

## **Program based on Interface to Interface**

// Define the MedicalCheckup interface

```
interface MedicalCheckup {  
    void recordTemperature(double temperature);  
    void recordBloodPressure(int systolic, int diastolic);  
}
```

// Define the Billing interface

```
interface Billing {  
    double calculateConsultationFee();  
    double calculateMedicationCost();  
}
```

// Implement the interfaces in a class called PatientRecord

```
class PatientRecord implements MedicalCheckup, Billing {  
    private double temperature;  
    private int systolicPressure;  
    private int diastolicPressure;
```

// Implement methods from MedicalCheckup interface

@Override

```
public void recordTemperature(double temperature) {  
    this.temperature = temperature;  
    System.out.println("Temperature recorded: " + temperature + " °C");  
}
```

@Override

```
public void recordBloodPressure(int systolic, int diastolic) {  
    this.systolicPressure = systolic;  
    this.diastolicPressure = diastolic;  
    System.out.println("Blood Pressure recorded: " + systolic + "/" + diastolic + "  
mmHg");  
}
```

```

// Implement methods from Billing interface
@Override
public double calculateConsultationFee() {
    // Assume a fixed consultation fee, e.g., $50
    return 50.0;
}

@Override
public double calculateMedicationCost() {
    // Assume a fixed cost per medication, e.g., $10 per medication
    int numberOfMedications = 2; // Example: Patient took 2 medications
    return numberOfMedications * 10.0;
}

// Additional method to display the patient's record
public void displayPatientRecord() {
    System.out.println("\nPatient Record:");
    System.out.println("Temperature: " + temperature + " °C");
    System.out.println("Blood Pressure: " + systolicPressure + "/" +
diastolicPressure + " mmHg");
    System.out.println("Consultation Fee: $" + calculateConsultationFee());
    System.out.println("Medication Cost: $" + calculateMedicationCost());
}
}

// Main class to test the implementation
public class MedicalBillingInterface {
    public static void main(String[] args) {
        // Create an instance of PatientRecord
        PatientRecord patient = new PatientRecord();

        // Record medical data
        patient.recordTemperature(98.6);
        patient.recordBloodPressure(120, 80);
    }
}

```

```
        // Display the patient's record with billing information
        patient.displayPatientRecord();
    }
}
```