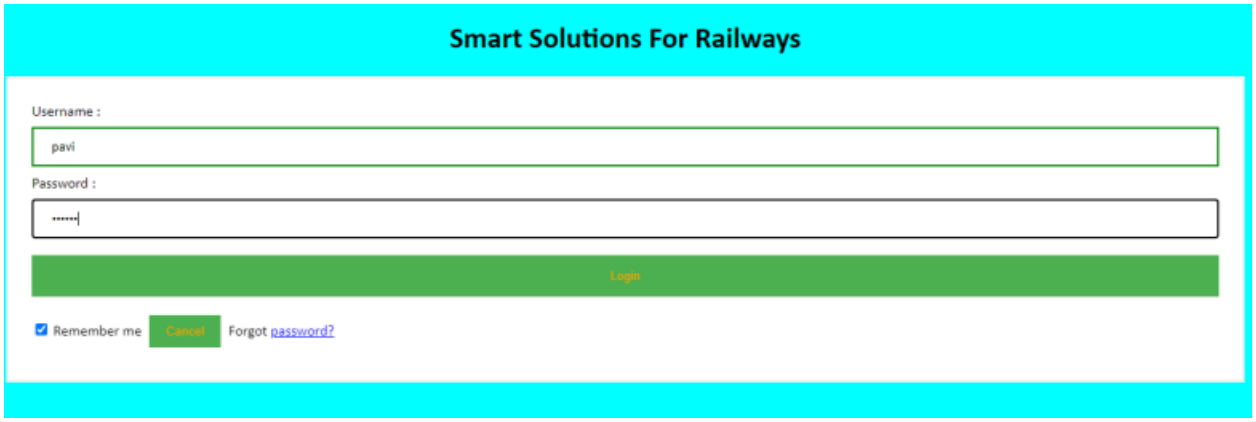
SPRINT 1:

login.py:

```
from tkinter import *
import sqlite3

root = Tk()
root.title("Python: Simple Login Application")
width = 400
height = 280
screen_width = root.winfo_screenwidth()
screen_height = root.winfo_screenheight()
x = (screen_width/2) - (width/2)
y = (screen_height/2) - (height/2)
root.geometry("%dx%d+%d+%d" % (width, height, x, y))
root.resizable(0, 0)

#==============================VARIABLES============================
==========
USERNAME = StringVar()
PASSWORD = StringVar()

#==============================FRAMES===============================
==========
Top = Frame(root, bd=2,  relief=RIDGE)
Top.pack(side=TOP, fill=X)
Form = Frame(root, height=200)
Form.pack(side=TOP, pady=20)

#==============================LABELS===============================
==========
lbl_title = Label(Top, text = "Python: Simple Login Application", font=('arial', 15))
lbl_title.pack(fill=X)
lbl_username = Label(Form, text = "Username:", font=('arial', 14), bd=15)
lbl_username.grid(row=0, sticky="e")
lbl_password = Label(Form, text = "Password:", font=('arial', 14), bd=15)
lbl_password.grid(row=1, sticky="e")
lbl_text = Label(Form)
lbl_text.grid(row=2, columnspan=2)

#==============================ENTRY
WIDGETS==================================
username = Entry(Form, textvariable=USERNAME, font=(14))
username.grid(row=0, column=1)
password = Entry(Form, textvariable=PASSWORD, show="*", font=(14))
password.grid(row=1, column=1)
```

```
#==============================METHODS==============================
===========
def Database():
    global conn, cursor
    conn = sqlite3.connect("pythontut.db")
    cursor = conn.cursor()
    cursor.execute("CREATE TABLE IF NOT EXISTS `member` (mem_id INTEGER NOT
NULL PRIMARY KEY  AUTOINCREMENT, username TEXT, password TEXT)")
    cursor.execute("SELECT * FROM `member` WHERE `username` = 'admin' AND `password`
= 'admin'")
    if cursor.fetchone() is None:
        cursor.execute("INSERT INTO `member` (username, password) VALUES('admin',
'admin')")
        conn.commit()
def Login(event=None):
    Database()
    if USERNAME.get() == "" or PASSWORD.get() == "":
        lbl_text.config(text="Please complete the required field!", fg="red")
    else:
        cursor.execute("SELECT * FROM `member` WHERE `username` = ? AND `password` =
?", (USERNAME.get(), PASSWORD.get()))
        if cursor.fetchone() is not None:
            HomeWindow()
            USERNAME.set("")
            PASSWORD.set("")
            lbl_text.config(text="")
        else:
            lbl_text.config(text="Invalid username or password", fg="red")
            USERNAME.set("")
            PASSWORD.set("")
    cursor.close()
    conn.close()


#==============================BUTTON
WIDGETS================================
btn_login = Button(Form, text="Login", width=45, command=Login)
btn_login.grid(pady=25, row=3, columnspan=2)
btn_login.bind('<Return>', Login)


def HomeWindow():
    global Home
```

```
    root.withdraw()
    Home = Toplevel()
    Home.title("Python: Simple Login Application")
    width = 600
    height = 500
    screen_width = root.winfo_screenwidth()
    screen_height = root.winfo_screenheight()
    x = (screen_width/2) - (width/2)
    y = (screen_height/2) - (height/2)
    root.resizable(0, 0)
    Home.geometry("%dx%d+%d+%d" % (width, height, x, y))
    lbl_home = Label(Home, text="Successfully Login!", font=('times new roman', 20)).pack()
    btn_back = Button(Home, text='Back', command=Back).pack(pady=20, fill=X)

def Back():
    Home.destroy()
    root.deiconify()
```



otpgen.py

```
# import library
import math, random

# function to generate OTP
def generateOTP() :

    # Declare a digits variable
    # which stores all digits
    digits = "0123456789"
    OTP = ""

   # length of password can be changed
   # by changing value in range
    for i in range(4) :
```

```
        OTP += digits[math.floor(random.random() * 10)]

    return OTP

# Driver code
if __name__ == "__main__" :

    print("OTP of 4 digits:", generateOTP())
```

Anaconda Powershell Prompt (anaconda3)

```
(base) PS E:\IBM_Project> python otpgen.py
OTP of 4 digits: 0942
(base) PS E:\IBM_Project>
```

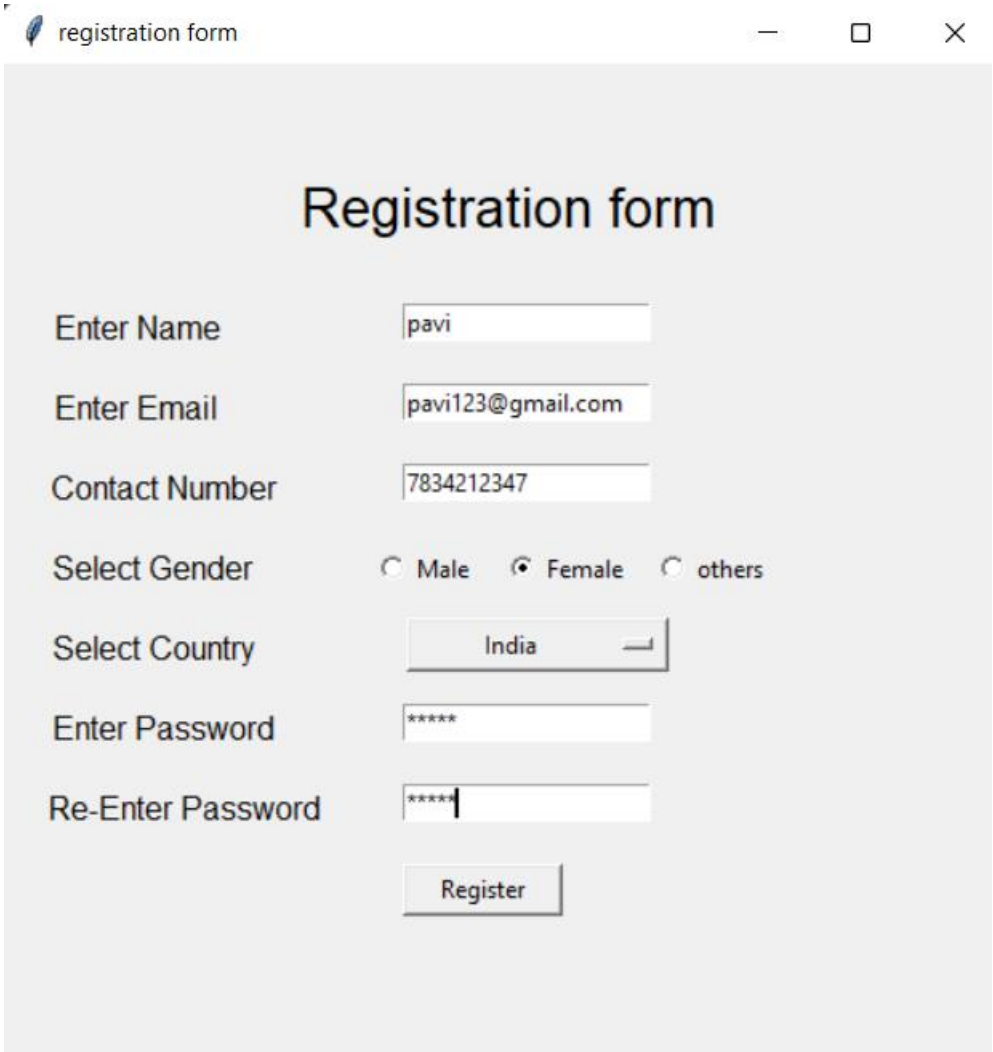
otpveri.py:

```
import os
import math
import random
import smtplib

digits = "0123456789"
OTP = ""

for i in range (6):
    OTP += digits[math.floor(random.random()*10)]

otp = OTP + " is your OTP"
message = otp
s = smtplib.SMTP('smtp.gmail.com', 587)
s.starttls()

emailid = input("Enter your email: ")
s.login("YOUR Gmail ID", "YOUR APP PASSWORD")
s.sendmail('&&&&&&',emailid,message)

a = input("Enter your OTP >>: ")
if a == OTP:
    print("Verified")
else:
    print("Please Check your OTP again")
```

reg.py:

```
from tkinter import*
base = Tk()
base.geometry("500x500")
base.title("registration form")

labl_0 = Label(base, text="Registration form",width=20,font=("bold", 20))
labl_0.place(x=90,y=53)

lb1= Label(base, text="Enter Name", width=10, font=("arial",12))
lb1.place(x=20, y=120)
en1= Entry(base)
en1.place(x=200, y=120)

lb3= Label(base, text="Enter Email", width=10, font=("arial",12))
lb3.place(x=19, y=160)
en3= Entry(base)
en3.place(x=200, y=160)

lb4= Label(base, text="Contact Number", width=13,font=("arial",12))
lb4.place(x=19, y=200)
en4= Entry(base)
en4.place(x=200, y=200)

lb5= Label(base, text="Select Gender", width=15, font=("arial",12))
lb5.place(x=5, y=240)
var = IntVar()
Radiobutton(base, text="Male", padx=5,variable=var, value=1).place(x=180, y=240)
Radiobutton(base, text="Female", padx =10,variable=var, value=2).place(x=240,y=240)
Radiobutton(base, text="others", padx=15, variable=var, value=3).place(x=310,y=240)

list_of_cntry = ("United States", "India", "Nepal", "Germany")
cv = StringVar()
drplist= OptionMenu(base, cv, *list_of_cntry)
drplist.config(width=15)
cv.set("United States")
lb2= Label(base, text="Select Country", width=13,font=("arial",12))
lb2.place(x=14,y=280)
drplist.place(x=200, y=275)

lb6= Label(base, text="Enter Password", width=13,font=("arial",12))
lb6.place(x=19, y=320)
en6= Entry(base, show='*')
en6.place(x=200, y=320)

lb7= Label(base, text="Re-Enter Password", width=15,font=("arial",12))
```

```
lb7.place(x=21, y=360)
en7 =Entry(base, show='*')
en7.place(x=200, y=360)

Button(base, text="Register", width=10).place(x=200,y=400)
base.mainloop()
```



Start_des.py:

```
# import module
import requests
from bs4 import BeautifulSoup

# user define function
# Scrape the data
def getdata(url):
```

```
    r = requests.get(url)
    return r.text


# input by geek
from_Station_code = "GAYA"
from_Station_name = "GAYA"

To_station_code = "PNBE"
To_station_name = "PATNA"
# url
url = "https://www.railyatri.in/booking/trains-between-
stations?from_code="+from_Station_code+"&from_name="+from_Station_name+"+JN+&journ
ey_date=+Wed&src=tbs&to_code=" + \
    To_station_code+"&to_name="+To_station_name + \
    "+JN+&user_id=-
1603228437&user_token=355740&utm_source=dwebsearch_tbs_search_trains"

# pass the url
# into getdata function
htmldata = getdata(url)
soup = BeautifulSoup(htmldata, 'html.parser')

# find the Html tag
# with find()
# and convert into string
data_str = ""
for item in soup.find_all("div", class_="col-xs-12 TrainSearchSection"):
    data_str = data_str + item.get_text()
result = data_str.split("\n")

print("Train between "+from_Station_name+" and "+To_station_name)
print("")

# Display the result
for item in result:
    if item != "":
        print(item)
```

```
(base) PS E:\IBM_Project\Sprint_1> python start_des.py
Train between GAYA and PATNA

(base) PS E:\IBM_Project\Sprint_1>
```

SPRINT 2:

Booking.py:

```
print("\n\nTicket Booking System\n")
restart = ('Y')

while restart != ('N','NO','n','no'):
	print("1.Check PNR status")
	print("2.Ticket Reservation")
	option = int(input("\nEnter your option : "))

	if option == 1:
		print("Your PNR status is t3")
		exit(0)

	elif option == 2:
		people = int(input("\nEnter no. of Ticket you want : "))
		name_l = []
		age_l = []
		sex_l = []
		for p in range(people):
			name = str(input("\nName : "))
			name_l.append(name)
			age  = int(input("\nAge  : "))
			age_l.append(age)
			sex  = str(input("\nMale or Female : "))
			sex_l.append(sex)

		restart = str(input("\nDid you forgot someone? y/n: "))
		if restart in ('y','YES','yes','Yes'):
			restart = ('Y')
		else :
			x = 0
			print("\nTotal Ticket : ",people)
			for p in range(1,people+1):
				print("Ticket : ",p)
				print("Name : ", name_l[x])
				print("Age  : ", age_l[x])
				print("Sex : ",sex_l[x])
				x += 1
```

```
(base) PS E:\IBM_Project\Sprint_2> python booking.py


Ticket Booking System

1.Check PNR status
2.Ticket Reservation

Enter your option : 2

Enter no. of Ticket you want : 2

Name : Pavi

Age  : 21

Male or Female : Female

Name : Binu

Age  : 21

Male or Female : Female

Did you forgot someone? y/n: n

Total Ticket :  2
Ticket :  1
Name :  Pavi
Age  :  21
Sex :  Female
Ticket :  2
Name :  Binu
Age  :  21
Sex :  Female
1.Check PNR status
2.Ticket Reservation

Enter your option : 1
Your PNR status is t3
(base) PS E:\IBM_Project\Sprint_2>
```

Payment.py:

```
from django.contrib.auth.base_user import AbstractBaseUser
from django.db import models


class User(AbstractBaseUser):
    """
    User model.
    """

    USERNAME_FIELD = "email"

    REQUIRED_FIELDS = ["first_name", "last_name"]

    email = models.EmailField(
        verbose_name="E-mail",
        unique=True
    )

    first_name = models.CharField(
        verbose_name="First name",
        max_length=30
    )

    last_name = models.CharField(
        verbose_name="Last name",
        max_length=40
    )

    city = models.CharField(
        verbose_name="City",
        max_length=40
    )

    stripe_id = models.CharField(
        verbose_name="Stripe ID",
        unique=True,
        max_length=50,
        blank=True,
        null=True
    )

    objects = UserManager()

    @property
    def get_full_name(self):
```

```
        return f"{self.first_name} {self.last_name}"

    class Meta:
        verbose_name = "User"
        verbose_name_plural = "Users"


class Profile(models.Model):
    """
    User's profile.
    """

    phone_number = models.CharField(
        verbose_name="Phone number",
        max_length=15
    )

    date_of_birth = models.DateField(
        verbose_name="Date of birth"
    )

    postal_code = models.CharField(
        verbose_name="Postal code",
        max_length=10,
        blank=True
    )

    address = models.CharField(
        verbose_name="Address",
        max_length=255,
        blank=True
    )

    class Meta:
        abstract = True


class UserProfile(Profile):
    """
    User's profile model.
    """

    user = models.OneToOneField(
        to=User, on_delete=models.CASCADE, related_name="profile",
    )
```

```
    group = models.CharField(
        verbose_name="Group type",
        choices=GroupTypeChoices.choices(),
        max_length=20,
        default=GroupTypeChoices.EMPLOYEE.name,
    )

    def __str__(self):
        return self.user.email

    class Meta:

# user 1 - employer
user1, _ = User.objects.get_or_create(
    email="foo@bar.com",
    first_name="Employer",
    last_name="Testowy",
    city="Białystok",
)

user1.set_unusable_password()

group_name = "employer"

_profile1, _ = UserProfile.objects.get_or_create(
    user=user1,
    date_of_birth=datetime.now() - timedelta(days=6600),
    group=GroupTypeChoices(group_name).name,
    address="Myśliwska 14",
    postal_code="15-569",
    phone_number="+48100200300",
)

# user2 - employee
user2, _ = User.objects.get_or_create()
    email="bar@foo.com",
    first_name="Employee",
    last_name="Testowy",
    city="Białystok",
)

user2.set_unusable_password()

group_name = "employee"

_profile2, _ = UserProfile.objects.get_or_create()
```

```
    user=user2,
    date_of_birth=datetime.now() - timedelta(days=7600),
    group=GroupTypeChoices(group_name).name,
    address="Myśliwska 14",
    postal_code="15-569",
    phone_number="+48200300400",
)

response_customer = stripe.Customer.create()
    email=user.email,
    description=f"EMPLOYER - {user.get_full_name}",
    name=user.get_full_name,
    phone=user.profile.phone_number,
)

user1.stripe_id = response_customer.stripe_id
user1.save()

mcc_code, url = "1520", "https://www.softserveinc.com/"

response_ca = stripe.Account.create()
    type="custom",
    country="PL",
    email=user2.email,
    default_currency="pln",
    business_type="individual",
    settings={"payouts": {"schedule": {"interval": "manual", }}},
    requested_capabilities=["card_payments", "transfers", ],
    business_profile={"mcc": mcc_code, "url": url},
    individual={
        "first_name": user2.first_name,
        "last_name": user2.last_name,
        "email": user2.email,
        "dob": {
            "day": user2.profile.date_of_birth.day,
            "month": user2.profile.date_of_birth.month,
            "year": user2.profile.date_of_birth.year,
        },
        "phone": user2.profile.phone_number,
        "address": {
            "city": user2.city,
            "postal_code": user2.profile.postal_code,
            "country": "PL",
            "line1": user2.profile.address,
        },
    },
```

```
)

user2.stripe_id = response_ca.stripe_id
user2.save()

tos_acceptance = {"date": int(time.time()), "ip": user_ip},

stripe.Account.modify(user2.stripe_id, tos_acceptance=tos_acceptance)

passport_front = stripe.File.create(
    purpose="identity_document",
    file=_file, # ContentFile object
    stripe_account=user2.stripe_id,
)

individual = {
    "verification": {
        "document": {"front": passport_front.get("id"),},
        "additional_document": {"front": passport_front.get("id"),},
    }
}


stripe.Account.modify(user2.stripe_id, individual=individual)

new_card_source = stripe.Customer.create_source(user1.stripe_id, source=token)

stripe.SetupIntent.create(
    payment_method_types=["card"],
    customer=user1.stripe_id,
    description="some description",
    payment_method=new_card_source.id,
)

payment_method = stripe.Customer.retrieve(user1.stripe_id).default_source

payment_intent = stripe.PaymentIntent.create(
    amount=amount,
    currency="pln",
    payment_method_types=["card"],
    capture_method="manual",
    customer=user1.stripe_id, # customer
    payment_method=payment_method,
    application_fee_amount=application_fee_amount,
    transfer_data={"destination": user2.stripe_id}, # connect account
    description=description,
```

```
    metadata=metadata,
)

payment_intent_confirm = stripe.PaymentIntent.confirm(
    payment_intent.stripe_id, payment_method=payment_method
)

stripe.PaymentIntent.capture(
    payment_intent.id, amount_to_capture=amount
)
stripe.Balance.retrieve(stripe_account=user2.stripe_id)

stripe.Charge.create(
    amount=amount,
    currency="pln",
    source=user2.stripe_id,
    description=description
)

stripe.PaymentIntent.cancel(payment_intent.id)


        unique_together = ("user", "group")
```

Apply Coupons | Pay with Netbanking

Pay using Credit or Debit card

Card Number ###-###-###

Expiry Date DD-MM-YY
CVV number xxx
Card Holder name Enter your Name
submit

redirect.py:

```
import logging

import attr
from flask import Blueprint, flash, redirect, request, url_for
from flask.views import MethodView
from flask_babelplus import gettext as _
from flask_login import current_user, login_required
from pluggy import HookimplMarker

@attr.s(frozen=True, cmp=False, hash=False, repr=True)
class UserSettings(MethodView):
    form = attr.ib(factory=settings_form_factory)
    settings_update_handler = attr.ib(factory=settings_update_handler)

    decorators = [login_required]

    def get(self):
        return self.render()

    def post(self):
        if self.form.validate_on_submit():
            try:
                self.settings_update_handler.apply_changeset(
                    current_user, self.form.as_change()
                )
            except StopValidation as e:
                self.form.populate_errors(e.reasons)
                return self.render()
            except PersistenceError:
                logger.exception("Error while updating user settings")
                flash(_("Error while updating user settings"), "danger")
                return self.redirect()

            flash(_("Settings updated."), "success")
            return self.redirect()
        return self.render()

    def render(self):
        return render_template("user/general_settings.html", form=self.form)

    def redirect(self):
        return redirect(url_for("user.settings"))


@attr.s(frozen=True, hash=False, cmp=False, repr=True)
```

```
class ChangePassword(MethodView):
    form = attr.ib(factory=change_password_form_factory)
    password_update_handler = attr.ib(factory=password_update_handler)
    decorators = [login_required]

    def get(self):
        return self.render()

    def post(self):
        if self.form.validate_on_submit():
            try:
                self.password_update_handler.apply_changeset(
                    current_user, self.form.as_change()
                )
            except StopValidation as e:
                self.form.populate_errors(e.reasons)
                return self.render()
            except PersistenceError:
                logger.exception("Error while changing password")
                flash(_("Error while changing password"), "danger")
                return self.redirect()

            flash(_("Password updated."), "success")
            return self.redirect()
        return self.render()

    def render(self):
        return render_template("user/change_password.html", form=self.form)

    def redirect(self):
        return redirect(url_for("user.change_password"))


@attr.s(frozen=True, cmp=False, hash=False, repr=True)
class ChangeEmail(MethodView):
    form = attr.ib(factory=change_email_form_factory)
    update_email_handler = attr.ib(factory=email_update_handler)
    decorators = [login_required]

    def get(self):
        return self.render()

    def post(self):
        if self.form.validate_on_submit():
            try:
                self.update_email_handler.apply_changeset(
```

```
                current_user, self.form.as_change()
            )
        except StopValidation as e:
            self.form.populate_errors(e.reasons)
            return self.render()
        except PersistenceError:
            logger.exception("Error while updating email")
            flash(_("Error while updating email"), "danger")
            return self.redirect()

        flash(_("Email address updated."), "success")
        return self.redirect()
    return self.render()

def render(self):
    return render_template("user/change_email.html", form=self.form)

def redirect(self):
    return redirect(url_for("user.change_email"))
```

seatsbook.py:

```
def berth_type(s):

    if s>0 and s<73:
        if s % 8 == 1 or s % 8 == 4:
            print (s), "is lower berth"
        elif s % 8 == 2 or s % 8 == 5:
            print (s), "is middle berth"
        elif s % 8 == 3 or s % 8 == 6:
            print (s), "is upper berth"
        elif s % 8 == 7:
            print (s), "is side lower berth"
        else:
            print (s), "is side upper berth"
    else:
        print (s), "invalid seat number"

# Driver code
s = 10
berth_type(s)      # fxn call for berth type

s = 7
berth_type(s)     # fxn call for berth type

s = 0
```

berth_type(s) # fxn call for berth type

```
(base) PS E:\IBM_Project\Sprint_2> python seatsbook.py
10
7
0
(base) PS E:\IBM_Project\Sprint_2>
```

SPRINT 3:

ticketgen.py:

```
class Ticket:
    counter=0
    def __init__(self,passenger_name,source,destination):
        self.__passenger_name=passenger_name
        self.__source=source
        self.__destination=destination
        self.Counter=Ticket.counter
        Ticket.counter+=1
    def validate_source_destination(self):
        if (self.__source=="Delhi" and (self.__destination=="Pune" or
self.__destination=="Mumbai" or self.__destination=="Chennai" or
self.__destination=="Kolkata")):
            return True
        else:
            return False

    def generate_ticket(self ):
        if True:
            __ticket_id=self.__source[0]+self.__destination[0]+"0"+str(self.Counter)
            print( "Ticket id will be:",__ticket_id)
        else:
            return False
    def get_ticket_id(self):
        return self.ticket_id
    def get_passenger_name(self):
        return self.__passenger_name
    def get_source(self):
        if self.__source=="Delhi":
            return self.__source
        else:
            print("you have written invalid soure option")
            return None
    def get_destination(self):
        if self.__destination=="Pune":
            return self.__destination
        elif self.__destination=="Mumbai":
            return self.__destination
        elif self.__destination=="Chennai":
            return self.__destination
        elif self.__destination=="Kolkata":
            return self.__destination

        else:
            return None
```

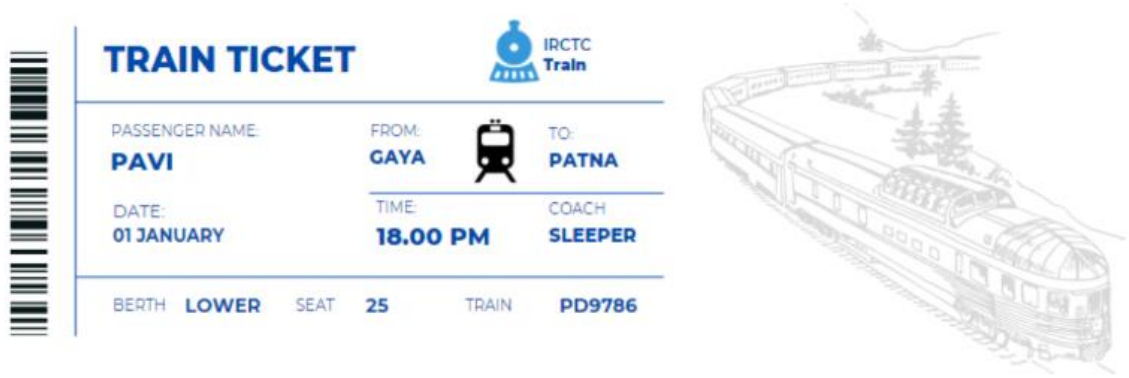
confirmation.py:

```
# import module
import requests
from bs4 import BeautifulSoup
import pandas as pd

# user define function
# Scrape the data
def getdata(url):
	r = requests.get(url)
	return r.text

# input by geek
train_name = "03391-rajgir-new-delhi-clone-special-rgd-to-ndls"

# url
url = "https://www.railyatri.in/live-train-status/"+train_name

# pass the url
# into getdata function
htmldata = getdata(url)
soup = BeautifulSoup(htmldata, 'html.parser')

# traverse the live status from
# this Html code
data = []
for item in soup.find_all('script', type="application/ld+json"):
	data.append(item.get_text())

# convert into dataframe
df = pd.read_json(data[2])

# display this column of
# dataframe
print(df["mainEntity"][0]['name'])
print(df["mainEntity"][0]['acceptedAnswer']['text'])
```

Ticket is booked successfully

Happy journey!!!

Latitude: 13.0261299
Longitude: 80.223446



gpstrack.py:

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from PIL import Image, ImageDraw

data_path = 'data.csv'
data = pd.read_csv(data_path, names=['LATITUDE', 'LONGITUDE'], sep=',')
gps_data = tuple(zip(data['LATITUDE'].values, data['LONGITUDE'].values))

image = Image.open('map.png', 'r')  # Load map image.
img_points = []
for d in gps_data:
    x1, y1 = scale_to_img(d, (image.size[0], image.size[1]))  # Convert GPS coordinates to image
coordinates.
    img_points.append((x1, y1))
draw = ImageDraw.Draw(image)
draw.line(img_points, fill=(255, 0, 0), width=2)  # Draw converted records to the map image.
```

```
image.save('resultMap.png')
x_ticks = map(lambda x: round(x, 4), np.linspace(lon1, lon2, num=7))
y_ticks = map(lambda x: round(x, 4), np.linspace(lat1, lat2, num=8))
y_ticks = sorted(y_ticks, reverse=True)  # y ticks must be reversed due to conversion to image
coordinates.

fig, axis1 = plt.subplots(figsize=(10, 10))
axis1.imshow(plt.imread('resultMap.png'))  # Load the image to matplotlib plot.
axis1.set_xlabel('Longitude')
axis1.set_ylabel('Latitude')
axis1.set_xticklabels(x_ticks)
axis1.set_yticklabels(y_ticks)
axis1.grid()
plt.show()
```

notification.py:

```
import pyttsx3
from plyer import notification
import time


# Speak method
def Speak(self, audio):

        # Calling the initial constructor
        # of pyttsx3
        engine = pyttsx3.init('sapi5')

        # Calling the getter method
        voices = engine.getProperty('voices')

        # Calling the setter method
        engine.setProperty('voice', voices[1].id)

        engine.say(audio)
        engine.runAndWait()


def Take_break():

        Speak("Do you want to start sir?")
        question = input()
```

```
        if "yes" in question:
                Speak("Starting Sir")

        if "no" in question:
                Speak("We will automatically start after 5 Mins Sir.")
                time.sleep(5*60)
                Speak("Starting Sir")

        # A notification we will held that
        # Let's Start sir and with a message of
        # will tell you to take a break after 45
        # mins for 10 seconds
        while(True):
                notification.notify(title="Let's Start sir",
                message="will tell you to take a break after 45 mins",
                timeout=10)

                # For 45 min the will be no notification but
                # after 45 min a notification will pop up.
                time.sleep(0.5*60)

                Speak("Please Take a break Sir")

                notification.notify(title="Break Notification",
                message="Please do use your device after sometime as you have"
                "been continuously using it for 45 mins and it will affect your eyes",
                timeout=10)


# Driver's Code
if __name__ == '__main__':
        Take_break()
```

SPRINT 4:

ansqueries.py:

```
import email, smtplib, ssl

from email import encoders
from email.mime.base import MIMEBase
from email.mime.multipart import MIMEMultipart
from email.mime.text import MIMEText

subject = "An email with attachment from Python"
body = "This is an email with attachment sent from Python"
sender_email = "my@gmail.com"
receiver_email = "your@gmail.com"
password = input("Type your password and press enter:")

# Create a multipart message and set headers
message = MIMEMultipart()
message["From"] = sender_email
message["To"] = receiver_email
message["Subject"] = subject
message["Bcc"] = receiver_email  # Recommended for mass emails

# Add body to email
message.attach(MIMEText(body, "plain"))

filename = "document.pdf"  # In same directory as script

# Open PDF file in binary mode
with open(filename, "rb") as attachment:
    # Add file as application/octet-stream
    # Email client can usually download this automatically as attachment
    part = MIMEBase("application", "octet-stream")
    part.set_payload(attachment.read())

# Encode file in ASCII characters to send by email
encoders.encode_base64(part)

# Add header as key/value pair to attachment part
part.add_header(
    "Content-Disposition",
    f"attachment; filename= {filename}",
)

# Add attachment to message and convert message to string
message.attach(part)
text = message.as_string()
```

```
# Log in to server using secure context and send email
context = ssl.create_default_context()
with smtplib.SMTP_SSL("smtp.gmail.com", 465, context=context) as server:
    server.login(sender_email, password)
    server.sendmail(sender_email, receiver_email, text)
```

feedinfo.py:

```
# Python program to find PNR
# status using RAILWAY API

# import required modules
import requests, json

# Enter API key here
api_key = "Your_API_key"

# base_url variable to store url
base_url = "https://api.railwayapi.com/v2/pnr-status/pnr/"

# Enter valid pnr_number
pnr_number = "6515483790"

# Stores complete url address
complete_url = base_url + pnr_number + "/apikey/" + api_key + "/"

# get method of requests module
# return response object
response_ob = requests.get(complete_url)

# json method of response object convert
# json format data into python format data
result = response_ob.json()

# now result contains list
# of nested dictionaries
if result["response_code"] == 200:

        # train name is extracting
        # from the result variable data
        train_name = result["train"]["name"]

        # train number is extracting from
        # the result variable data
```

```
train_number = result["train"]["number"]

# from station name is extracting
# from the result variable data
from_station = result["from_station"]["name"]

# to_station name is extracting from
# the result variable data
to_station = result["to_station"]["name"]

# boarding point station name is
# extracting from the result variable data
boarding_point = result["boarding_point"]["name"]

# reservation upto station name is
# extracting from the result variable data
reservation_upto = result["reservation_upto"]["name"]

# store the value or data of "pnr"
# key in pnr_num variable
pnr_num = result["pnr"]

# store the value or data of "doj" key
# in variable date_of_journey variable
date_of_journey = result["doj"]

# store the value or data of
# "total_passengers" key in variable
total_passengers = result["total_passengers"]

# store the value or data of "passengers"
# key in variable passengers_list
passengers_list = result["passengers"]

# store the value or data of
# "chart_prepared" key in variable
chart_prepared = result["chart_prepared"]

# print following values
print(" train name : " + str(train_name)
        + "\n train number : " + str(train_number)
        + "\n from station : " + str(from_station)
        + "\n to station : " + str(to_station)
        + "\n boarding point : " + str(boarding_point)
        + "\n reservation upto : " + str(reservation_upto)
        + "\n pnr number : " + str(pnr_num)
```

```
                + "\n date of journey : " + str(date_of_journey)
                + "\n total no. of passengers: " + str(total_passengers)
                + "\n chart prepared : " + str(chart_prepared))

        # looping through passenger list
        for passenger in passengers_list:

                # store the value or data
                # of "no" key in variable
                passenger_num = passenger["no"]

                # store the value or data of
                # "current_status" key in variable
                current_status = passenger["current_status"]

                # store the value or data of
                # "booking_status" key in variable
                booking_status = passenger["booking_status"]

                # print following values
                print(" passenger number : " + str(passenger_num)
                        + "\n current status : " + str(current_status)
                        + "\n booking_status : " + str(booking_status))

else:
        print("Record Not Found")
```

raisequeries.py:

```
import smtplib, ssl
from email.mime.text import MIMEText
from email.mime.multipart import MIMEMultipart

sender_email = "my@gmail.com"
receiver_email = "your@gmail.com"
password = input("Type your password and press enter:")

message = MIMEMultipart("alternative")
message["Subject"] = "multipart test"
message["From"] = sender_email
message["To"] = receiver_email

# Create the plain-text and HTML version of your message
text = """\
Hi,
How are you?
Real Python has many great tutorials:
www.realpython.com"""
```

```
html = """\
<html>
  <body>
    <p>Hi,<br>
       How are you?<br>
       <a href="http://www.realpython.com">Real Python</a>
       has many great tutorials.
    </p>
  </body>
</html>
"""

# Turn these into plain/html MIMEText objects
part1 = MIMEText(text, "plain")
part2 = MIMEText(html, "html")

# Add HTML/plain-text parts to MIMEMultipart message
# The email client will try to render the last part first
message.attach(part1)
message.attach(part2)

# Create secure connection with server and send email
context = ssl.create_default_context()
with smtplib.SMTP_SSL("smtp.gmail.com", 465, context=context) as server:
    server.login(sender_email, password)
    server.sendmail(
        sender_email, receiver_email, message.as_string()
    )
```

ticketcanc.py:

```
from pickle import load,dump
import time
import random
import os
class tickets:
    def __init__(self):
        self.no_ofac1stclass=0
        self.totaf=0
        self.no_ofac2ndclass=0
        self.no_ofac3rdclass=0
        self.no_ofsleeper=0
        self.no_oftickets=0
        self.name=''
        self.age=''
```

```
    self.resno=0
    self.status=''
def ret(self):
    return(self.resno)
def retname(self):
    return(self.name)
def display(self):
    f=0
    fin1=open("tickets.dat","rb")
    if not fin1:
        print "ERROR"
    else:
        print
        n=int(raw_input("ENTER PNR NUMBER : "))
        print "\n\n"
        print ("FETCHING DATA . . .".center(80))
        time.sleep(1)
        print
        print('PLEASE WAIT...!!'.center(80))
        time.sleep(1)
        os.system('cls')
        try:
            while True:
                tick=load(fin1)
                if(n==tick.ret()):
                    f=1
                    print "="*80
                    print("PNR STATUS".center(80))
                    print"="*80
                    print
                    print "PASSENGER'S NAME :",tick.name
                    print
                    print "PASSENGER'S AGE :",tick.age
                    print
                    print "PNR NO :",tick.resno
                    print
                    print "STATUS :",tick.status
                    print
                    print "NO OF SEATS BOOKED : ",tick.no_oftickets
                    print
        except:
            pass
        fin1.close()
        if(f==0):
            print
            print "WRONG PNR NUMBER..!!"
```

```
            print
def pending(self):
     self.status="WAITING LIST"
     print "PNR NUMBER :",self.resno
     print
     time.sleep(1.2)
     print "STATUS = ",self.status
     print
     print "NO OF SEATS BOOKED : ",self.no_oftickets
     print
def confirmation (self):
    self.status="CONFIRMED"
    print "PNR NUMBER : ",self.resno
    print
    time.sleep(1.5)
    print "STATUS = ",self.status
    print
def cancellation(self):
    z=0
    f=0
    fin=open("tickets.dat","rb")
    fout=open("temp.dat","ab")
    print
    r= int(raw_input("ENTER PNR NUMBER : "))
    try:
        while(True):
            tick=load(fin)
            z=tick.ret()
            if(z!=r):
                dump(tick,fout)
            elif(z==r):
                 f=1
    except:
        pass
    fin.close()
    fout.close()
    os.remove("tickets.dat")
    os.rename("temp.dat","tickets.dat")
    if (f==0):
        print
        print "NO SUCH RESERVATION NUMBER FOUND"
        print
        time.sleep(2)
        os.system('cls')
    else:
        print
```

```
        print "TICKET CANCELLED"
        print"RS.600 REFUNDED...."
def reservation(self):
    trainno=int(raw_input("ENTER THE TRAIN NO:"))
    z=0
    f=0
    fin2=open("tr1details.dat")
    fin2.seek(0)
    if not fin2:
        print "ERROR"
    else:
        try:
            while True:
                tr=load(fin2)
                z=tr.gettrainno()
                n=tr.gettrainname()
                if (trainno==z):
                    print
                    print "TRAIN NAME IS : ",n
                    f=1
                    print
                    print "-"*80
                    no_ofac1st=tr.getno_ofac1stclass()
                    no_ofac2nd=tr.getno_ofac2ndclass()
                    no_ofac3rd=tr.getno_ofac3rdclass()
                    no_ofsleeper=tr.getno_ofsleeper()
                if(f==1):
                    fout1=open("tickets.dat","ab")
                    print
                    self.name=raw_input("ENTER THE PASSENGER'S NAME ")
                    print
                    self.age=int(raw_input("PASSENGER'S AGE : "))
                    print
                    print"\t\t SELECT A CLASS YOU WOULD LIKE TO TRAVEL IN :- "
                    print "1.AC FIRST CLASS"
                    print
                    print "2.AC SECOND CLASS"
                    print
                    print "3.AC THIRD CLASS"
                    print
                    print "4.SLEEPER CLASS"
                    print
                    c=int(raw_input("\t\t\tENTER YOUR CHOICE = "))
                    os.system('cls')
                    amt1=0
                    if(c==1):
```

```
                self.no_oftickets=int(raw_input("ENTER NO_OF FIRST CLASS AC SEATS
TO BE BOOKED : "))
                i=1
                while(i<=self.no_oftickets):
                    self.totaf=self.totaf+1
                    amt1=1000*self.no_oftickets
                    i=i+1
                print
                print "PROCESSING. .",
                time.sleep(0.5)
                print ".",
                time.sleep(0.3)
                print'.'
                time.sleep(2)
                os.system('cls')
                print "TOTAL AMOUNT TO BE PAID = ",amt1
                self.resno=int(random.randint(1000,2546))
                x=no_ofac1st-self.totaf
                print
                if(x>0):
                    self.confirmation()
                    dump(self,fout1)
                    break
                else:
                    self.pending()
                    dump(tick,fout1)
                    break
            elif(c==2):
                self.no_oftickets=int(raw_input("ENTER NO_OF SECOND CLASS AC
SEATS TO BE BOOKED :  "))
                i=1



def menu():
    tr=train()
    tick=tickets()
    print
    print "WELCOME TO PRAHIT AGENCY".center(80)
    while True:
        print
        print "="*80
        print " \t\t\t\t  RAILWAY"
        print
        print "="*80
        print
```

```
        print "\t\t\t1. **UPDATE TRAIN DETAILS."
        print
        print "\t\t\t2. TRAIN DETAILS. "
        print
        print "\t\t\t3. RESERVATION OF TICKETS."
        print
        print "\t\t\t4. CANCELLATION OF TICKETS. "
        print
        print "\t\t\t5. DISPLAY PNR STATUS."
        print
        print "\t\t\t6. QUIT."
        print"** - office use....."
        ch=int(raw_input("\t\t\tENTER YOUR CHOICE : "))
        os.system('cls')
        print "\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\n\t\t\t\t\t\tLOADING. .",
        time.sleep(1)
        print (".",
        time.sleep(0.5)
        print (".")
        time.sleep(2)
        os.system('cls')
        if ch==1:
            j="*****"
            r=raw_input("\n\n\n\n\n\n\n\n\n\n\n\t\t\t\tENTER THE PASSWORD: ")
            os.system('cls')
            if (j==r):
                x='y'
                while (x.lower()=='y'):
                    fout=open("tr1details.dat","ab")
                    tr.getinput()
                    dump(tr,fout)
                    fout.close()
                    print"\n\n\n\n\n\n\n\n\n\n\n\t\t\tUPDATING TRAIN LIST PLEASE WAIT . .",
                    time.sleep(1)
                    print (".",
                    time.sleep(0.5)
                    print (".",
                    time.sleep(2)
                    os.system('cls')
                    print "\n\n\n\n\n\n\n\n\n\n\n"
                    x=raw_input("\t\tDO YOU WANT TO ADD ANY MORE TRAINS DETAILS ?
")
                    os.system('cls')
                continue
            elif(j<>r):
                print"\n\n\n\n\n"
```

```
        print "WRONG PASSWORD".center(80)
elif ch==2:
    fin=open("tr1details.dat",'rb')
    if not fin:
        print "ERROR"
    else:
        try:
            while True:
                print"*"*80
                print"\t\t\t\tTRAIN DETAILS"
                print"*"*80
                print
                tr=load(fin)
                tr.output()



                raw_input("PRESS ENTER TO VIEW NEXT TRAIN DETAILS")
                os.system('cls')
        except EOFError:
            pass
elif ch==3:
    print'='*80
    print "\t\t\t\tRESERVATION OF TICKETS"
    print'='*80
    print
    tick.reservation()
elif ch==4:
    print"="*80
    print"\t\t\t\tCANCELLATION OF TICKETS"
    print
    print"="*80
    print
    tick.cancellation()
elif ch==5:
    print "="*80
    print("PNR STATUS".center(80))
    print"="*80
    print
    tick.display()
elif ch==6:
    quit()

raw_input("PRESS ENTER TO GO TO BACK MENU".center(80))
os.system('cls')
 menu()
```