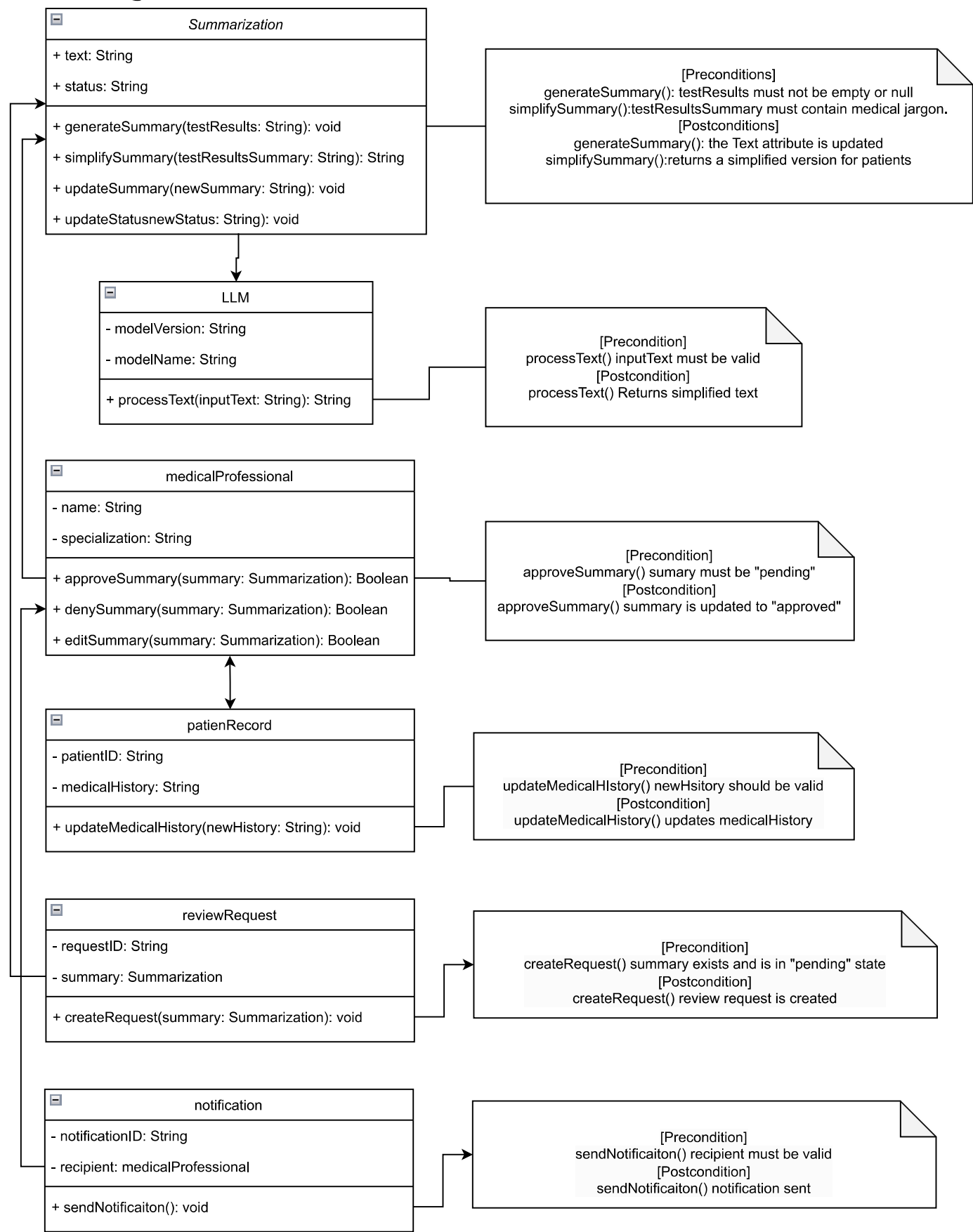
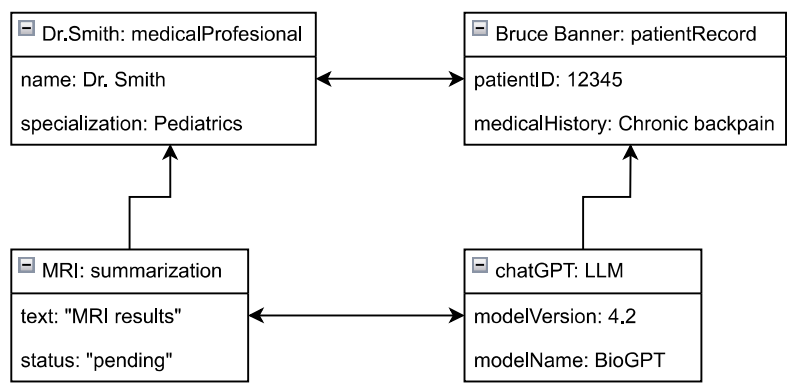


# Class Diagram



# Object Diagram



## Descriptions

### 1. Summarization Class

**Purpose:** The Summarization class is responsible for generating and simplifying text summaries of medical test results. Its primary function is to convert complex medical jargon into simplified, patient-friendly language that non-medical readers can understand. This class plays a central role in ensuring that patients receive accessible information regarding their health, thereby enhancing patient comprehension and communication.

### 2. LLM Class

**Purpose:** The LLM (Language Model) class represents the language model used for natural language processing tasks. This class is responsible for handling text processing, specifically simplifying the medical content provided by the Summarization class. It is a core component in automating the text generation and simplification process, making the output more understandable. This LLM is crucial for ensuring accuracy and efficiency in simplifying complex medical terminology.

### 3. MedicalProfessional Class

**Purpose:** The MedicalProfessional class represents healthcare professionals involved in reviewing summaries generated by the system. Medical professionals can approve, deny, or edit summaries before they are presented to patients. This class ensures a quality check, providing oversight for the summaries created by the Summarization class. Allowing medical professionals to review and validate the content guarantees that all information shared with patients is accurate, appropriate, and follows medical guidelines.

### 4. PatientRecord Class

**Purpose:** The PatientRecord class stores information about patients, including medical histories and test results. It serves as the primary data source used by the Summarization class to generate the summaries. This class provides context to the language model and medical professionals, enabling them to understand the patient's medical background while generating or reviewing summaries. The PatientRecord class ensures that summaries are personalized and relevant to each patient's medical situation.

### 5. ReviewRequest Class

**Purpose:** The ReviewRequest class represents a request for a medical professional to review a generated summary. This class is used to track pending reviews and facilitate the workflow between Summarization and MedicalProfessional. It manages the request creation and keeps records of which summaries need to be reviewed, thus ensuring that a qualified medical professional evaluates every summary before being shared with the patient.

### 6. Notification Class

**Purpose:** The Notification class is responsible for notifying medical professionals about pending summaries that require their review. This class manages communication between the system and healthcare professionals, making sure they know their responsibilities to review, approve, or deny summaries. By sending timely notifications, this class is crucial in maintaining workflow efficiency and ensuring the summaries are validated and delivered to patients promptly.