

//HOSPITAL MANAGEMENT SYSTEM

import javax.swing.\*;

import java.awt.\*;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.util.ArrayList;

class Patient {

private String name;

private int age;

private String gender;

private String illness;

public Patient(String name, int age, String gender, String illness) {

this.name = name;

this.age = age;

this.gender = gender;

this.illness = illness;

}

public String getName() {

return name;

}

public int getAge() {

return age;

}

public String getGender() {

return gender;

}

public String getIllness() {

return illness;

}

@Override

public String toString() {

return "Name: " + name + ", Age: " + age + ", Gender: " + gender + ", Illness: " + illness;

}

}

class Doctor {

private String name;

private String specialization;

public Doctor(String name, String specialization) {

this.name = name;

this.specialization = specialization;

}

public String getName() {

return name;

}

public String getSpecialization() {

return specialization;

}

@Override

public String toString() {

return "Doctor: " + name + ", Specialization: " + specialization;

}

}

class Hospital {

private ArrayList<Patient> patients;

private ArrayList<Doctor> doctors;

public Hospital() {

patients = new ArrayList<>();

doctors = new ArrayList<>();

}

public void addPatient(Patient patient) {

patients.add(patient);

}

public void addDoctor(Doctor doctor) {

doctors.add(doctor);

}

public ArrayList<Patient> getPatients() {

return patients;

}

public ArrayList<Doctor> getDoctors() {

return doctors;

}

}

public class HospitalManagementSystemGUI {

private static Hospital hospital = new Hospital();

public static void main(String[] args) {

createTestData(); // Create some initial data for demonstration

showMainMenu();

}

private static void showMainMenu() {

JFrame frame = new JFrame("Hospital Management System");

frame.setDefaultCloseOperation(JFrame.EXIT\_ON\_CLOSE);

frame.setSize(400, 300);

frame.setLayout(new FlowLayout());

JButton viewPatientsButton = new JButton("View Patients");

JButton viewDoctorsButton = new JButton("View Doctors");

JButton addPatientButton = new JButton("Add New Patient");

JButton addDoctorButton = new JButton("Add New Doctor");

viewPatientsButton.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

displayPatients();

}

});

viewDoctorsButton.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

displayDoctors();

}

});

addPatientButton.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

addNewPatient();

}

});

addDoctorButton.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

addNewDoctor();

}

});

frame.add(viewPatientsButton);

frame.add(viewDoctorsButton);

frame.add(addPatientButton);

frame.add(addDoctorButton);

frame.setVisible(true);

}

private static void displayPatients() {

JOptionPane.showMessageDialog(null, "List of Patients:\n" + getPatientList());

}

private static void displayDoctors() {

JOptionPane.showMessageDialog(null, "List of Doctors:\n" + getDoctorList());

}

private static void addNewPatient() {

JFrame patientFrame = new JFrame("Add New Patient");

patientFrame.setDefaultCloseOperation(JFrame.DISPOSE\_ON\_CLOSE);

patientFrame.setSize(300, 200);

patientFrame.setLayout(new GridLayout(4, 2));

JTextField nameField = new JTextField();

JTextField ageField = new JTextField();

JTextField genderField = new JTextField();

JTextField illnessField = new JTextField();

JButton addButton = new JButton("Add Patient");

patientFrame.add(new JLabel("Name:"));

patientFrame.add(nameField);

patientFrame.add(new JLabel("Age:"));

patientFrame.add(ageField);

patientFrame.add(new JLabel("Gender:"));

patientFrame.add(genderField);

patientFrame.add(new JLabel("Illness:"));

patientFrame.add(illnessField);

addButton.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

String name = nameField.getText();

int age = Integer.parseInt(ageField.getText());

String gender = genderField.getText();

String illness = illnessField.getText();

Patient newPatient = new Patient(name, age, gender, illness);

hospital.addPatient(newPatient);

JOptionPane.showMessageDialog(null, "New patient added successfully!");

patientFrame.dispose();

}

});

patientFrame.add(addButton);

patientFrame.setVisible(true);

}

private static void addNewDoctor() {

JFrame doctorFrame = new JFrame("Add New Doctor");

doctorFrame.setDefaultCloseOperation(JFrame.DISPOSE\_ON\_CLOSE);

doctorFrame.setSize(300, 150);

doctorFrame.setLayout(new GridLayout(3, 2));

JTextField nameField = new JTextField();

JTextField specializationField = new JTextField();

JButton addButton = new JButton("Add Doctor");

doctorFrame.add(new JLabel("Name:"));

doctorFrame.add(nameField);

doctorFrame.add(new JLabel("Specialization:"));

doctorFrame.add(specializationField);

addButton.addActionListener(new ActionListener() {

public void actionPerformed(ActionEvent e) {

String name = nameField.getText();

String specialization = specializationField.getText();

Doctor newDoctor = new Doctor(name, specialization);

hospital.addDoctor(newDoctor);

JOptionPane.showMessageDialog(null, "New doctor added successfully!");

doctorFrame.dispose();

}

});

doctorFrame.add(addButton);

doctorFrame.setVisible(true);

}

private static String getPatientList() {

StringBuilder patientList = new StringBuilder();

for (Patient patient : hospital.getPatients()) {

patientList.append(patient.toString()).append("\n");

}

return patientList.toString();

}

private static String getDoctorList() {

StringBuilder doctorList = new StringBuilder();

for (Doctor doctor : hospital.getDoctors()) {

doctorList.append(doctor.toString()).append("\n");

}

return doctorList.toString();

}

private static void createTestData() {

hospital.addPatient(new Patient("John Doe", 30, "Male", "Fever"));

hospital.addPatient(new Patient("Jane Smith", 25, "Female", "Fracture"));

hospital.addDoctor(new Doctor("Dr. Smith", "Cardiologist"));

hospital.addDoctor(new Doctor("Dr. Johnson", "Orthopedic"));

}

}