import datetime

import random

# Patient class to hold and process all information

class Patient:

def \_\_init\_\_(self, name, sex, age, description, symptoms):

self.name = name

self.sex = sex

self.age = age

self.description = description

self.symptoms = [sym.strip().lower() for sym in symptoms]

self.appointment\_date = self.generate\_appointment()

self.diagnosis, self.treatment = self.generate\_diagnosis\_treatment()

self.monitoring\_tips = self.health\_monitoring\_tips()

def generate\_appointment(self):

today = datetime.date.today()

appointment\_day = today + datetime.timedelta(days=random.randint(1, 5))

return appointment\_day

def generate\_diagnosis\_treatment(self):

s = self.symptoms

if 'fever' in s and 'cough' in s:

return "Flu", "Rest, fluids, paracetamol, avoid cold drinks"

elif 'chest pain' in s or 'shortness of breath' in s:

return "Possible Heart Condition", "ECG required, consult cardiologist"

elif 'headache' in s and 'nausea' in s:

return "Migraine", "Painkillers, dark room, avoid screen time"

elif 'stomach pain' in s:

return "Gastritis or Infection", "Hydration, light meals, antacids"

elif 'rash' in s or 'itching' in s:

return "Allergic Reaction", "Antihistamines, avoid triggers"

else:

return "Further Diagnosis Needed", "Visit general physician for lab tests"

def health\_monitoring\_tips(self):

return [

"Monitor temperature every 6 hours",

"Take medications as prescribed",

"Stay hydrated and eat light food",

"Seek medical help if symptoms worsen"

]

def print\_report(self):

print("\n🩺 --- Patient Health Report ---")

print(f"Name : {self.name}")

print(f"Sex : {self.sex}")

print(f"Age : {self.age}")

print(f"Health Description : {self.description}")

print(f"Symptoms : {', '.join(self.symptoms)}")

print(f"Appointment Date : {self.appointment\_date}")

print(f"Diagnosis : {self.diagnosis}")

print(f"Treatment Plan : {self.treatment}")

print("Health Monitoring :")

for tip in self.monitoring\_tips:

print(f" - {tip}")

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

# Function to register a new patient

def register\_patient():

print("\n📋 Register New Patient")

name = input("Enter patient's name: ")

sex = input("Enter sex (M/F/Other): ")

age = input("Enter age: ")

description = input("Enter health description: ")

symptoms = input("Enter symptoms (comma-separated): ").split(",")

return Patient(name, sex, age, description, symptoms)

# Function to handle menu options

def patient\_menu(patients):

while True:

print("\n📂 --- Patient Management Menu ---")

print("1. Register a new patient")

print("2. View all patient names")

print("3. View full report for a patient")

print("4. View all patients' reports")

print("5. Exit")

choice = input("Select an option (1-5): ")

if choice == '1':

patient = register\_patient()

patients.append(patient)

print(f"✅ Patient '{patient.name}' registered successfully.")

elif choice == '2':

if not patients:

print("⚠️ No patients registered yet.")

else:

print("\n👤 Registered Patients:")

for i, p in enumerate(patients, 1):

print(f"{i}. {p.name} ({p.sex}, Age {p.age})")

elif choice == '3':

if not patients:

print("⚠️ No patients registered yet.")

else:

index = int(input("Enter patient number: ")) - 1

if 0 <= index < len(patients):

patients[index].print\_report()

else:

print("❌ Invalid patient number.")

elif choice == '4':

if not patients:

print("⚠️ No patients registered yet.")

else:

for patient in patients:

patient.print\_report()

elif choice == '5':

print("👋 Exiting system. Stay healthy!")

break

else:

print("❌ Invalid choice. Try again.")

# Main program

def main():

print("🏥 Welcome to Healthcare Diagnosis System")

patients = []

patient\_menu(patients)

if \_\_name\_\_ == "\_\_main\_\_":

main()