

Arjuna Group's Python and Wise Sessions
SSN College of Engineering
Kalavakkam- 603110

Python Project 2021-2022

IRCTC Automation

Project Students:

Pavan V. and Vanasri Vignesh B.

1st year- Electronics and Communication Engineering

Project Mentors:

Jayaraja Kamalasekar

Karthik D

Project Duration:

1 week

Project Summary:

IRCTC is the Indian Railways Catering and Touring Corporation which has been the sole Passenger Railway service Corporation in India connecting various parts of India. The bookings for its ticket is done online through the <https://www.irctc.co.in> website. If you are a frequent visitor and in a hurry, it would be wise to save the form and to use it as many times in future. So we have created a IRCTC automation using selenium that searches the website, fills out all the details and just asks for the date at last given the data once.

Objective:

1. Get the user data, on the departing and arriving station, type of ticket and apply concessions if any.
2. Using Selenium, open IRCTC and fill out the details.
3. Get the travel data during Run-time and automate until the choice of price step.

Used Libraries:

1. Selenium (external library):
Selenium has methods to open browser, point the cursor, mimic keyboard and mouse input operation on the website thereby automating browser. It is primarily used to test the behaviour of a web application program across various browsers and devices for any errors and the efficacy of the program. Selenium can work across a plethora of high

level language like python, java etc. It makes use of the Selenium webdriver and browser specific WebDrivers to automate a website.

2. time (in-built module):

It provides various time related functions. It is based on the ctime module from C language. It can be used to schedule the Python operation based on the time by halting a process until the specified time of its commencement.

Pre-requisites:

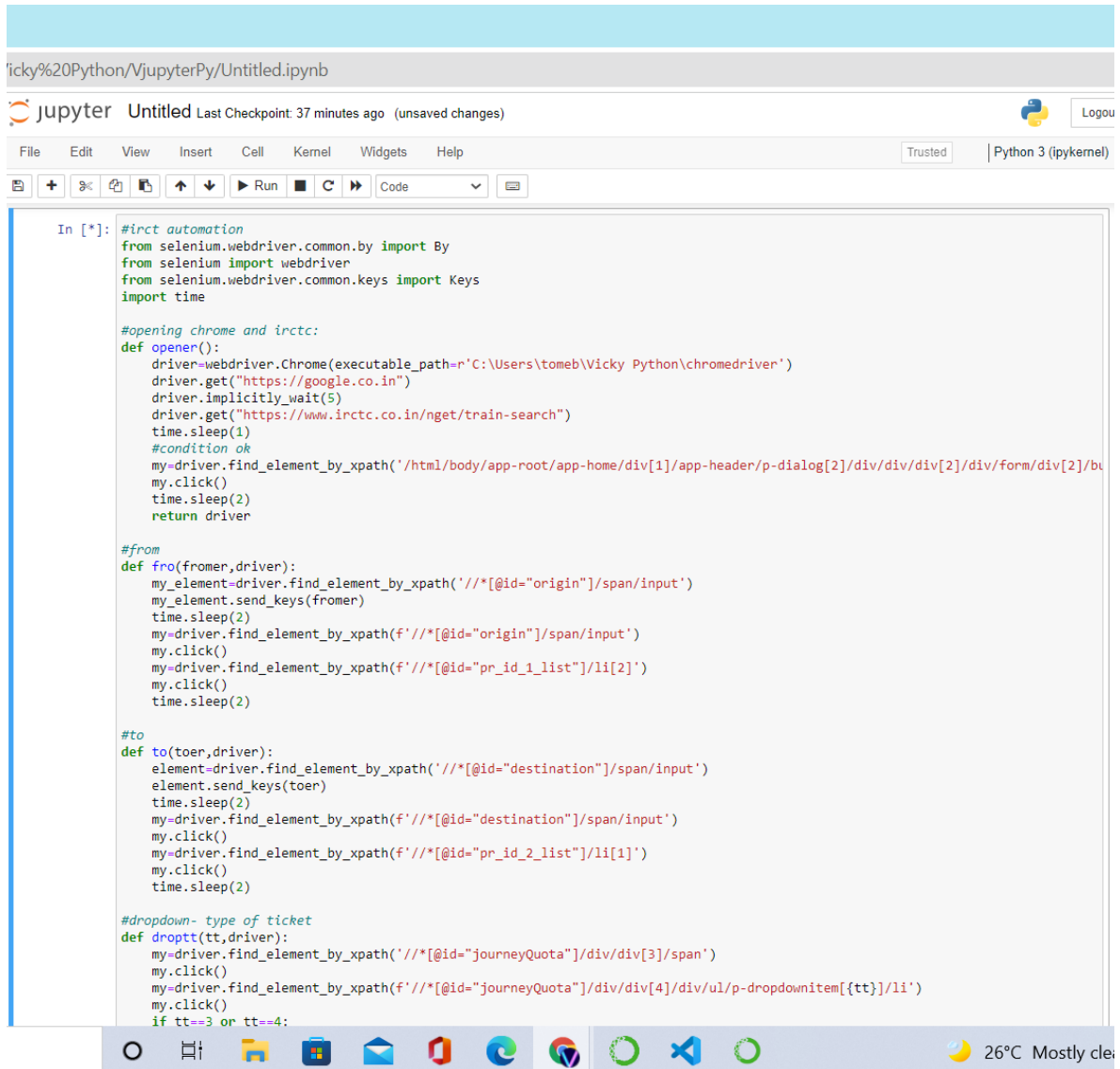
The user should give the data on, the department and arriving station, the class of ticket and the concession to be applied.

Implementation:

- Firstly, get the data, the departing and arriving station, type of ticket and the class of ticket etc.
- Then, open Chrome using Selenium and Chromedriver, using the driver.get(*) open irctc website.
- Using find_element_by_xpath(*) point the cursor.
- Using send_keys(*) and click() functions input the acquired data on the website.
- Wait for user to select date during runtime and click on submit.

OUTPUT SCREEN-SHOTS:

IRCTC Automation



```
In [*]: #irctc automation
from selenium.webdriver.common.by import By
from selenium import webdriver
from selenium.webdriver.common.keys import Keys
import time

#opening chrome and irctc:
def opener():
    driver=webdriver.Chrome(executable_path=r"C:\Users\tomeb\Vicky Python\chromedriver")
    driver.get("https://google.co.in")
    driver.implicitly_wait(5)
    driver.get("https://www.irctc.co.in/nget/train-search")
    time.sleep(1)
    #condition ok
    my=driver.find_element_by_xpath('/html/body/app-root/app-home/div[1]/app-header/p-dialog[2]/div/div/div[2]/div/form/div[2]/b')
    my.click()
    time.sleep(2)
    return driver

#from
def fro(fromer,driver):
    my_element=driver.find_element_by_xpath('//*[@id="origin"]/span/input')
    my_element.send_keys(fromer)
    time.sleep(2)
    my=driver.find_element_by_xpath('//*[@id="origin"]/span/input')
    my.click()
    my=driver.find_element_by_xpath('//*[@id="pr_id_1_list"]/li[2]')
    my.click()
    time.sleep(2)

#to
def to(toer,driver):
    element=driver.find_element_by_xpath('//*[@id="destination"]/span/input')
    element.send_keys(toer)
    time.sleep(2)
    my=driver.find_element_by_xpath('//*[@id="destination"]/span/input')
    my.click()
    my=driver.find_element_by_xpath('//*[@id="pr_id_2_list"]/li[1]')
    my.click()
    time.sleep(2)

#dropdown- type of ticket
def droptt(tt,driver):
    my=driver.find_element_by_xpath('//*[@id="journeyQuota"]/div/div[3]/span')
    my.click()
    my=driver.find_element_by_xpath('//*[@id="journeyQuota"]/div/div[4]/div/ul/p-dropdownitem[{tt}]/li')
    my.click()
    if tt==3 or tt==4:
```

Vicky%20Python/VjupyterPy/Untitled.ipynb

jupyter Untitled Last Checkpoint: 37 minutes ago (unsaved changes) Python 3 (ipykernel) Logout

File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel)

```

if tt==3 or tt==4:
    my=driver.find_element_by_xpath(f'//*[@id="divMain"]/div/app-main-page/div/div/div[1]/div[1]/div[1]/app-jp-input/p-confir
    my.click()
    time.sleep(2)
else: time.sleep(2)

#dropdown-class
def droptc(tc,driver):
    my=driver.find_element_by_xpath('//*[@id="journeyClass"]/div/div[3]/span')
    my.click()
    my=driver.find_element_by_xpath(f'//*[@id="journeyClass"]/div/div[4]/div/ul/p-dropdownitem[{tc}]/li/span')
    my.click()
    time.sleep(2)

#set date
def setdate(driver):
    my=driver.find_element_by_xpath(f'//*[@id="jDate"]/span/input')
    my.click()
    time.sleep(15)
    book_button=driver.find_element_by_xpath('//*[@id="divMain"]/div/app-main-page/div/div/div[1]/div[1]/div[1]/app-jp-input/div
    book_button.click()
    time.sleep(10)
    my=driver.find_element_by_xpath(f'//*[@id="divMain"]/div/app-main-page/div/div/div[1]/div[1]/div[1]/app-jp-input/p-confirmdia
    my.click()
    time.sleep(2)

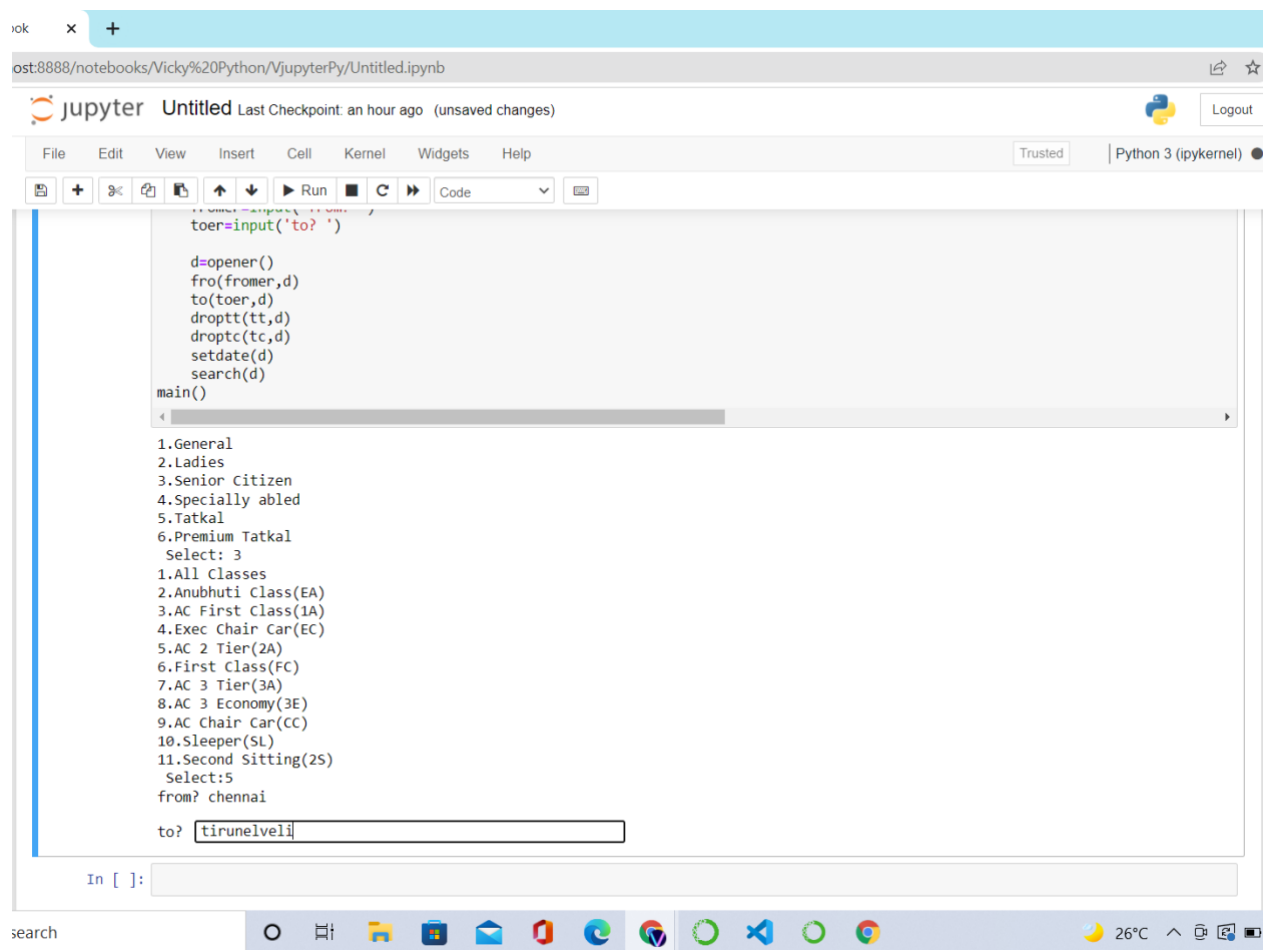
#select search
def search(driver):
    v=driver.find_element_by_xpath('//*[@id="divMain"]/div/app-train-list/div[4]/div/div[5]/div[1]/div[1]/app-train-avl-enq/div[1]
    v.click()

def main():
    #inputs
    #tt- type of ticket
    tt=int(input(f'1.General\n2.Ladies\n3.Senior Citizen\n4.Specially abled\n5.Tatkal\n6.Premium Tatkal\n Select: '))
    #tc- class of ticket
    tc=int(input(f'1.All Classes\n2.Anubhuti Class(EA)\n3.AC First Class(1A)\n4.Exec Chair Car(EC)\n5.AC 2 Tier(2A)\n6.First Clas
    #from-to
    fromer=input('from? ')
    toer=input('to? ')

    d=opener()
    fro(fromer,d)
    to(toer,d)
    droptt(tt,d)
    droptc(tc,d)
    setdate(d)
    search(d)
main()

```

26°C Mostly clear



The screenshot displays a Jupyter Notebook titled 'Untitled' with a Python 3 (ipykernel) environment. The code in the notebook is as follows:

```

toer=input('to? ')

d=opener()
fro(fromer,d)
to(toer,d)
droptt(tt,d)
droptc(tc,d)
setdate(d)
search(d)
main()

```

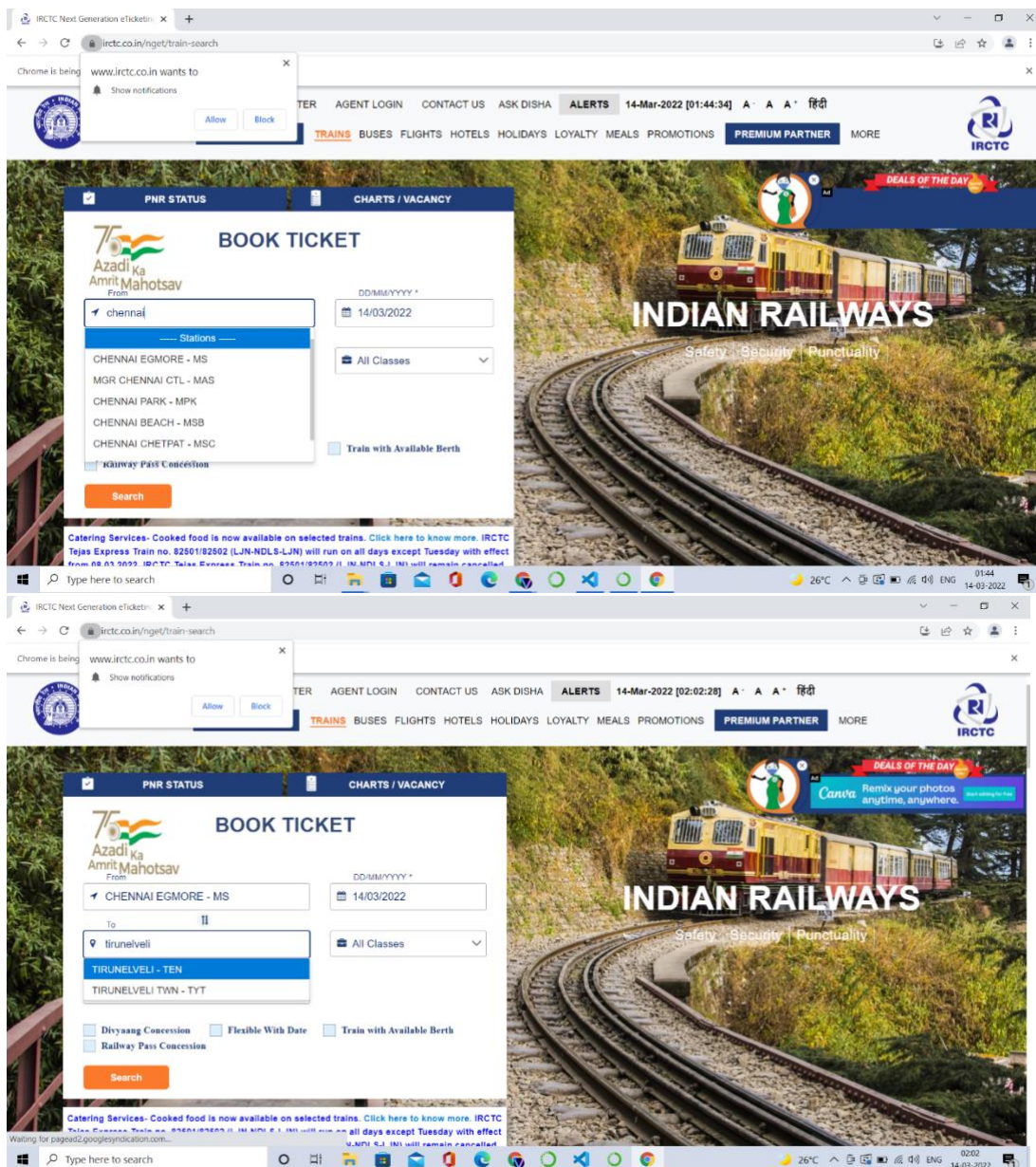
The output of the code shows a list of train classes and a prompt for the 'to?' station:

```

1.General
2.Ladies
3.Senior Citizen
4.Specially abled
5.Tatkal
6.Premium Tatkal
Select: 3
1.All Classes
2.Anubhuti Class(EA)
3.AC First Class(1A)
4.Exec Chair Car(EC)
5.AC 2 Tier(2A)
6.First Class(FC)
7.AC 3 Tier(3A)
8.AC 3 Economy(3E)
9.AC Chair Car(CC)
10.Sleeper(SL)
11.Second Sitting(2S)
Select:5
from? chennai
to? tirunelveli

```

The input field for 'to?' contains the text 'tirunelveli'.



IRCTC Automation

IRCTC Next Generation eTicketing: x

www.irctc.co.in wants to

TER AGENT LOGIN CONTACT US ASK DISHA ALERTS 14-Mar-2022 [01:44:49] A A A

TRAINS BUSES FLIGHTS HOTELS HOLIDAYS LOYALTY MEALS PROMOTIONS PREMIUM PARTNER MORE

PNR STATUS CHARTS / VACANCY

BOOK TICKET

75 Azadi Ka Amrit Mahotsav

From CHENNAI EGMORE - MS To TIRUNELVELI - TEN

DD/MM/YYYY * 14/03/2022

LOWER BERTH/SR.CITIZEN

Divyaang Concession Flexible With Date Railway Pass Concession

Search

Catering Services- Cooked food is now available on selected Tejas Express Train no. 82501/82502 (LJN-NDLS-LJN) will run from 08.03.2022. IRCTC Tejas Express Train no. 82501/82502 (LJN-NDLS-LJN) will remain cancelled.

Ask DISHA Digital Interaction to Seek Help Anytime

Get 233 any-net Minutes for R97 shop now MTN

DEALS OF THE DAY

Most Asked Queries

Cancel e-ticket? Check refund status? Check the availability? Tatkal timing?

Enter your query here

Advertise with us! Powered by Confuser

Type here to search

26°C 01:44 14-03-2022

IRCTC Next Generation eTicketing: x

www.irctc.co.in wants to

TER AGENT LOGIN CONTACT US ASK DISHA ALERTS 14-Mar-2022 [02:03:06] A A A

TRAINS BUSES FLIGHTS HOTELS HOLIDAYS LOYALTY MEALS PROMOTIONS PREMIUM PARTNER MORE

CHENNAI EGMORE - TIRUNELVELI - TEN 31/03/2022 AC 2 Tier (2A) LOWER BERTH/SR.CITIZEN

Flexible With Date Train with Available Berth Divyaang Concession Railway Pass Concession

Modify Search

Refine Results Reset Filters

JOURNEY CLASS Select All

AC First Class (1A) AC 2 Tier (2A) Second Sitting (2S) AC 3 Tier (3A) Sleeper (SL)

TRAIN TYPE Select All

OTHER SPECIAL

DEPARTURE TIME Select All

00:00 - 06:00 Early Morning 06:00 - 12:00 Morning 12:00 - 18:00 18:00 - 24:00

6 Results for CHENNAI EGMORE → TIRUNELVELI | Thu, 31 Mar 2022 For Quota | Lower Berth/sr.citizen

Sort By | Duration Show Available Trains

MS NCJ EXPRESS (12667) Runs On: M T W T F S S Train Schedule

18:55 | CHENNAI EGMORE | Thu, 31 Mar 10:25 05:20 | TIRUNELVELI | Fri, 01 Apr

Second Sitting (2S) Sleeper (SL) AC 3 Tier (3A) AC 2 Tier (2A)

Thu, 31 Mar Thu, 07 Apr Thu, 14 Apr Thu, 21 Apr Thu, 28 Apr Thu, 05 May

AVAILABLE-0003 AVAILABLE-0003 AVAILABLE-0001 AVAILABLE-0003 AVAILABLE-0003 AVAILABLE-0003

Book Now ₹ 1460

Tata AIA Life Insurance Sampurna Raksha Supreme TATA AIA

An affordable Term Plan for you

Type here to search

26°C 02:03 14-03-2022

