

# RAG (Retrieval-Augmented Generation) Results

**Question:** java abstract classes

**Search Method:** Cosine

**Embedding Model:** text-embedding-3-small

**Generation Model:** Llama-3.3-70B-Instruct

**Generated:** 2025-07-24 15:51:58

## Generated Answer

According to the provided context, an abstract class in Java is defined as a "clas■ ■ablon" or a template class, which is denoted by the "abstract" modifier (Source: Modificator CLAS■ METHOD■ VARIABIL■ table). <br/><br/>The context also mentions that an abstract class can have methods that are declared but not defined, also known as "metod■ ■ablon" or template methods (Source: Modificator CLAS■ METHOD■ VARIABIL■ table). <br/><br/>Additionally, the context states that a static method in an abstract class "nu poate fi redefinita in subclase", which means it cannot be redefined in subclasses (Source: Modificator CLAS■ METHOD■ VARIABIL■ table).<br/><br/>While the context does not provide a comprehensive overview of abstract classes in Java, it does provide some basic information about their definition and characteristics. For more information on abstract classes, it may be necessary to consult additional resources, such as the "Java 8 in Action" book by Raoul-Gabriel Urma, Mario Fusco, and Alan Mycroft (Source: BIBLIOGRAFIE), or the "Building Java Programs" book by Pearson (Source: BIBLIOGRAFIE). <br/><br/>It's worth noting that the context also provides information on other Java-related topics, such as private methods in interfaces (Source: <https://www.journaldev.com/12850/java-9-private-methods-interfaces>), Java 9 modules (Source: <https://www.journaldev.com/13106/java-9-modules>), and Java 9 features (Source: <https://www.journaldev.com/13121/java-9-features-with-examples>). However, these topics are not directly related to abstract classes.

## Performance Metrics

**Search Time:** 3.0749 seconds

**Generation Time:** 30.5273 seconds

**Total Time:** 33.6023 seconds

## Source Documents

#### Source 1

**Document:** Java\_9.pdf

**Chunk:** 5

**Relevance Score:** 0.5144

**Content Preview:** Oct. 2017 <https://www.journaldev.com/12850/java-9-private-methods-interfaces>

#### Source 2

**Document:** Curs2\_3\_SDJava.pdf

**Chunk:** 0

**Relevance Score:** 0.4680

**Content Preview:** Programare Java (2) prof.dr.ing. ■tefan -Gheorghe Pentiuc Modificator CLAS■  
METHOD■ VARIABIL■ public acces permis tuturor claselorpoate fi apelat■ din orice clas■ poate fi  
consultat■ / modificat■ din ...

#### Source 3

**Document:** Curs2\_3\_SDJava.pdf

**Chunk:** 10

**Relevance Score:** 0.4382

**Content Preview:** ecated. The finalization mechanism is inherently problematic. Class getClass ()  
Returns the runtime class of this Object. int hashCode () Returns a hash code value for the object. void  
notify () ...

#### Source 4

**Document:** Java\_9.pdf

**Chunk:** 4

**Relevance Score:** 0.4372

**Content Preview:** erface, enum , obiecte , instructiuni etc). jshell > int counter = 0 counter ==> 0 jshell  
> counter++ \$6 ==> 0 jshell > counter counter ==> 1 BIBLIOGRAFIE •What's New in Oracle JDK ...

#### Source 5

**Document:** ExpresiiLambda.pdf

**Chunk:** 6

**Relevance Score:** 0.4268

**Content Preview:** dia, 2014 •Java 8 in Action , by Raoul -Gabriel Urma , Mario Fusco , Alan Mycroft ,  
2014 Manning Publications •Building Java Programs , Chapter 19, Pearson 2016



## RAG Process Summary

This RAG (Retrieval-Augmented Generation) search performed the following steps:

1. **Retrieval:** Found 5 most relevant document chunks using cosine similarity with text-embedding-3-small model from <https://aihubmytesthub7294089329.openai.azure.com/>
2. **Augmentation:** Combined the retrieved content as context
3. **Generation:** Used Llama-3.3-70B-Instruct model from <https://aihubmytesthub7294089329.services.ai.azure.com/models> to generate a comprehensive answer based on the context

RAG provides more accurate and contextual answers by grounding the AI response in your specific document content. Using separate models and endpoints for embedding and generation allows for optimized performance and resource allocation.