

# Exercise - Requirements Specification

- **Objective:** Evaluate the use of AI as a support tool in Requirements Engineering education.
- **Research Question:** Can LLMs support Requirements Specification? What are the challenges and benefits of using them?
  - Hypothetical Scenario: Considering the widespread adoption of AIs, how can a professor use LLMs to support the teaching of Software Engineering, specifically in the topic of Requirements Specification?

# Summary

1. Requirements Specification Review
2. Activity Statement
  - a. Example of a Scenario
  - b. Chat Generative Pre-trained Transformer (chatGPT)

3. Practical Activity
  - a. Group Division
  - b. Basic Information Collection
  - c. Application of the Latin Square
    - i. User Story Construction
    - ii. Use of LLM
  - d. Questionnaire
4. Final Considerations

# 1. Requirements Specification Review



How the customer explained it



How the project leader understood it



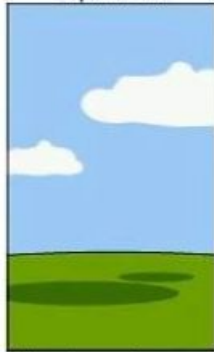
How the engineer designed it



How the programmer wrote it



How the sales executive described it



How the project was documented



What operations installed



How the customer was billed



How the helpdesk supported it



What the customer really needed

# 1. Requirements Specification Review

## 1 Introduction

- 1.1 Objective
- 1.2 Scope
- 1.3 Definitions, Acronyms, e Abbreviations
- 1.4 References
- 1.5 Overview

## 2 General Description

- 2.1 Interface Requirements
- 2.2 Functional Requirements
- 2.3 Use Case Modeling
- 2.4 Use Case Descriptions
- 2.5 Non-Functional Requirements
- 2.6 User Characteristics
- 2.7 Constraints
- 2.8 Assumptions and Dependencies

## 2. Activity Statement

### DESCRIPTION

AS I: <Persona>

I WANT TO: <Goal>

SO THAT: <Reason>

### USE CASES (Main or Alternative Flow)

GIVEN THAT: <precondition>

AND ... AND ... <precondition(s)>

WHEN: <actions>

THEN: <postcondition(s)>

### DESCRIPTION

AS A: Customer

I WANT TO: Access my account

SO THAT: I can manage my finances

### USE CASE (Main Flow)

GIVEN THAT: I have credentials

AND: I entered them correctly

WHEN: I press the button

THEN: Account balance appears

## 2. Task Example

### 2.1. EduFlow

Build a **User Story** with 2 **Use Cases**, including one **Main Flow** and one **Alternative Flow** for the **EduFlow** application described below.

**EduFlow** is an online platform that recommends personalized learning content and paths for professionals, based on their progress and interests. The system uses artificial intelligence to suggest courses, articles, and practical challenges, encouraging continuous and adaptive learning. Companies can also use the platform to monitor their teams' development, create internal training programs, and assess employees' skill progression.

**Possible features:** Personalized learning path, gamification, performance evaluation, integration with external courses.

## 2. Task Example

### 2.2. EduFlow: Description

**USER STORY 01:** Personalized Recommendation for Professional Development

**AS A:** Professional seeking continuous learning

**I WANT TO:** Receive personalized recommendations for courses and content

**SO THAT:** I can improve my skills and advance in my career

## 2. Task Example

### 2.3. EduFlow: Main Flow

**USE CASE 01:** Receive Learning Recommendations

**GIVEN THAT:** The user has a registered profile on the platform

**AND:** The user has completed some courses and marked interests

**AND:** The user has a history of interactions

**AND:** The user has taken assessments

**WHEN:** The user accesses the platform's home page

**THEN:** The system displays a list of recommended courses

**AND:** The system suggests learning paths based on their profile

**AND:** The system presents practical challenges aligned with their preferences



## 2. Task Example

### 2.4. EduFlow: Alternative Flow

**USE CASE 02:** User Without Prior History

**GIVEN THAT:** The user has a registered profile on the platform

**AND:** The user has not taken any courses or selected interests

**WHEN:** The user accesses the platform's home page

**THEN:** The system prompts the user to select areas of interest

**AND:** The system suggests a placement test for more accurate recommendations

**AND:** The system displays popular courses within general categories

## 2. Task Example

### 2.5. Chat Generative Pre-trained Transformer (chatGPT)

#### How to Use ChatGPT

- Go to <https://chat.openai.com>
- Log in with Google, Microsoft, or email.
- Keep default configurations.
- Type a question and press Enter.
- Get instant answers and continue the conversation.

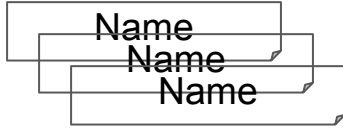
#### How to Share a Chat

- Click the “Share” button (top right of the chat window)
- Copy the link and send it to others
- The shared link gives read-only access to your chat

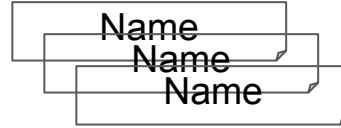
### 3. Practical Activity

#### 1. Division of participants into 2 groups (G1 and G2)

G1



G2



### 3. Practical Activity

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2. Gathering Basic Information

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1. Division of participants into 2 groups (G1 and G2)
2. Gathering Basic Information
3. Latin Square

Time	G1	G2
00 - 25	T01 Sem LLM	T01 Com LLM
25 - 50	T02 Com LLM	T02 Sem LLM

### 3. Practical Activity

1. Division of participants into 2 groups (G1 and G2)
2. Gathering Basic Information
3. Latin Square ( Task 01 - TechFix )

Time	G1	G2
00 - 25	T01 Sem LLM	T01 Com LLM
25 - 50	T02 Com LLM	T02 Sem LLM

### 3. Practical Activity

1. Division of participants into 2 groups (G1 and G2)
2. Gathering Basic Information
3. Latin Square ( Task 02 - GreenMarket )

Time	G1	G2
00 - 25	T01 Sem LLM	T01 Com LLM
25 - 50	T02 Com LLM	T02 Sem LLM

### 3. Practical Activity

1. Division of participants into 2 groups (G1 and G2)
2. Gathering Basic Information
3. Latin Square
4. Questionnaire



## 4. Final Considerations

Open Forum

FeedBack (Optional)

THANKs