71 thahir\_falconz 72 saifan\_bin\_haji\_1008 73 siva\_\_pra\_\_sad 74 alagan.menstudio 75 \_ananyapandey 76 paayalbatheja 77 zorba\_thecakestudio 78 imrizwan\_1 79 aayushikapur 80 rahulm\_76 81 saitejaworld 82 m.i.r.z.a\_\_ 83 sanjay\_earla\_ 84 georgejeong43 85 vidhya199325 86 sowmikavi 87 jahnavii\_07 88 its\_\_\_nain\_ 89 barkha.lahoriya04 90 pnkirank 91 hash\_i\_m47 92 aastha18\_\_ 93 hemant6404 94 ll.\_vogendra\_.ll 95 the\_mr\_bean\_ 96 surbhi\_tkr 97 001nikhildagar 98 tomar\_karunya 99 atulsahnan 100 sharma.neeraj840 6.2 Now print all the followers of "foodtalkindia" that you are following but those who don't follow you. def myFollowings(): In [151... profileUrl = f'https://www.instagram.com/{username}/' driver.get(profileUrl) WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.XPATH, "//span[@class = 'g47SY ']"))) countOfFollowings = int(driver.find\_elements\_by\_xpath("//span[@class = 'g47SY ']")[2].text) #print(countOfFollowings, type(countOfFollowings)) WebDriverWait(driver,10).until(EC.element\_to\_be\_clickable((By.XPATH,'//li[@class = "Y8-fY "]'))) driver.find\_elements\_by\_xpath("//li[@class = 'Y8-fY ']")[2].click() followersPanel = driver.find\_element\_by\_xpath('//div[contains(@class,"isgrP")]') currentScrollPos, newHeight = 0,1 i = 0myFollowingsList = [] while i < countOfFollowings:</pre> try: follower = driver.find\_elements\_by\_xpath("//div[@class = 'PZuss']/li")[i] #print(i+1, follower.text.split()[0]) myFollowingsList.append(follower.text.split()[0]) i = i+1except IndexError : speed = 50currentScrollPos = newHeight newHeight = driver.execute\_script("return arguments[0].scrollHeight", followersPanel) while currentScrollPos <= newHeight:</pre> currentScrollPos += speed driver.execute\_script("arguments[0].scrollTo(0, arguments[1])", followersPanel, currentScrollPos) time.sleep(2) return myFollowingsList In [152... def myFollowers(): profileUrl = f'https://www.instagram.com/{username}/' driver.get(profileUrl) WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.XPATH, "//span[@class = 'g47SY ']"))) countOfFollowers = int(driver.find\_elements\_by\_xpath("//span[@class = 'g47SY ']")[1].text) #print(countOfFollowers, type(countOfFollowers)) WebDriverWait(driver, 10).until(EC.element\_to\_be\_clickable((By.XPATH, '//li[@class = "Y8-fY "]'))) driver.find\_elements\_by\_xpath("//li[@class = 'Y8-fY ']")[1].click() WebDriverWait(driver, 10).until(EC.presence\_of\_all\_elements\_located((By.XPATH, "//div[@class = 'isgrP']"))) followersPanel = driver.find\_element\_by\_xpath('//div[contains(@class, "isgrP")]') currentScrollPos, newHeight = 0,1 i = 0myFollowersList = [] while i < countOfFollowers:</pre> try: follower = driver.find\_elements\_by\_xpath("//div[@class = 'PZuss']/li")[i] #print(i+1, follower.text.split()[0]) myFollowersList.append(follower.text.split()[0]) i = i+1except IndexError : speed = 50currentScrollPos = newHeight newHeight = driver.execute\_script("return arguments[0].scrollHeight", followersPanel) while currentScrollPos <= newHeight:</pre> currentScrollPos += speed driver.execute\_script("arguments[0].scrollTo(0, arguments[1])", followersPanel, currentScrollPos) time.sleep(2) return myFollowersList def jerks(): myFollowingsList = myFollowings() myFollowersList = myFollowers() jerkList = set(myFollowingsList) - set(myFollowersList) **return** jerkList In [154... jerkList = jerks() print("Users who do not follow back") print("-----") for jerk in jerkList: print(jerk) Users who do not follow back sexeducation kevincanfhimself kiaraaliaadvani alicasmd \_archana\_\_anil eshhpat aksharpathak dundermifflinclips theindianidiot bhuvan.bam22 renukanair11 alexandradaddario bbcfleabag sampada1607 conscious.scientist laurenfisher poopcultureindia foodadikande aleena\_rais\_insta adeebaanaaz scottbrits theoffice emmatmackey superJerksList = set(handleFollowersList).intersection(jerkList) if len(superJerksList) == 0: print("No Such Users") print("All the followers of "foodtalkindia" that you are following but those who don't follow you, are") for jerk in superJerksList: print(jerk) No Such Users Task 7: Check the story of 'coding.ninjas'. Consider the following Scenarios and print error messages accordingly -7.1 If You have already seen the story. 7.2 Or The user has no story. 7.3 Or View the story if not yet seen. def watchStory(handle): goHomeInsta() openProfile(handle) try: driver.find\_element\_by\_xpath('//div[@class = "RR-M- h5uCO"]').click() height = driver.find\_element\_by\_xpath("//div[@class = 'RR-M- h5uC0']//canvas").get\_attribute('height') width = driver.find\_element\_by\_xpath("//div[@class = 'RR-M- h5uCO']//canvas").get\_attribute('width') #print(height, width) **if** height == '68' and width == '68': driver.find\_element\_by\_xpath('//div[@class = "RR-M- h5uCO"]').click() time.sleep(5) to close the story  $\#close\_btn = driver.find\_element\_by\_xpath('//div[@class = "K\_10X"]/button/div')$ #close\_btn.click() print(f"Just viewed {handle}'s story") elif height == '65' and width == '65': print(f'You have already viewed {handle}\'s story') except NoSuchElementException: print("User has no story") handle = 'coding.ninjas' In [157... watchStory(handle) You have already viewed coding.ninjas's story Logging out of Instagram In [158... logout() Logout Successful Closing the chrome driver window driver.close()