The Prompt Guide for RE

Current State of Discussion at the International Requirements Engineering Board (IREB)

International Requirements Engineering Board (IREB)

Special Interest Group AI

- Research and Innovation
- Share Knowledge and Expertise
- Strengthen the Community
- Develop Future-Oriented Perspectives

How will AI shape RE in the **future**?

How can AI be used in RE **today**?

International Requirements Engineering Board (IREB)

Special Interest Group AI

How can AI be used in RE **today**?

Prompt Guide for RE

RE Activities & Potential AI Use Cases

- Explore domain
- Identify stakeholders
- Generate personas
- Prepare interview
- Plan workshop
- Transcribe interview
- Transcribe whiteboard picture
- Identify requirements
- Specify requirements
- Tag requirements
- Trace requirements
- Decompose requirements
- Identify similar requirements
- Identify duplicates
- Identify dependencies
- Find synonyms
- Generate model from text
- Generate text from model
- Generate video from text
- Describe in simple language
- Analyze impact of change requests
- Compare specification with source code
- Generate specification from source code
- Generate prototypes
- Estimate business value

RE Activities & Potential AI Use Cases

Elicitation

- Explore domain
- Identify stakeholders
- Prepare interview
- Plan workshop
- Transcribe interview
- Transcribe whiteboard picture
- Identify requirements

Documentation

- Specify requirements
- Find synonyms
- Decompose requirements
- Generate model from text
- Generate text from model
- Generate video from text
- Describe in simple language
- Generate personas
- Generate specification from source code

Validation

- Generate prototypes
- Identify duplicates
- Identify similar requirements
- Compare specification with source code

Management

- Identify dependencies
- Analyze impact of change requests
- Tag requirements
- Trace requirements
- Estimate business value

RE Activities & Potential AI Use Cases

Elicitation

Exploring

- Explore domain
- Identify stakeholders
- Prepare interview
- Plan workshop

Transcribing

- Transcribe interview
- Transcribe whiteboard picture

Extracting

- Identify requirements

Documentation

Formulating

- Specify requirements
- Find synonyms
- Decompose requirements

Translating

- Generate model from text
- Generate text from model
- Generate video from text
- Describe in simple language
- Generate personas
- Generate specification from source code

Validation

Verifying

- Identify duplicates
- Identify similar requirements
- Compare specification with source code

Validating

- Generate prototypes

Management

Aligning

- Analyze impact of change requests

Prioritizing

- Estimate business value

Assigning

- Tag requirements
- Trace requirements
- Identify dependencies

Prompt Guide

Elicitation	Exploring
Explore domain	

- Overview
- System context
- Regulations and standards
- Actors
- Glossary

Prompt Guide

Elicitation	Exploring

Explore domain

Overview

AI's role: Domain expert in **[DOMAIN]** with extensive experience in both of its technical foundations and practical applications.

My role: Requirements engineer, responsible for defining system requirements for **[SYSTEM]** at the initial stage of a project.

My purpose: To proceed effectively, I need a foundational understanding of the domain.

Task: Create a brief, well-structured overview titled "Introduction". The overview should:

- Target an audience of stakeholders and project collaborators, some of whom may be unfamiliar with the domain.
- Explain the system's core purpose, key benefits, and common use cases.
- Provide a clear and informative introduction that supports the early requirements engineering process.
- Clearly formatted and professionally written for ease of reading in a collaborative workspace.
- Maintaining an accessible tone, avoiding unnecessary technical jargon while preserving essential accuracy.

Format:

- Length: **[LENGTH]**
- Format: **[FORMAT]**

Prompt Guide

Elicitation	Exploring

Explore domain

Overview

AI's role: Domain expert in **international air navigation** with extensive experience in both of its technical foundations and practical applications.

My role: Requirements engineer, responsible for defining system requirements for **Aeronautical Information Service (AIS)** at the initial stage of a project.

My purpose: To proceed effectively, I need a foundational understanding of the domain.

Task: Create a brief, well-structured overview titled "Introduction". The overview should:

- Target an audience of stakeholders and project collaborators, some of whom may be unfamiliar with the domain.
- Explain the system's core purpose, key benefits, and common use cases.
- Provide a clear and informative introduction that supports the early requirements engineering process.
- Clearly formatted and professionally written for ease of reading in a collaborative workspace.
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Format:

- Length: **1 slide**
- Format: **PowerPoint**

Prompt Guide

Elicitation	Exploring

Explore domain

Overview

Introduction: Aeronautical Information Service (AIS)

Purpose
The Aeronautical Information Service (AIS) ensures that all users of the air navigation system — including pilots, airlines, air traffic controllers, and flight planners — have access to accurate, reliable, and timely aeronautical information. This information is essential for safe and efficient air operations worldwide.

Core Function
AIS collects, manages, and distributes aeronautical data — such as airspace structures, flight procedures, airport details, and navigational aids — through standardized digital and published formats. It forms the foundation for flight planning, navigation, and air traffic management systems.

Key Benefits

- **Safety:** Supports safe flight operations by providing verified and current data.
- **Efficiency:** Enables optimized flight routes and airspace utilization.
- **Interoperability:** Ensures data consistency across international aviation systems.
- **Compliance:** Aligns with ICAO standards to maintain global harmonization.

Typical Use Cases

- Pre-flight planning and briefing for pilots and operators
- Real-time updates of airspace or airport changes for air traffic control
- Integration into digital flight management and navigation systems
- Support for data exchange in collaborative air traffic management environments

Prompt Guide

Elicitation	Exploring
Explore domain	

Overview

System context

I want to understand the context of the system.

Are there any other systems with which it interacts? List these systems and describe their purpose and how they interact.

The title should be 'System Context'.

Format: confluence optimized table

Prompt Guide

Elicitation | Exploring

Explore domain

- Overview
- System context
- Regulations and standards
- Actors
- Glossary

System	Purpose	Interaction with AIS
Air Traffic Management (ATM) System	Coordinates the safe and efficient movement of aircraft through controlled airspace.	Uses AIS data (e.g., airspace structure, restrictions, procedures) to ensure accurate situational awareness and flight coordination.
Flight Planning System (FPL)	Supports operators and pilots in preparing flight plans based on airspace availability, routes, and procedures.	Retrieves aeronautical data from AIS (e.g., waypoints, NOTAMs, air routes) for validated flight planning.
NOTAM System (Notice to Airmen/Air Missions)	Communicates time-sensitive operational information such as temporary airspace restrictions or hazards.	Exchanges information with AIS to maintain consistency between static aeronautical data and dynamic operational updates.
Aeronautical Information Management (AIM) Database	Centralized digital repository for standardized aeronautical data and metadata.	Serves as the digital evolution of AIS — AIS data is stored, validated, and distributed via AIM systems.
Airspace Management (ASM) System	Manages the design, allocation, and real-time activation of airspace segments.	Receives and provides updates to AIS about airspace structures and usage to ensure current and accurate publications.
Meteorological (MET) Information System	Provides weather information essential for flight safety and efficiency.	Complements AIS by integrating aeronautical and weather data for comprehensive flight briefings and decision support.
Airport Operations Systems (AODB/ATIS)	Support airport management, ground operations, and information broadcasting to pilots.	Share airport data (runway status, facilities, obstacles) with AIS for inclusion in aeronautical publications.
Flight Management Systems (FMS)	Onboard aircraft systems that calculate optimal flight paths and navigation.	Consume AIS data (navigation aids, procedures, airways) to ensure onboard flight databases are current and compliant.
ICAO and State Regulatory Systems	Define standards and validate compliance for international air navigation.	AIS aligns with and reports to these systems to ensure data meets global standards and regulations.

Prompt Guide

Documentation	Translating

Generate model from text

- Use given model & diagram type
- Read text and identify requirements
- Group requirements
- Ask user for group to be processed
- Identify relevant elements
- Interpret and refine ambiguities
- Generate output in textual notation

Prompt Guide

Documentation | Translating

Generate model from text

AI´s role: MBSE and modeling expert specializing in UML, BPMN, SysML v1 and SysML v2. You can transform natural language requirements or use case descriptions into precise models, ensuring compliance with modeling standards and providing clarity for stakeholders.

My role (user role): Requirements engineer who wants to generate models for **[SYSTEM]** to ensure that stakeholders can quickly understand system information when expressed in familiar modeling notations.

My purpose: Generating accurate, standards-aligned models (UML diagrams, BPMN processes, SysML v1/v2 models) directly from text descriptions of requirements, use cases, or scenarios, so stakeholders can interpret and validate them efficiently.

Task:

Use model language **[MODELING_LANGUAGE]** and diagram type **[DIAGRAM_TYPE]**.

Use the input document and identify requirements who can be grouped together for a representation in a diagram (consider the selected diagram type for this task).

Ask the user which group to start with.

After that continue using the selected group of requirements and identify all possible relevant elements of the selected diagram type.

Interpret and refine ambiguities if needed.

Provide the output in textual notation (e.g., SysML v2 textual syntax, PlantUML, BPMN XML), ensuring it can be imported into modeling tools.

Optionally, provide a simple visual diagram preview if appropriate.

Format:

Grouping of requirements - List the defined grouped requirements and explain why these can be grouped together (max 3 sentences)

Diagram elements - List the identified diagram elements in a table format with explanation for the different elements of the selected diagram type

Model Representation (main output) – Provide the model in textual notation (e.g., SysML v2 syntax, PlantUML code, BPMN XML).

Validation Note – Mention any assumptions made or gaps identified in the source text.

+ Add word file with requirements

Prompt Guide

Documentation | Translating

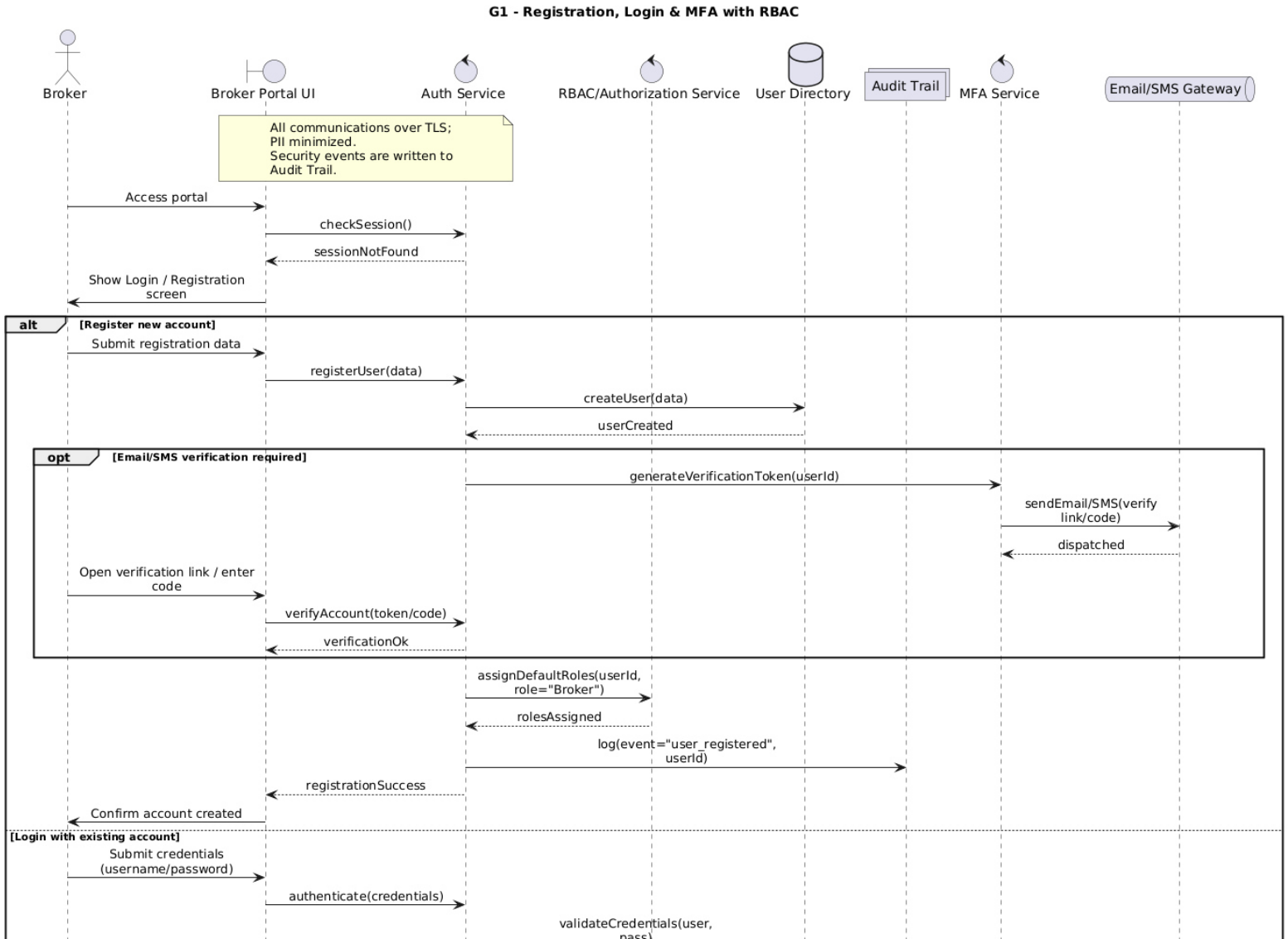
Generate model from text

```
@startuml
title G1 – Registration, Login & MFA with RBAC

skinparam sequenceArrowThickness 1
skinparam sequenceMessageAlign center
skinparam wrapWidth 200
skinparam maxMessageSize 200

actor Broker as B
boundary "Broker Portal UI" as UI
control "Auth Service" as AUTH
control "RBAC/Authorization Service" as RBAC
database "User Directory" as DIR
collections "Audit Trail" as AUDIT
control "MFA Service" as MFA
queue "Email/SMS Gateway" as MSG

note over UI,AUTH
All communications over TLS; PII minimized.
Security events are written to Audit Trail.
end note

' Broker arrives at portal
B -> UI: Access portal
UI -> AUTH: checkSession()
AUTH --> UI: sessionNotFound
UI -> B: Show Login / Registration screen

alt Register new account
  B -> UI: Submit registration data
  UI -> AUTH: registerUser(data)
```

Prompt Guide

Documentation | Translating

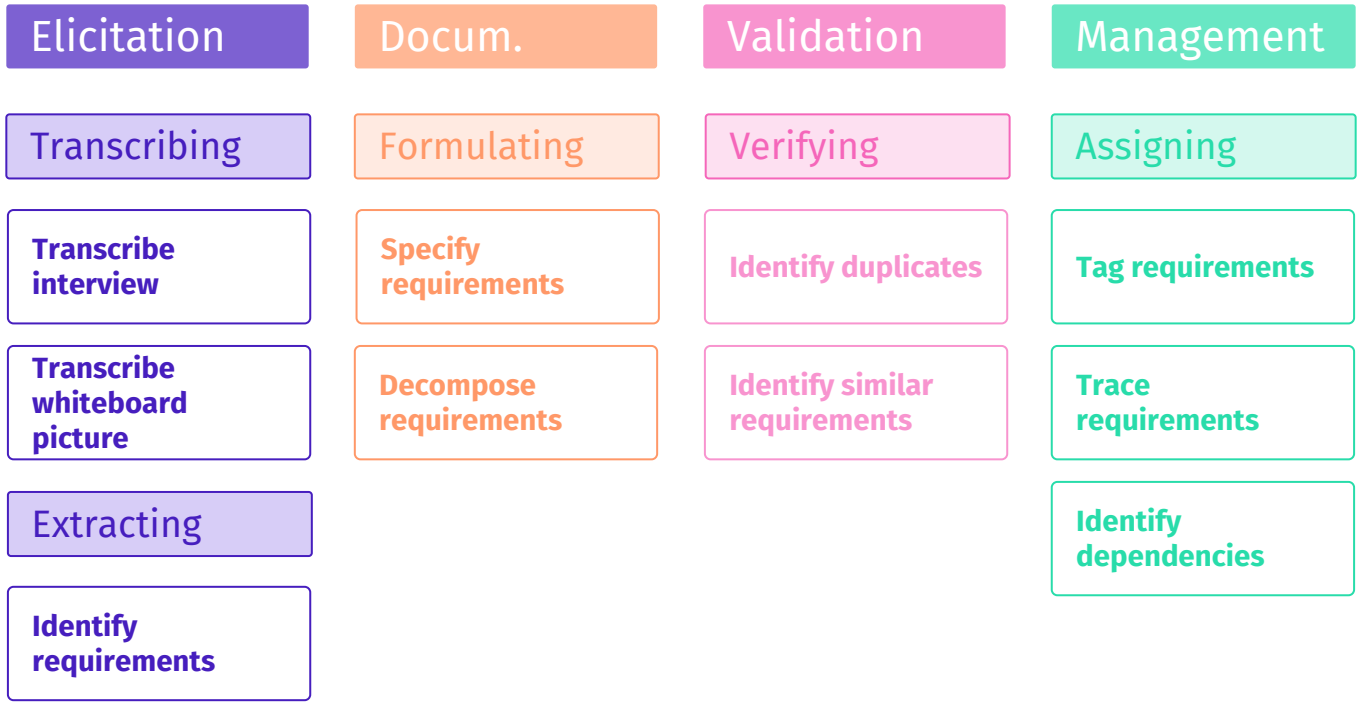
Generate model from text



adesso

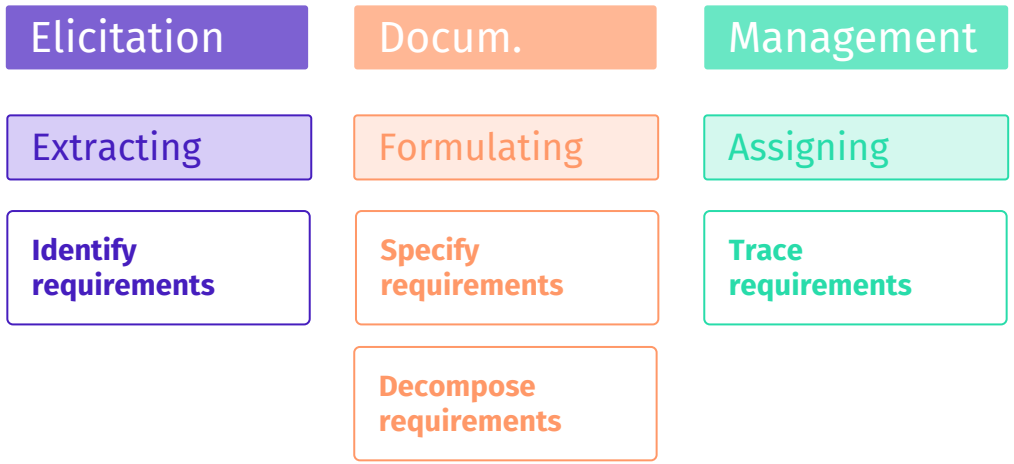
Prompt Guide

Formulate requirements



Prompt Guide

Formulate requirements



Prompt Guide

Prompt Guide

REQ 1

As a toy designer, I want to create a unique Lego Ninjago figure that can temporarily blind opponents by conjuring a bright rainbow, so that the figure can gain a tactical advantage in play scenarios.

Acceptance Criteria:

- ...

Questions a software engineer might need to ask:

- ...

REQ 2

As a toy designer, I want the Lego Ninjago figure to be a “good” character with a distinctive appearance and abilities, so that it stands out and appeals to children.

Acceptance Criteria:

- ...

Questions a software engineer might need to ask:

- ...

REQ 3

As a toy designer, I want the Lego Ninjago figure to be able to fly at both low altitude and cloud height by emitting rainbow beams from its hands, so that it can have dynamic movement options in play.

Acceptance Criteria:

- ...

Questions a software engineer might need to ask:

- ...

Personal, Preliminary Conclusion

Don't look for diamonds in the Large Language Model. Use the LLM to cut them.

Personal, Preliminary Conclusion

Use the strength of Large Language Models to transform things.
And in comparing and combining many things.

Personal, Preliminary Conclusion

Don’t trust
Large Language Models.

Personal, Preliminary Conclusion

Stay tuned.
And join us in shaping AI for RE.

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