System Operation Contract - 1

Name:

schedule Appointment(patientID, doctorID, appointmentDate, appointmentTime)

Responsibilities:

To schedule an appointment for a patient with a specified doctor at a given date and time.

Type:

Input

Cross References:

Use Case: Schedule Appointment

Exceptions:

- PatientIDNotFoundException
- DoctorIDNotFoundException
- TimeSlotUnavailableException

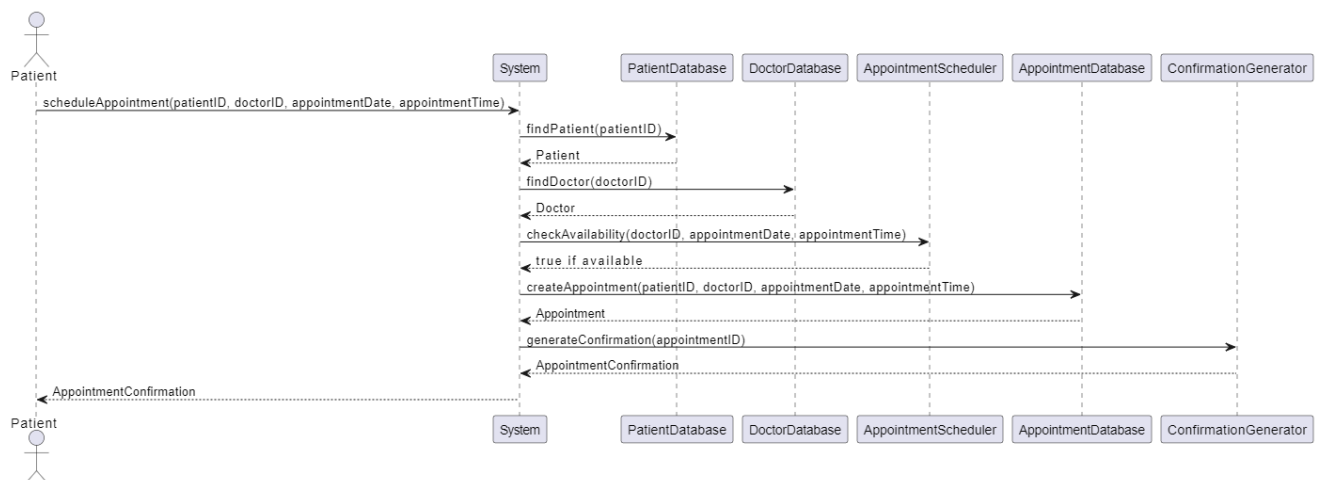### Output:

AppointmentConfirmation

Pre-conditions:

- Patient and doctor exist in the system.
- The requested time slot is available.

Post-conditions:

- An Appointment object is created with the specified details.
- An AppointmentConfirmation object is generated and returned.

Diagram:

System Operation Contract - 2

Name:

updateMedicalRecord(patientID, recordID, medicalHistory)

Responsibilities:

To update the medical record of a specific patient.

Type:

Input

Cross References:

Use Case: Update Medical Record

Exceptions:

- PatientIDNotFoundException
- DoctorIDNotFoundException

Output:

None

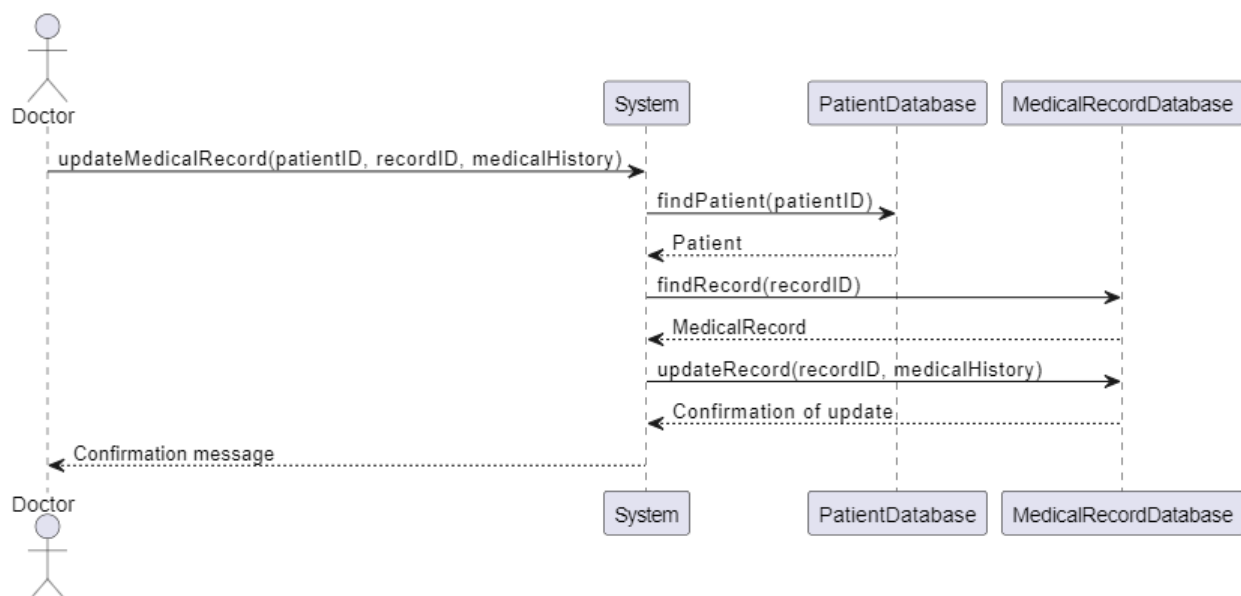**Pre-conditions:**

- Patient and record exist in the system.

Post-conditions:

- The MedicalRecord object is updated with the new medical history.

Diagram:

System Operation Contract - 3

Name:

processPayment(patientID, amount, paymentDate)

Responsibilities:

To process a payment made by a patient.

Type:

Input

Cross References:

Use Case: Process Payment

Exceptions:

- PatientIDNotFoundException

- InvalidPaymentException

Output:

PaymentReceipt

Pre-conditions:

- Patient exists in the system.
- The payment amount is valid.

Post-conditions:

- A CoPayment object is created with the payment details.
- A PaymentReceipt object is generated and returned.

Diagram: