



# ICT Training Center

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### Note

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# SPRING AI

## GENERATIVE ARTIFICIAL INTELLIGENCE CON JAVA

Simone Scannapieco

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

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### Note

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## PROPRIETÀ EMERGENTI

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- 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

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

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## File Modello di richiesta definizione

```
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");
    }
}
```

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```
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();
    }
}
```

### Note

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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));
}
}
```

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