import Read\_Hospital\_Excel\_Sheet

import Write\_Hospital\_Excel\_Sheet

def AppointmentIndexInDoctorsDataBase (patient\_ID) :

for i in Doctors\_DataBase :

for j in Doctors\_DataBase[i] :

if str(patient\_ID) == str(j[0]) :

Appointment\_index = Doctors\_DataBase[i].index(j)

return Appointment\_index,i

print("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*")

print("\* \*")

print("\* Welcome to Hospital Management System \*")

print("\* \*")

print("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*")

tries = 0

tries\_flag = ""

while tries\_flag != "Close the program" :

Patients\_DataBase = Read\_Hospital\_Excel\_Sheet.Read\_Patients\_DataBase()

Doctors\_DataBase = Read\_Hospital\_Excel\_Sheet.Read\_Doctors\_DataBase()

print("-----------------------------------------")

print("|Enter 1 for Admin mode |\n|Enter 2 for User mode |")

print("-----------------------------------------")

Admin\_user\_mode = input("Enter your mode : ")

if Admin\_user\_mode == "1" : #Admin mode

print("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n| Welcome to admin mode |\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*")

Password = input("Please enter your password : ")

while True :

if Password == "1234" :

print("-----------------------------------------")

print("|To manage patients Enter 1 |\n|To manage doctors Enter 2 |\n|To manage appointments Enter 3 |\n|To be back Enter E |")

print("-----------------------------------------")

AdminOptions = input ("Enter your choice : ")

AdminOptions = AdminOptions.upper()

if AdminOptions == "1" : #Admin mode --> Pateints Management

print("-----------------------------------------")

print("|To add new patient Enter 1 |")

print("|To display patient Enter 2 |")

print("|To delete patient data Enter 3 |")

print("|To edit patient data Enter 4 |")

print("|To Back enter E |")

print("-----------------------------------------")

Admin\_choice = input ("Enter your choice : ")

Admin\_choice = Admin\_choice.upper()

if Admin\_choice == "1" : #Admin mode --> Pateints Management --> Enter new patient data

try : #To avoid non integer input

patient\_ID = int(input("Enter patient ID : "))

while patient\_ID in Patients\_DataBase : #if Admin entered used ID

patient\_ID = int(input("This ID is unavailable, please try another ID : "))

Department=input("Enter patient department : ")

DoctorName=input("Enter name of doctor following the case : ")

Name =input("Enter patient name : ")

Age =input("Enter patient age : ")

Gender =input("Enter patient gender : ")

Address =input("Enter patient address : ")

RoomNumber=input("Enter patient room number : ")

Patients\_DataBase[patient\_ID]=[Department,DoctorName,Name,Age,Gender,Address,RoomNumber]

print("----------------------Patient added successfully----------------------")

except :

print("Patient ID should be an integer number")

elif Admin\_choice == "2" : #Admin mode --> Pateints Management --> Display patient data

try : #To avoid non integer input

patient\_ID = int(input("Enter patient ID : "))

while patient\_ID not in Patients\_DataBase :

patient\_ID = int(input("Incorrect ID, Please Enter patient ID : "))

print("\npatient name : ",Patients\_DataBase[patient\_ID][2])

print("patient age : ",Patients\_DataBase[patient\_ID][3])

print("patient gender : ",Patients\_DataBase[patient\_ID][4])

print("patient address : ",Patients\_DataBase[patient\_ID][5])

print("patient room number : ",Patients\_DataBase[patient\_ID][6])

print("patient is in "+Patients\_DataBase[patient\_ID][0]+" department")

print("patient is followed by doctor : "+Patients\_DataBase[patient\_ID][1])

except :

print("Patient ID should be an integer number")

elif Admin\_choice == "3" : #Admin mode --> Pateints Management --> Delete patient data

try : #To avoid non integer input

patient\_ID = int(input("Enter patient ID : "))

while patient\_ID not in Patients\_DataBase :

patient\_ID = int(input("Incorrect ID, Please Enter patient ID : "))

Patients\_DataBase.pop(patient\_ID)

print("----------------------Patient data deleted successfully----------------------")

except :

print("Patient ID should be an integer number")

elif Admin\_choice == "4" : #Admin mode --> Pateints Management --> Edit patient data

try : #To avoid non integer input

patient\_ID=int(input("Enter patient ID : "))

while patient\_ID not in Patients\_DataBase :

patient\_ID = int(input("Incorrect ID, Please Enter patient ID : "))

while True :

print("------------------------------------------")

print("|To Edit pateint Department Enter 1 : |")

print("|To Edit Doctor following case Enter 2 : |")

print("|To Edit patient Name Enter 3 : |")

print("|To Edit patient Age Enter 4 : |")

print("|To Edit patient Gender Enter 5 : |")

print("|To Edit patient Address Enter 6 : |")

print("|To Edit patient RoomNumber Enter 7 : |")

print("|To be Back Enter E |")

print("-----------------------------------------")

Admin\_choice = input("Enter your choice : ")

Admin\_choice = Admin\_choice.upper()

if Admin\_choice == "1" :

Patients\_DataBase[patient\_ID][0]=input("\nEnter patient department : ")

print("----------------------Patient Department edited successfully----------------------")

elif Admin\_choice == "2" :

Patients\_DataBase[patient\_ID][1]=input("\nEnter Doctor follouing case : ")

print("----------------------Doctor follouing case edited successfully----------------------")

elif Admin\_choice == "3" :

Patients\_DataBase[patient\_ID][2]=input("\nEnter patient name : ")

print("----------------------Patient name edited successfully----------------------")

elif Admin\_choice == "4" :

Patients\_DataBase[patient\_ID][3]=input("\nEnter patient Age : ")

print("----------------------Patient age edited successfully----------------------")

elif Admin\_choice == "5" :

Patients\_DataBase[patient\_ID][4]=input("\nEnter patient gender : ")

print("----------------------Patient address gender successfully----------------------")

elif Admin\_choice == "6" :

Patients\_DataBase[patient\_ID][5]=input("\nEnter patient address : ")

print("----------------------Patient address edited successfully----------------------")

elif Admin\_choice == "7" :

Patients\_DataBase[patient\_ID][6]=input("\nEnter patient RoomNumber : ")

print("----------------------Patient Room Number edited successfully----------------------")

elif Admin\_choice == "E" :

break

else :

print("Please Enter a correct choice")

except :

print("Patient ID should be an integer number")

elif Admin\_choice == "E" : #Admin mode --> Pateints Management --> Back

break

else :

print("Please enter a correct choice\n")

elif AdminOptions == "2" : #Admin mode --> Doctors Management

print("-----------------------------------------")

print("|To add new doctor Enter 1 |")

print("|To display doctor Enter 2 |")

print("|To delete doctor data Enter 3 |")

print("|To edit doctor data Enter 4 |")

print("|To be back enter E |")

print("-----------------------------------------")

Admin\_choice = input ("Enter your choice : ")

Admin\_choice = Admin\_choice.upper()

if Admin\_choice == "1" : #Admin mode --> Doctors Management --> Enter new doctor data

try :

#To avoid non integer input

Doctor\_ID = int(input("Enter doctor ID : "))

while Doctor\_ID in Doctors\_DataBase :

#if Admin entered used ID

Doctor\_ID = int(input("This ID is unavailable, please try another ID : "))

Department=input("Enter Doctor department : ")

Name =input("Enter Doctor name : ")

Address =input("Enter Doctor address : ")

Doctors\_DataBase[Doctor\_ID]=[[Department,Name,Address]]

print("----------------------Doctor added successfully----------------------")

except :

print("Doctor ID should be an integer number")

elif Admin\_choice == "2" : #Admin mode --> Doctors Management --> Display doctor data

try :

#To avoid non integer input

Doctor\_ID = int(input("Enter doctor ID : "))

while Doctor\_ID not in Doctors\_DataBase :

Doctor\_ID = int(input("Incorrect ID, Please Enter doctor ID : "))

print("Doctor name : ",Doctors\_DataBase[Doctor\_ID][0][1])

print("Doctor address : ",Doctors\_DataBase[Doctor\_ID][0][2])

print("Doctor is in "+Doctors\_DataBase[Doctor\_ID][0][0]+" department")

except :

print("Doctor ID should be an integer number")

elif Admin\_choice == "3" : #Admin mode --> Doctors Management --> Delete doctor data

try :

#To avoid non integer input

Doctor\_ID = int(input("Enter doctor ID : "))

while Doctor\_ID not in Doctors\_DataBase :

Doctor\_ID = int(input("Incorrect ID, Please Enter doctor ID : "))

Doctors\_DataBase.pop(Doctor\_ID)

print("/----------------------Doctor data deleted successfully----------------------/")

except :

print("Doctor ID should be an integer number")

elif Admin\_choice == "4" : #Admin mode --> Doctors Management --> Edit Doctor data

try :

#To avoid non integer input

Doctor\_ID=input("Enter doctor ID : ")

while Doctor\_ID not in Doctors\_DataBase :

Doctor\_ID = int(input("Incorrect ID, Please Enter doctor ID : "))

print("-----------------------------------------")

print("|To Edit doctor's department Enter 1 |")

print("|To Edit doctor's name Enter 2 |")

print("|To Edit doctor's address Enter 3 |")

print("To be Back Enter E |")

print("-----------------------------------------")

Admin\_choice=input("Enter your choice : ")

Admin\_choice = Admin\_choice.upper()

if Admin\_choice == "1" :

Doctors\_DataBase[Doctor\_ID][0][0]=input("Enter Doctor's Department : ")

print("/----------------------Doctor's department edited successfully----------------------/")

elif Admin\_choice == "2" :

Doctors\_DataBase[Doctor\_ID][0][1]=input("Enter Doctor's Name : ")

print("----------------------Doctor's name edited successfully----------------------")

elif Admin\_choice == "3" :

Doctors\_DataBase[Doctor\_ID][0][2]=input("Enter Doctor's Address : ")

print("----------------------Doctor's address edited successfully----------------------")

elif Admin\_choice == "E" :

break

else :

print("\nPlease enter a correct choice\n")

except :

print("Doctor ID should be an integer number")

elif Admin\_choice == "E" : #Back

break

else :

print("\nPlease enter a correct choice\n")

elif AdminOptions == "3" :

#Admin mode --> Appointment Management

print("-----------------------------------------")

print("|To book an appointment Enter 1 |")

print("|To edit an appointment Enter 2 |")

print("|To cancel an appointment Enter 3 |")

print("|To be back enter E |")

print("-----------------------------------------")

Admin\_choice = input ("Enter your choice : ")

Admin\_choice = Admin\_choice.upper()

if Admin\_choice == "1" : #Admin mode --> Appointment Management --> Book an appointment

try :

#To avoid non integer input

Doctor\_ID = int(input("Enter the ID of doctor : "))

while Doctor\_ID not in Doctors\_DataBase :

Doctor\_ID = int(input("Doctor ID incorrect, Please enter a correct doctor ID : "))

print("---------------------------------------------------------")

print("|For book an appointment for an exist patient Enter 1 |\n|For book an appointment for a new patient Enter 2 |\n|To be Back Enter E |")

print("---------------------------------------------------------")

Admin\_choice = input ("Enter your choice : ")

Admin\_choice = Admin\_choice.upper()

if Admin\_choice == "1" :

patient\_ID = int(input("Enter patient ID : "))

while patient\_ID not in Patients\_DataBase :

#if Admin entered incorrect ID

patient\_ID = int(input("Incorrect ID, please Enter a correct patient ID : "))

elif Admin\_choice == "2" :

patient\_ID = int(input("Enter patient ID : "))

while patient\_ID in Patients\_DataBase :

#if Admin entered used ID

patient\_ID = int(input("This ID is unavailable, please try another ID : "))

Department=Doctors\_DataBase[Doctor\_ID][0][0]

DoctorName=Doctors\_DataBase[Doctor\_ID][0][1]

Name =input("Enter patient name : ")

Age =input("Enter patient age : ")

Gender =input("Enter patient gender : ")

Address =input("Enter patient address : ")

RoomNumber=""

Patients\_DataBase[patient\_ID]=[Department,DoctorName,Name,Age,Gender,Address,RoomNumber]

elif Admin\_choice == "E" :

break

Session\_Start = input("Session starts at : ")

while Session\_Start[ :2] == "11" or Session\_Start[ :2] == "12" :

Session\_Start = input("Appointments should be between 01:00PM to 10:00PM, Please enter a time between working hours : ")

for i in Doctors\_DataBase[Doctor\_ID] :

if type(i[0])!=str :

while Session\_Start >= i[1] and Session\_Start < i[2] :

Session\_Start = input("This appointment is already booked, Please Enter an other time for start of session : ")

Session\_End = input("Session ends at : ")

New\_Appointment=list()

New\_Appointment.append(patient\_ID)

New\_Appointment.append(Session\_Start)

New\_Appointment.append(Session\_End)

Doctors\_DataBase[Doctor\_ID].append(New\_Appointment)

print("/----------------------Appointment booked successfully----------------------/")

except :

print("Doctor ID should be an integer number")

elif Admin\_choice == "2" : #Admin mode --> Appointment Management --> Edit an appointment

try : #To avoid non integer input

patient\_ID = int(input("Enter patient ID : "))

while patient\_ID not in Patients\_DataBase :

patient\_ID = int(input("Incorrect Id, Please Enter correct patient ID : "))

try : #To avoid no return function

AppointmentIndex,PairKey = AppointmentIndexInDoctorsDataBase(patient\_ID)

Session\_Start = input ("Please enter the new start time : ")

while Session\_Start[ :2] == "11" or Session\_Start[ :2] == "12" :

Session\_Start = input("Appointments should be between 01:00PM to 10:00PM, Please enter a time between working hours : ")

for i in Doctors\_DataBase[Doctor\_ID] :

if type(i[0])!=str :

while Session\_Start >= i[1] and Session\_Start < i[2] :

Session\_Start = input("This appointment is already booked, Please Enter an other time for start of session : ")

Session\_End = input ("Please enter the new end time : ")

Doctors\_DataBase[PairKey][AppointmentIndex]=[patient\_ID,Session\_Start,Session\_End]

print("/----------------------appointment edited successfully----------------------/")

except :

print("No Appointment for this patient")

except :

print("Doctor ID should be an integer number")

elif Admin\_choice == "3" : #Admin mode --> Appointment Management --> Cancel an appointment

try : #To avoid non integer input

patient\_ID = int(input("Enter patient ID : "))

while patient\_ID not in Patients\_DataBase :

patient\_ID = int(input("Invorrect ID, Enter patient ID : "))

try :

AppointmentIndex,PairKey = AppointmentIndexInDoctorsDataBase(patient\_ID)

Doctors\_DataBase[PairKey].pop(AppointmentIndex)

print("/----------------------appointment canceled successfully----------------------/")

except :

print("No Appointment for this patient")

except : #To avoid no return function

print("Patient ID should be an integer number")

elif Admin\_choice == "E" : print("please enter a correct choice")

elif AdminOptions == "E" : #Back

break

else :

print("Please enter a correct option")

elif Password != "1234" :

if tries < 2 :

Password = input("Password incorrect, please try again : ")

tries += 1

else :

print("Incorrect password, no more tries")

tries\_flag = "Close the program"

break

Write\_Hospital\_Excel\_Sheet.Write\_Patients\_DataBase(Patients\_DataBase)

Write\_Hospital\_Excel\_Sheet.Write\_Doctors\_DataBase(Doctors\_DataBase)

elif Admin\_user\_mode == "2" : #User mode

print("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n| Welcome to user mode |\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*")

while True :

print("\n-----------------------------------------")

print("|To view hospital's departments Enter 1 |")

print("|To view hospital's doctors Enter 2 |")

print("|To view patients' residents Enter 3 |")

print("|To view patient's details Enter 4 |")

print("|To view doctor's appointments Enter 5 |")

print("|To be Back Enter E |")

print("-----------------------------------------")

UserOptions = input("Enter your choice : ")

UserOptions = UserOptions.upper()

if UserOptions == "1" : #User mode --> view hospital's departments

print("Hospital's departments :")

for i in Doctors\_DataBase :

print(" "+Doctors\_DataBase[i][0][0])

elif UserOptions == "2" : #User mode --> view hospital's Doctors

print("Hospital's doctors :")

for i in Doctors\_DataBase :

print(" "+Doctors\_DataBase[i][0][1]+" in "+Doctors\_DataBase[i][0][0]+" department, from "+Doctors\_DataBase[i][0][2])

elif UserOptions == "3" : #User mode --> view patients' residents

for i in Patients\_DataBase :

print(" Patient : "+Patients\_DataBase[i][2]+" in "+Patients\_DataBase[i][0]+" department and followed by "+Patients\_DataBase[i][1]+", age : "+Patients\_DataBase[i][3]+", from : "+Patients\_DataBase[i][5]+", RoomNumber : "+Patients\_DataBase[i][6])

elif UserOptions == "4" : #User mode --> view patient's details

try : #To avoid non integer input

patient\_ID = int(input("Enter patient's ID : "))

while patient\_ID not in Patients\_DataBase :

patient\_ID = int(input("Incorrect Id, Please enter patient ID : "))

print(" patient name : ",Patients\_DataBase[patient\_ID][2])

print(" patient age : ",Patients\_DataBase[patient\_ID][3])

print(" patient gender : ",Patients\_DataBase[patient\_ID][4])

print(" patient address : ",Patients\_DataBase[patient\_ID][5])

print(" patient room number : ",Patients\_DataBase[patient\_ID][6])

print(" patient is in "+Patients\_DataBase[patient\_ID][0]+" department")

print(" patient is followed by doctor : "+Patients\_DataBase[patient\_ID][1])

except :

print("Patient ID should be an integer number")

elif UserOptions == "5" : #User mode --> view doctor's appointments

try : #To avoid non integer input

Doctor\_ID = int(input("Enter doctor's ID : "))

while Doctor\_ID not in Doctors\_DataBase :

Doctor\_ID = int(input("Incorrect Id, Please enter doctor ID : "))

print(Doctors\_DataBase[Doctor\_ID][0][1]+" has appointments :")

for i in Doctors\_DataBase[Doctor\_ID] :

if type(i[0])==str :

continue

else :

print(" from : "+i[1]+" to : "+i[2])

except :

print("Doctor ID should be an integer number")

elif UserOptions == "E" : #Back

break

else :

print("Please Enter a correct choice")

else :

print("Please choice just 1 or 2")

OUTPUT:



