



# ICT Training Center

**Il tuo partner per la Formazione e la Trasformazione digitale della tua azienda**



### Note

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

# SPRING AI

## GENERATIVE ARTIFICIAL INTELLIGENCE CON JAVA

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Corso base per Venis S.p.A, Venezia, Italia

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### Note

[illegible]



## PROPRIETÀ EMERGENTI

### Note

[illegible]

- 1 Modifica a *string template* per richiesta definizione da dizionario con formato di *output* automatizzato
- 2 Modifica modello per richiesta a LLM (popolamento parametri di *default*)
- 3 Modifica *file* GeminiFromClientServiceImpl.java
- 4 Test delle funzionalità con Postman/Insomnia

## 1 Test delle funzionalità con Postman/Insomnia

[illegible]

**File** get-json-output-converter-format-definition-prompt.st

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```
package it.venis.ai.spring.demo.model;

import java.util.Objects;
import java.util.UUID;

public record DefinitionRequest(UUID id, String lemma, String agent) {
    public DefinitionRequest(String lemma, String agent) {
        this(UUID.randomUUID(), lemma, agent);
    }

    @Override
    public String lemma() {
        return Objects.requireNonNullElse(this.lemma, "Ciao");
    }

    @Override
    public String agent() {
        return Objects.requireNonNullElse(this.agent, "Enciclopedia Treccani");
    }
}
```

### Note

[illegible]

```
package it.venis.ai.spring.demo.services;

import java.util.Map;
import org.springframework.ai.chat.client.ChatClient;
import org.springframework.ai.template.st.StTemplateRenderer;
import org.springframework.beans.factory.annotation.Value;
import org.springframework.core.io.Resource;
import org.springframework.stereotype.Service;
import it.venis.ai.spring.demo.model.Answer;
import it.venis.ai.spring.demo.model.DefinitionRequest;
import it.venis.ai.spring.demo.model.Question;

@Service
public class GeminiFromClientServiceImpl implements GeminiFromClientService {

    private final ChatClient chatClient;

    public GeminiFromClientServiceImpl(ChatClient.Builder chatClientBuilder) {
        this.chatClient = chatClientBuilder.build();
    }

    @Override
    public String getAnswerFromClient(String question) {
        return this.chatClient.prompt()
            .user(question)
            .call()
            .content();
    }
}
```

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```
...
@Value("classpath:templates/get-json-output-converter-format-definition-prompt.st")
private Resource JSONOutputConverterFormatDefinitionPrompt;

@Override
public DefinitionResponse getJSONOutputConverterFormatDefinitionFromClient(DefinitionRequest definitionRequest) {

    BeanOutputConverter<DefinitionResponse> converter = new BeanOutputConverter<>(DefinitionResponse.class);

    String format = converter.getFormat();

    System.out.println(format);

    String chatResponse = this.chatClient.prompt()
        .user(u -> u.text(this.JSONOutputConverterFormatDefinitionPrompt)
            .params(Map.of("lemma", definitionRequest.lemma(),
                "agente", definitionRequest.agent(),
                "formato", format)))
        .templateRenderer(StTemplateRenderer.builder().startDelimiterToken('{')
            .endDelimiterToken('}')
            .build())
        .call()
        .content();

    return converter.convert(Objects.requireNonNull(chatResponse));
}
}
```

## Note

[illegible]



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### Note

[illegible]