



CodeTuga



# MONTAGEM DE PC ONLINE

Sistema para montagem assistida de computadores de sua preferência.



2025

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# Quem somos?

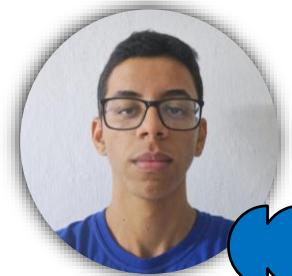
Equipe de estudantes de Engenharia da Computação



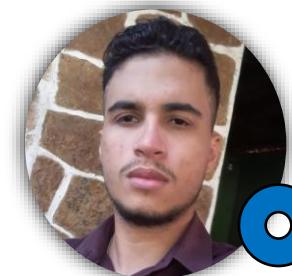
**Arlison Oliveira**  
Desenvolvedor



**Cauã Barros**  
Desenvolvedor



**Gustavo Moraes**  
Desenvolvedor



**Italo Oliveira**  
Desenvolvedor



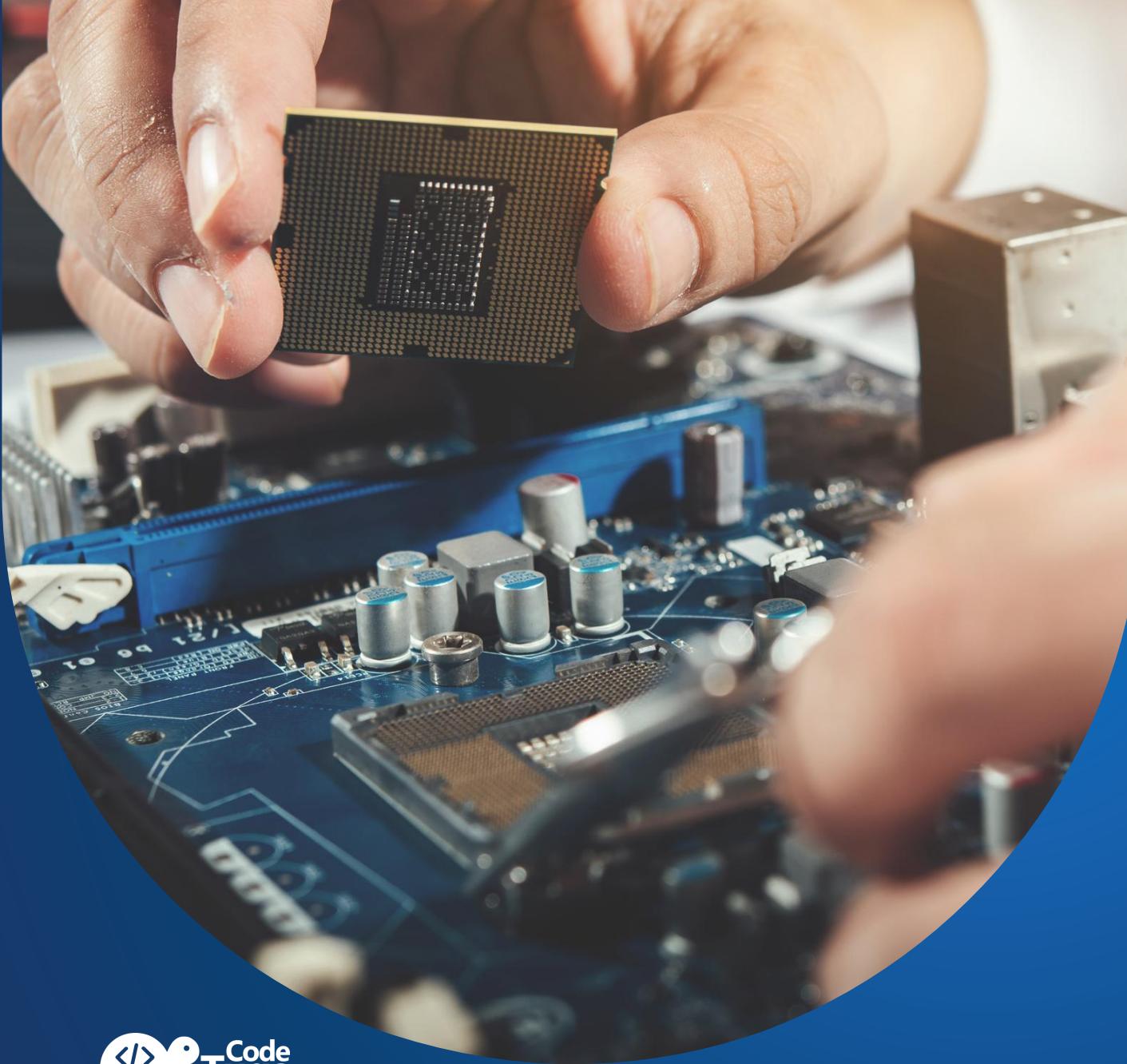
**João Sousa**  
Desenvolvedor

Somos uma equipe de estudantes/desenvolvedores apaixonados por tecnologia. Nosso objetivo é desenvolver uma plataforma que facilite a montagem personalizada de computadores, oferecendo praticidade e assertividade aos usuários.

# Missão

Oferecer uma plataforma inteligente e acessível que auxilie usuários na montagem de computadores personalizados de forma eficiente, segura e compatível com suas necessidades.





# Visão

Ser referência em soluções online de montagem de PCs, promovendo acessibilidade tecnológica e experiência personalizada para todos os perfis de usuários.

# O que é o Montador de PC Online

O Montador de PC Online é uma plataforma inteligente, assistida por inteligência artificial, que auxilia o usuário a montar um computador personalizado conforme seu orçamento, perfil de uso e ambiente. A IA sugere peças compatíveis, otimiza o custo-benefício e torna todo o processo mais acessível, mesmo para quem não tem conhecimento técnico.



# Benefícios do Nosso Projeto



1

## Recomendação inteligente de peças

A plataforma utiliza IA para sugerir componentes compatíveis com base no perfil do usuário.

2

## Acessível para todos os níveis de conhecimento

Ideal tanto para iniciantes quanto para usuários avançados que buscam agilidade.

3

## Otimização de custo-benefício

Garante uma configuração eficiente dentro do orçamento informado.

# O que são requisitos?

Requisitos são as necessidades, funcionalidades, comportamentos e restrições que o sistema precisa atender para cumprir seu propósito.

Eles são a base do desenvolvimento definem o que o sistema deve fazer e como ele deve se comportar para atender aos usuários e aos objetivos do projeto.



# Requisitos Funcionais



Recomendação de Refrigeração  
por IA



Sugestão por Ambiente



Detecção de Localização  
(IP + API de clima)



Chatbot Interativo



Recomendação  
Automatizada com IA



Build Alternativa  
Inferior com justificativa

# Requisitos Funcionais



Sugerir Upgrade de Orçamento



Perfil de Uso (gamer,  
escritório, etc.)



Links de Compra



Validação de Gabinete  
(espaço físico real)



Avaliação de  
Compatibilidade entre peças



Definição de  
Orçamento

# Requisitos Funcionais



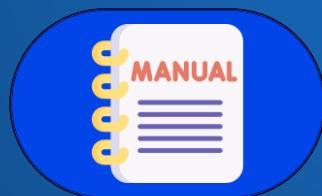
Cadastro de Usuário (incluir login via Google)



Salvar Build



Exportar Build (PDF/XLSX)



Montagem Manual

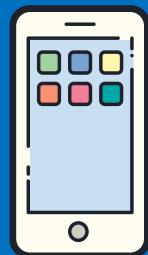


Coleta de Dados Ambientais

# REQUISITOS NÃO FUNCIONAIS

## Usabilidade

- Interface intuitiva e fácil de navegar
- Design responsivo para desktop e mobile



## Desempenho

- Carregamento rápido das páginas e sugestões
- IA com tempo de resposta otimizado

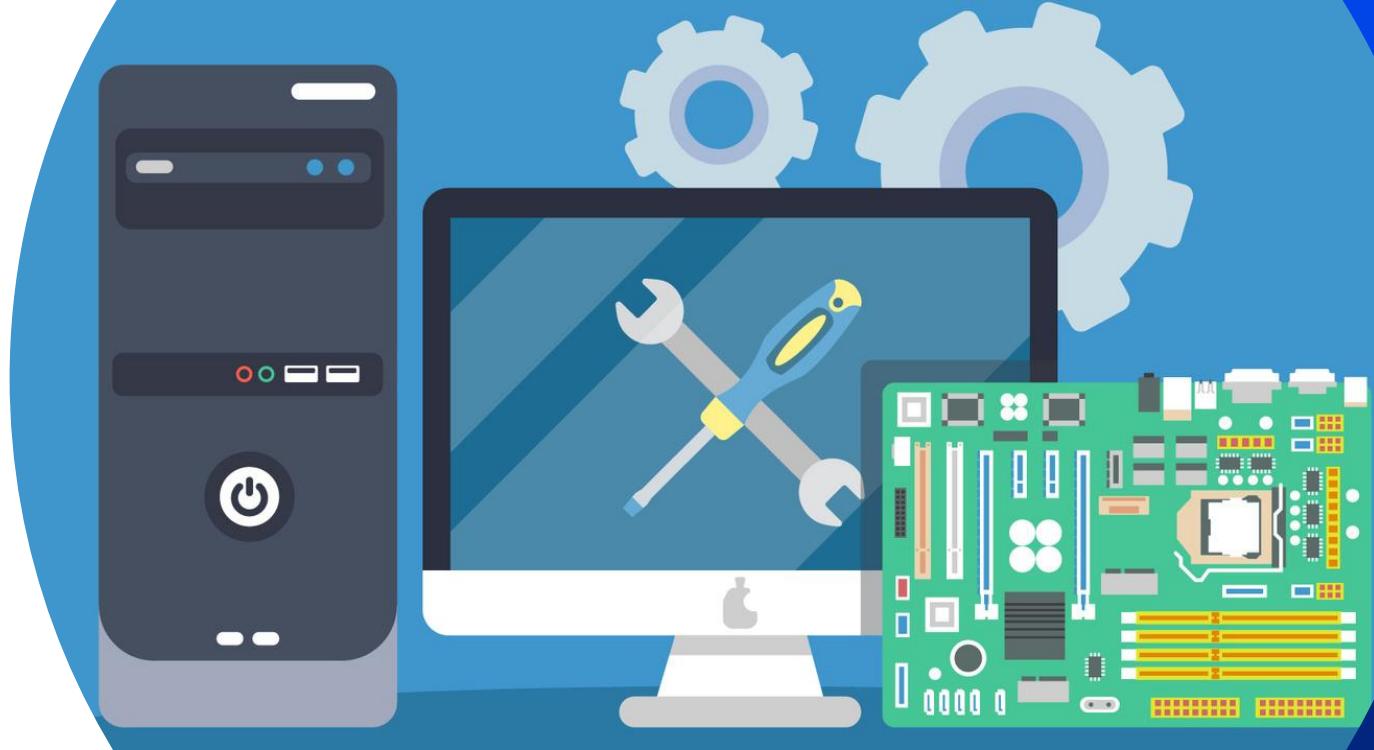


## Compatibilidade

- Compatível com diferentes tamanhos de tela



# Diagrama de Casos de Uso

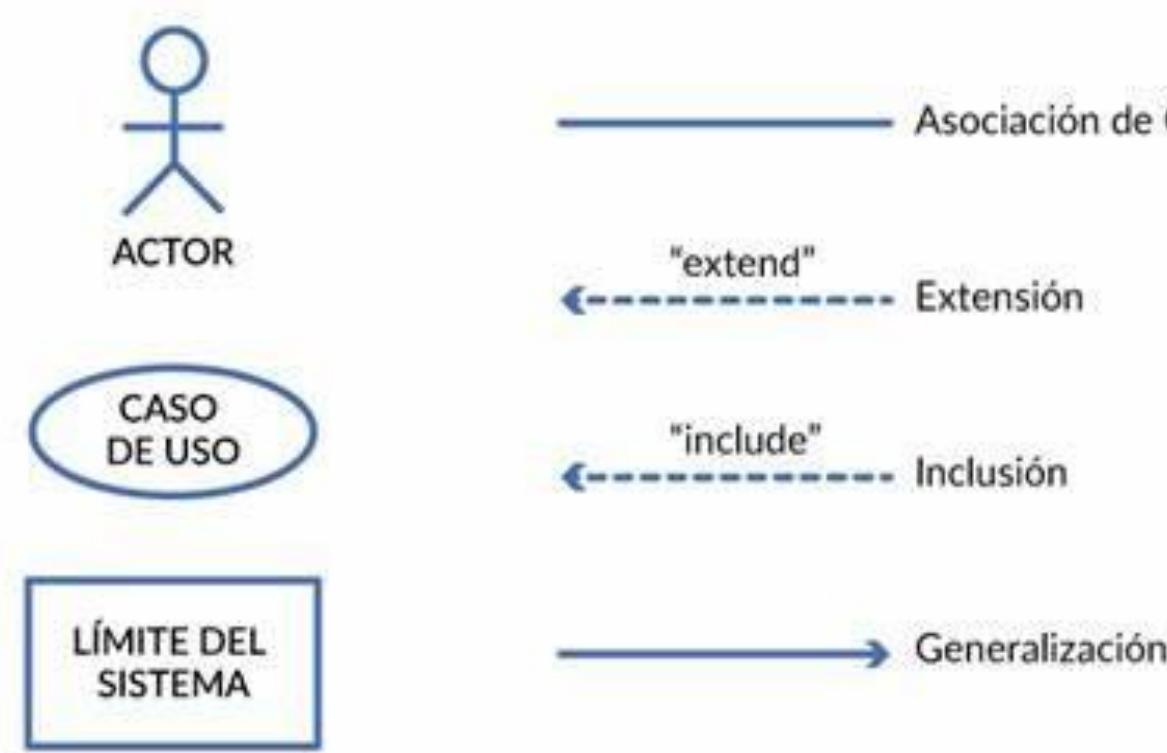


# EXPLICAÇÃO DO DIAGRAMA

Representa as funções principais do sistema e como os usuários interagem

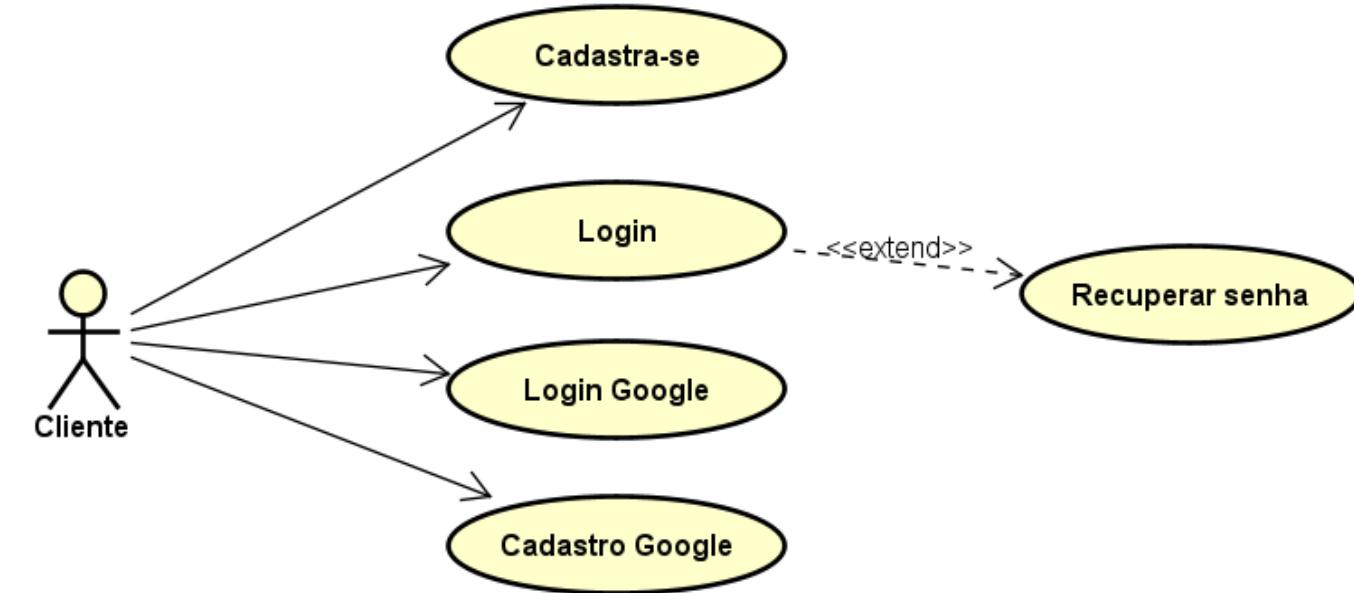
Elementos: atores, casos de uso, relacionamentos

Utilidade: visão geral do sistema

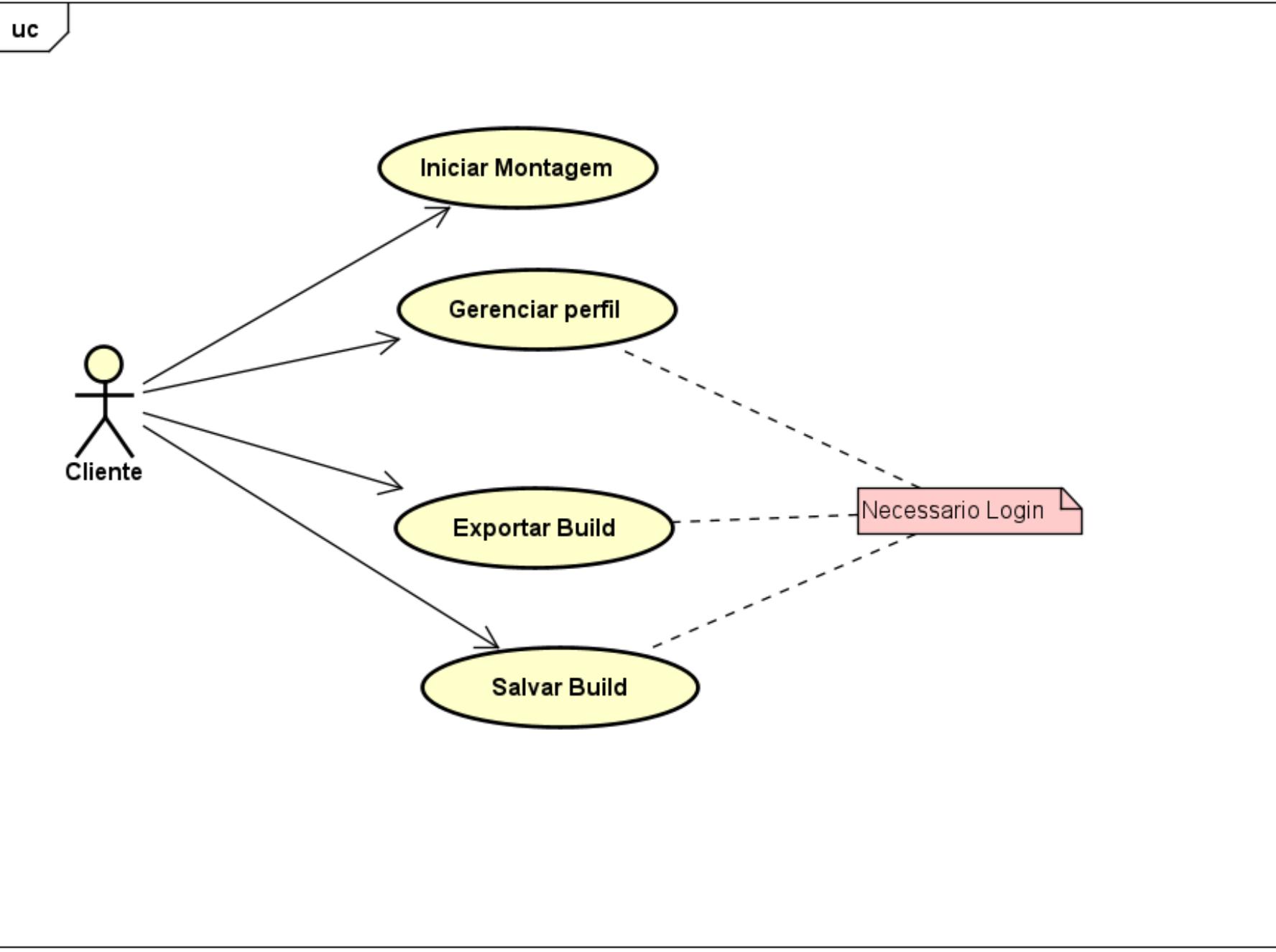


Fonte: [Fundamentos](#)

# Cadastro

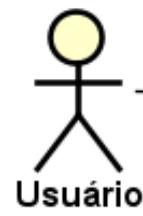


# Cadastro

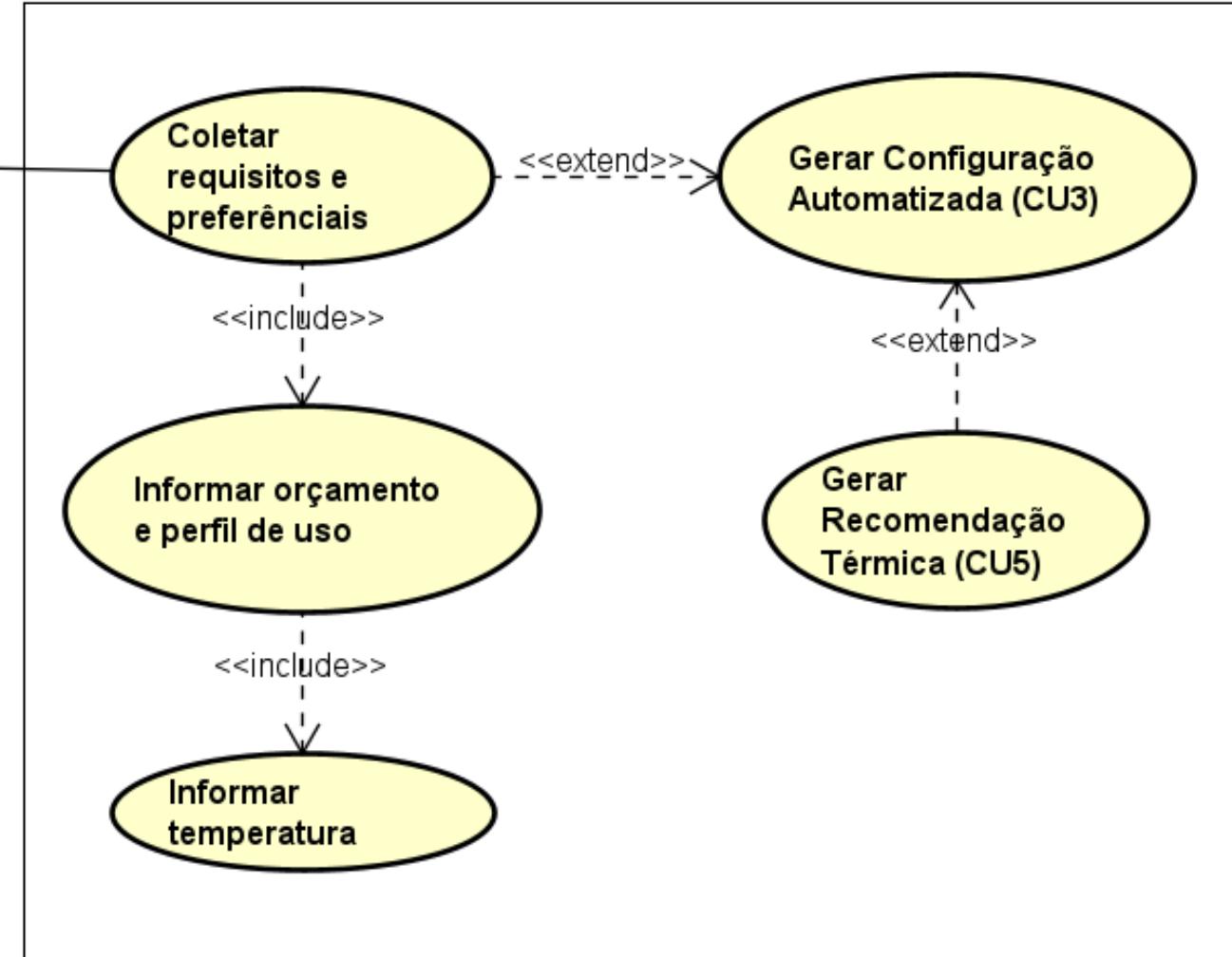


# Coleta de requisitos e Preferências do Usuário

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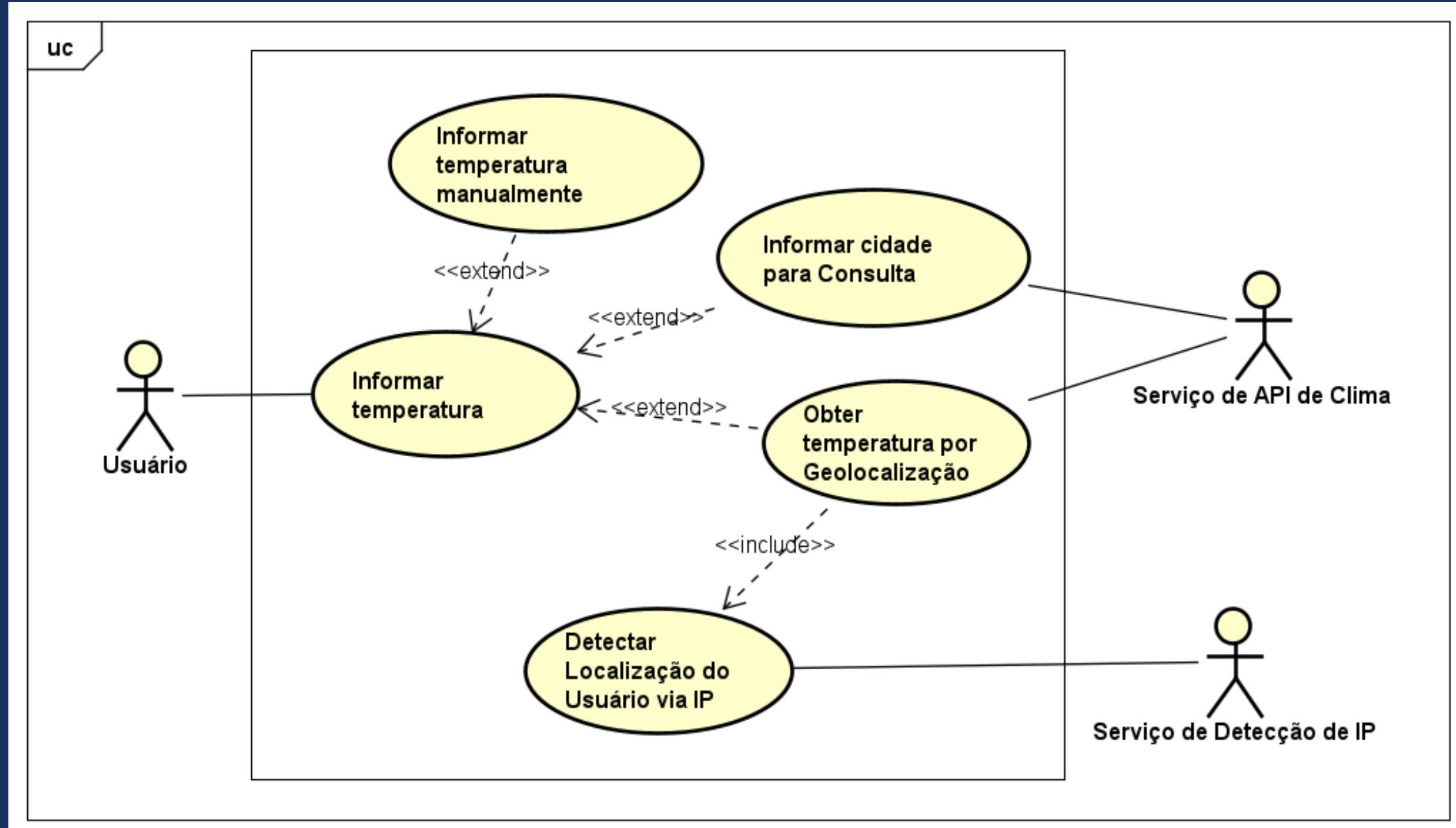


Usuário

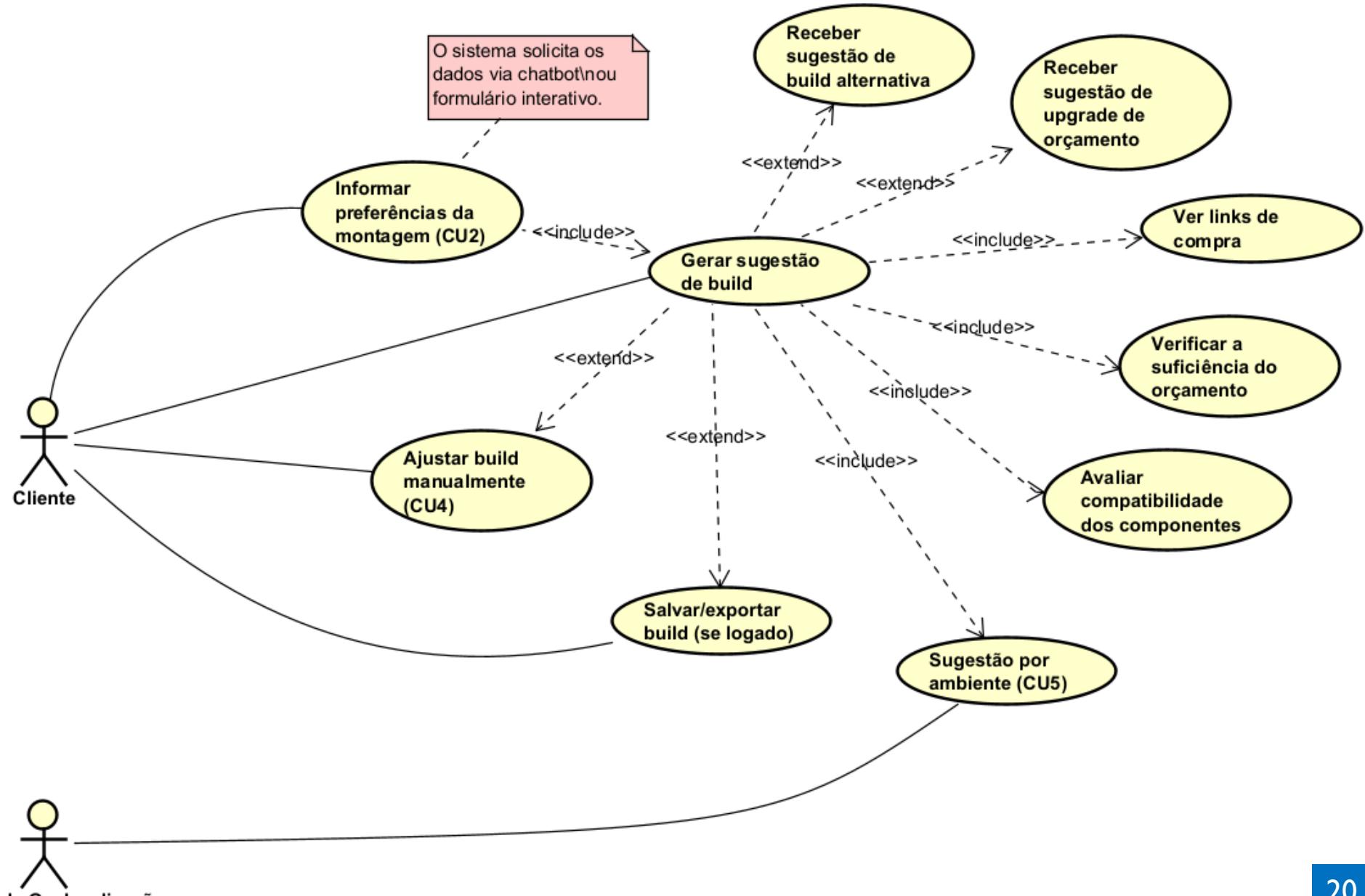


# Coleta de requisitos e Preferências do Usuário

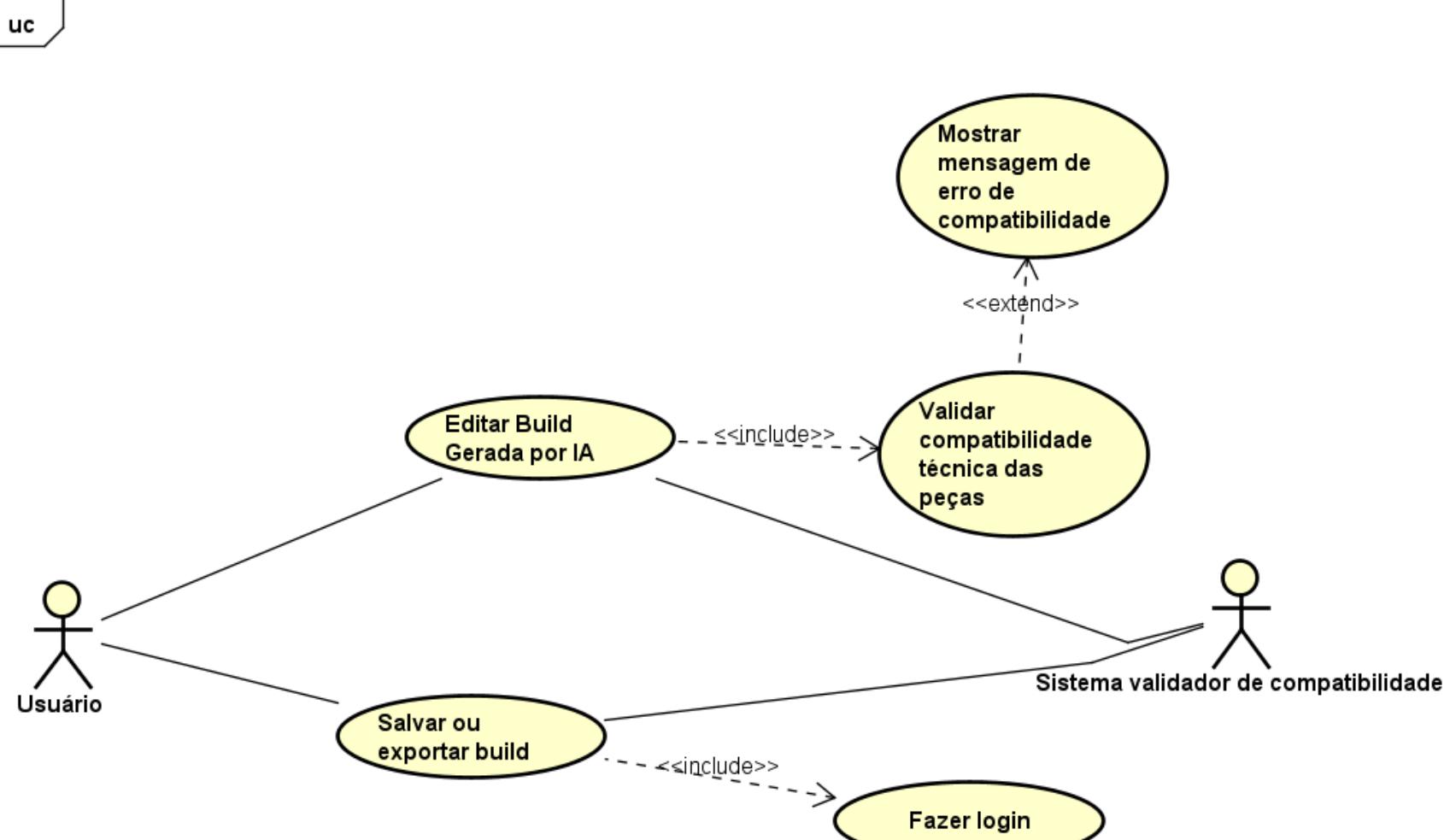
Informar temperatura



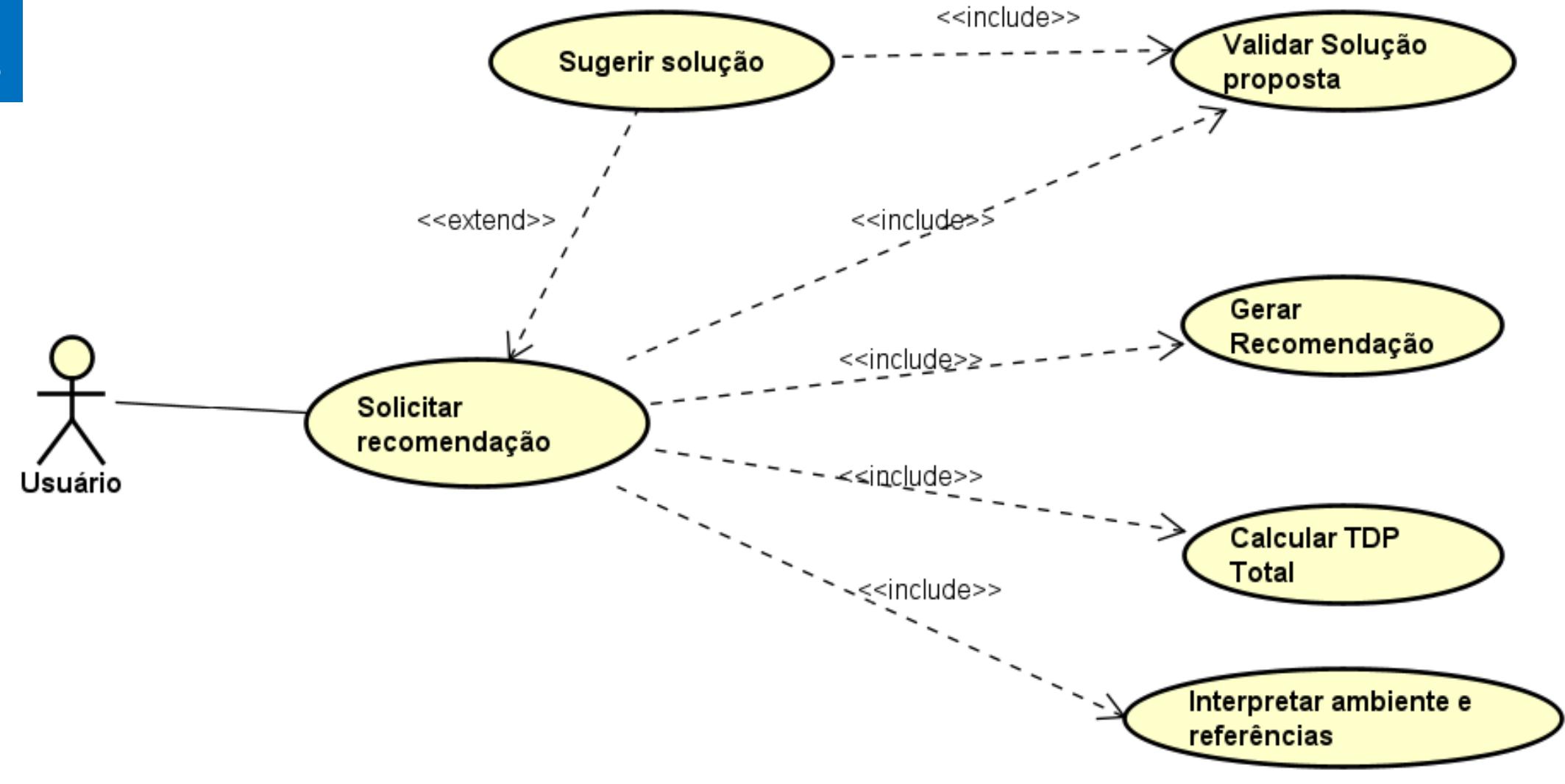
# Configuração Automatizada de PC



# Montagem manual e Validação da Build



# Sistema de Refrigeração

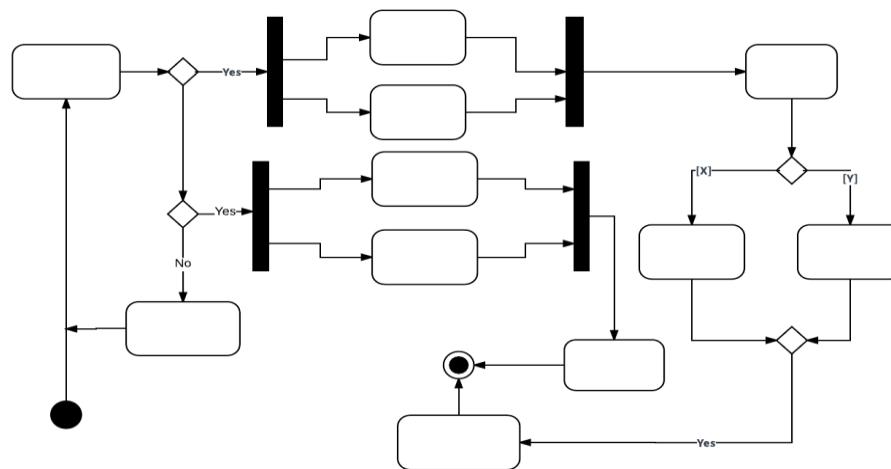


# Diagrama de Atividades



# EXPLICAÇÃO DO DIAGRAMA

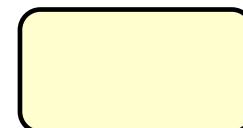
- Representa o **fluxo de ações e decisões**
- Mostra a lógica por trás de um processo
- Elementos: nós de ação, decisão, início/fim.



# SIMBOLOGIA DO DIAGRAMA DE ATIVIDADES



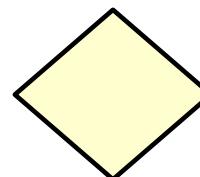
- Simboliza o início da atividade



- Ação: Etapa em que o usuário ou software realiza alguma atividade



- Simboliza o fim da atividade



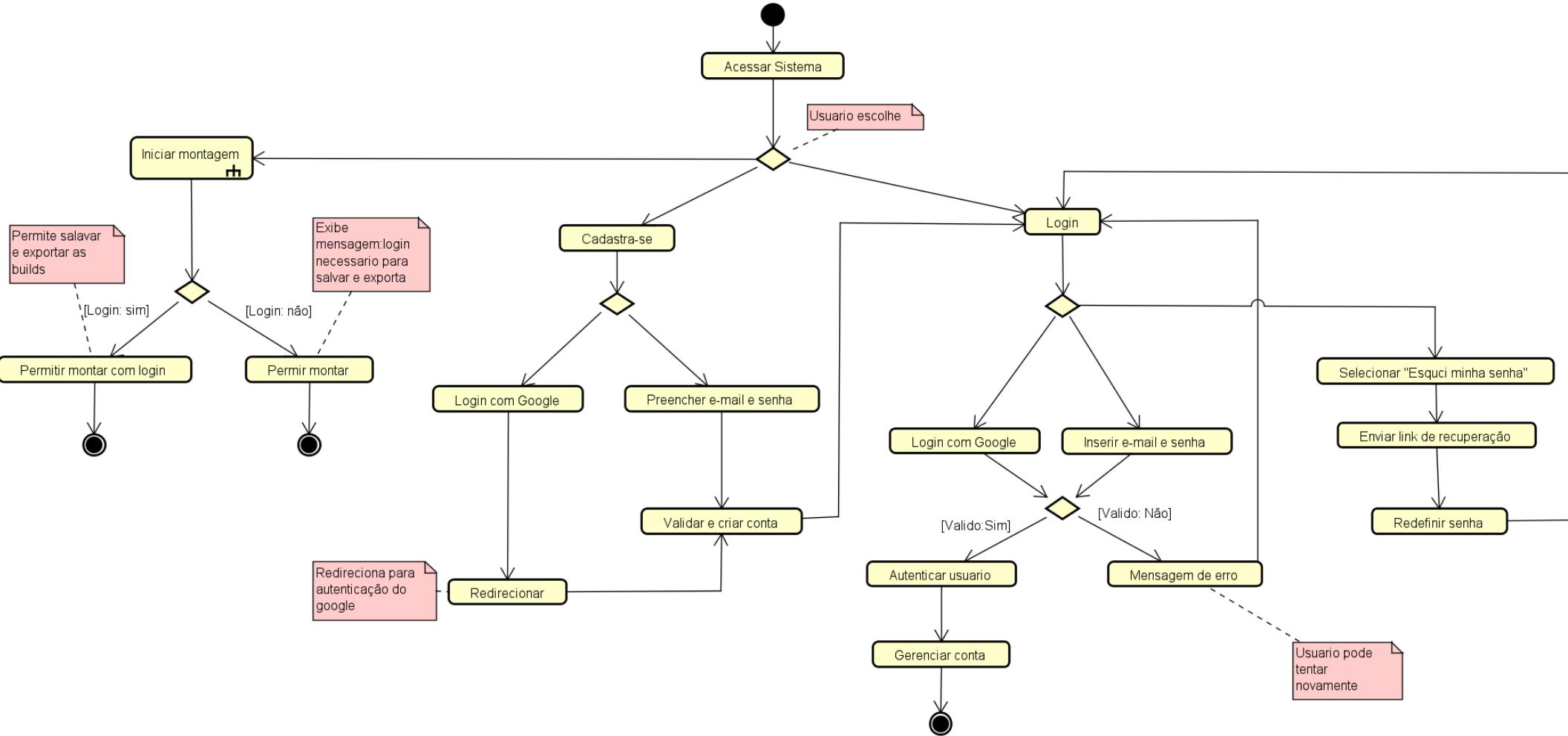
- Nó de decisão, é um ramo condicional do fluxo



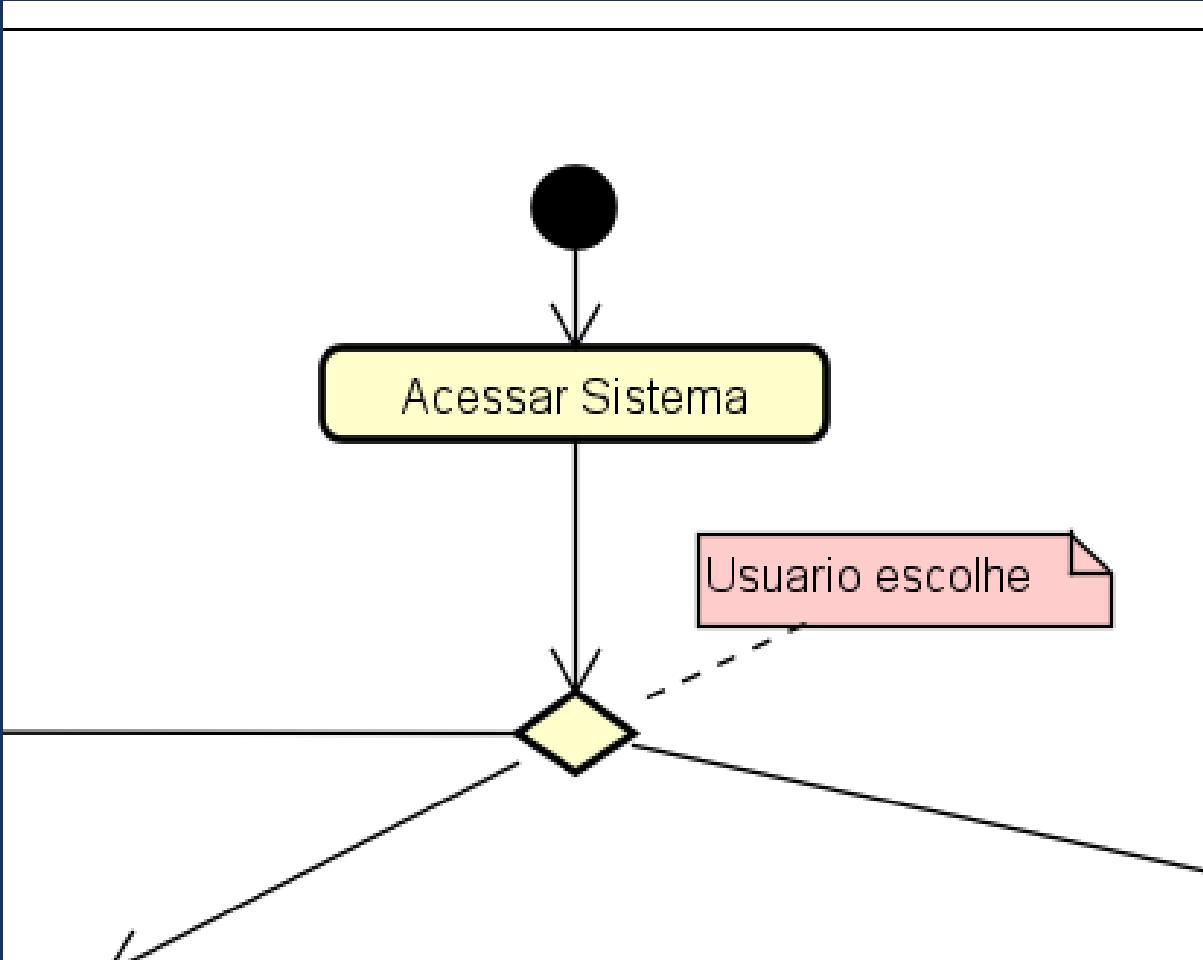
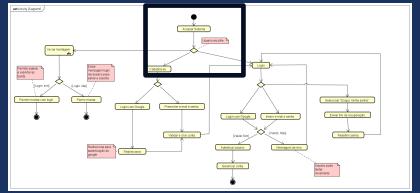
- Controle de fluxo, indica a direção do fluxo entre os elementos do diagrama

# Cadastro

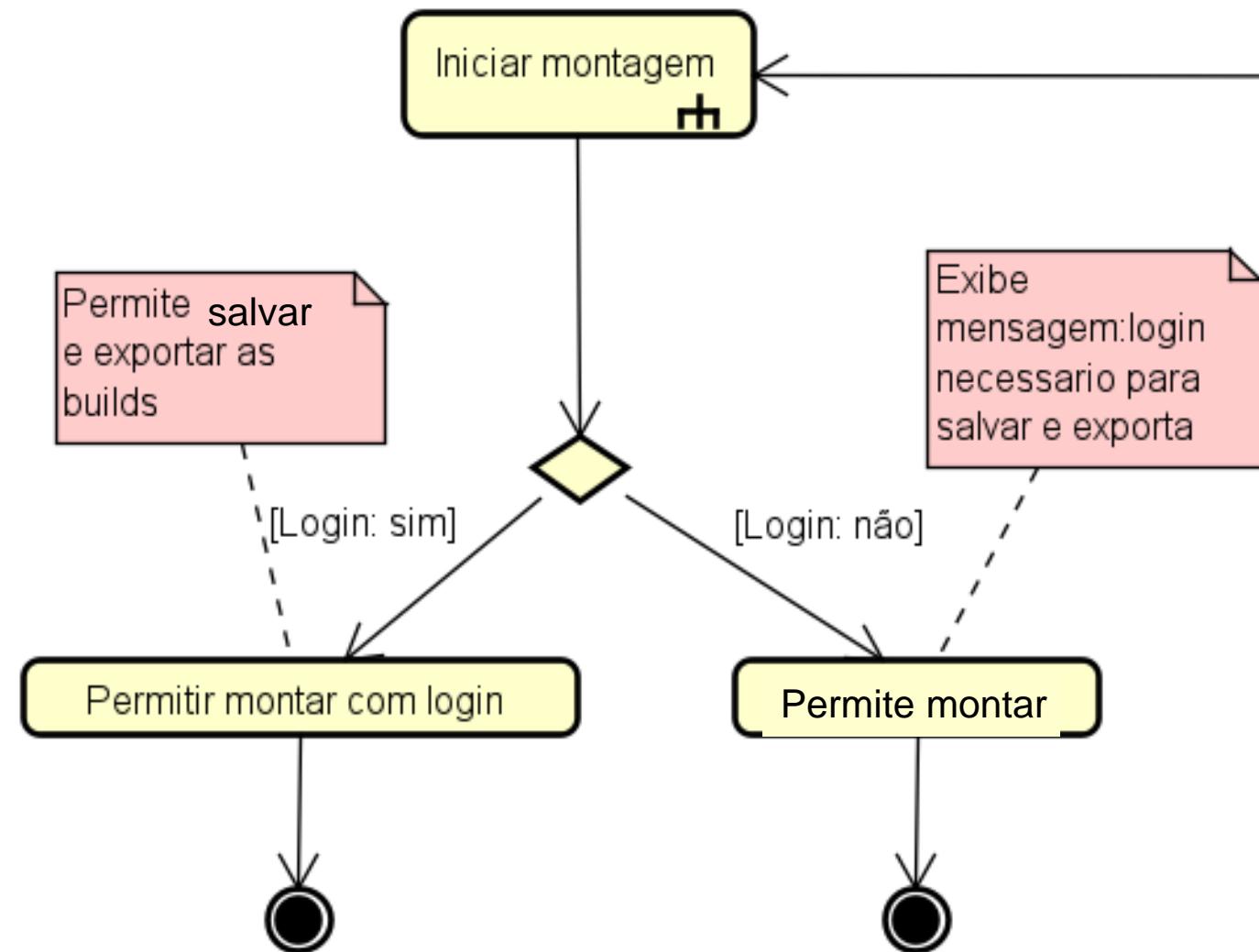
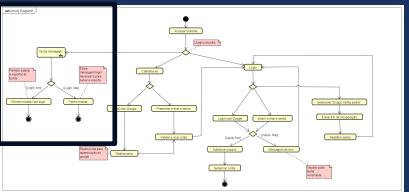
act Activity Diagram0



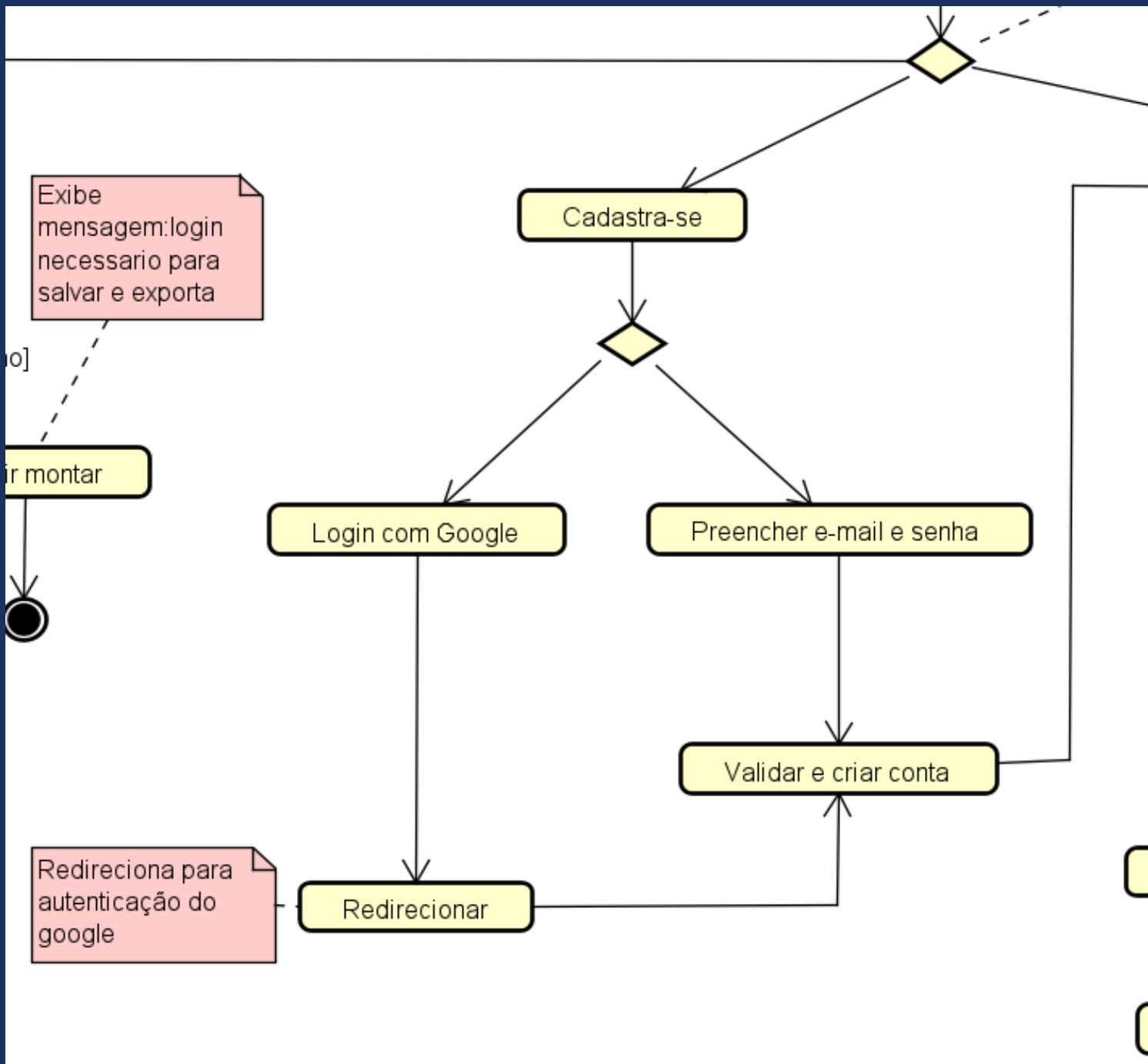
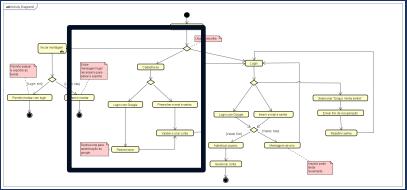
# Cadastro e Login



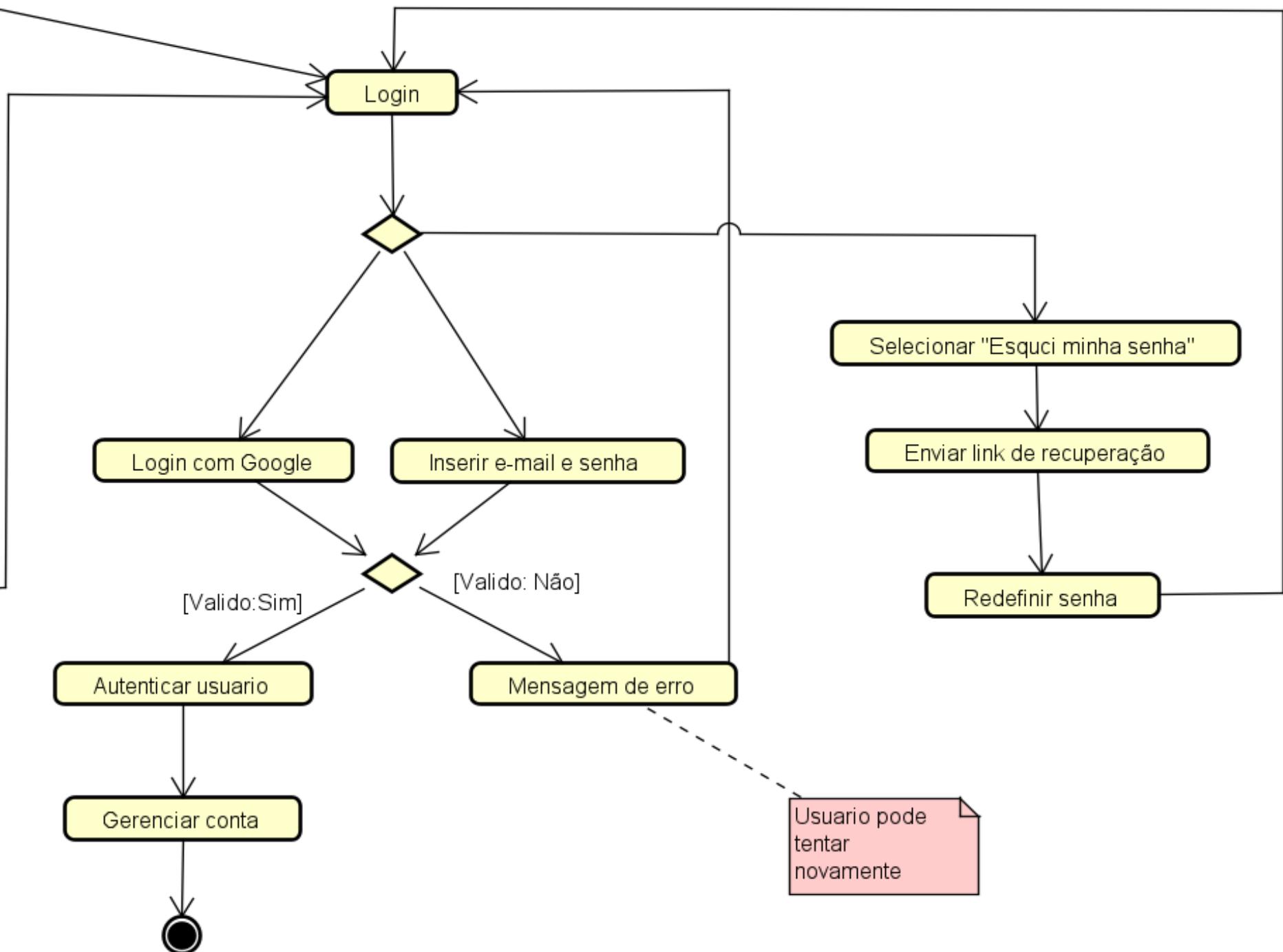
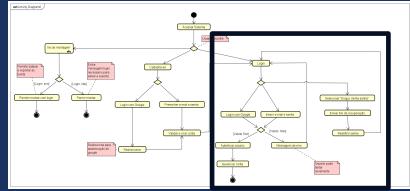
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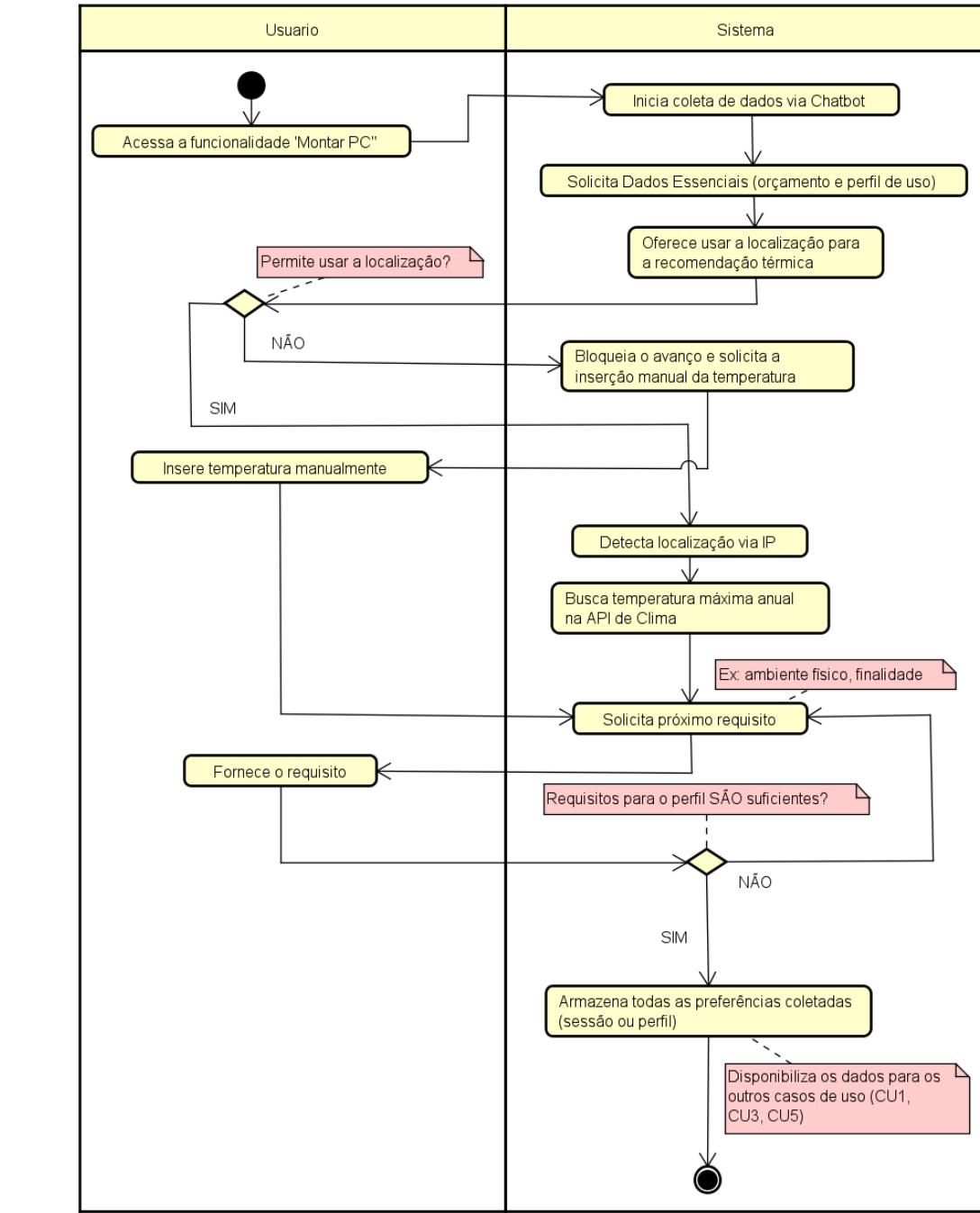


# Cadastro e Login

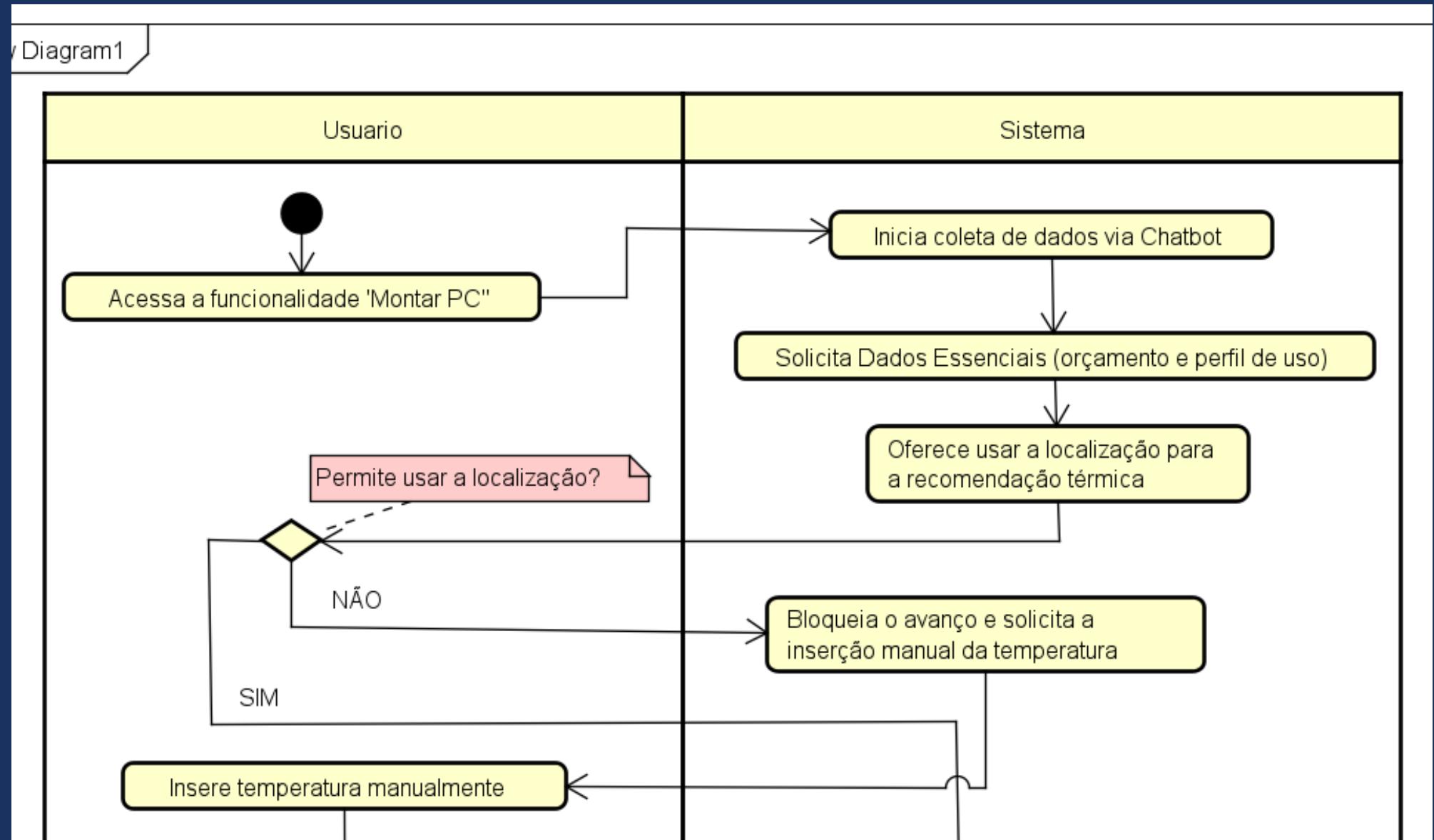
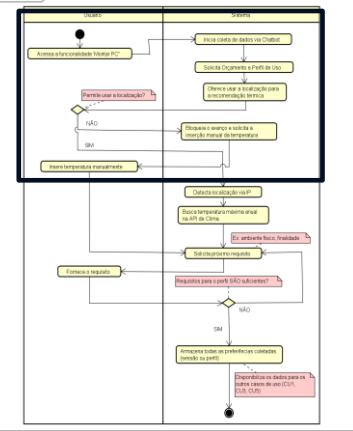


# Coleta de requisitos e Preferências do Usuário

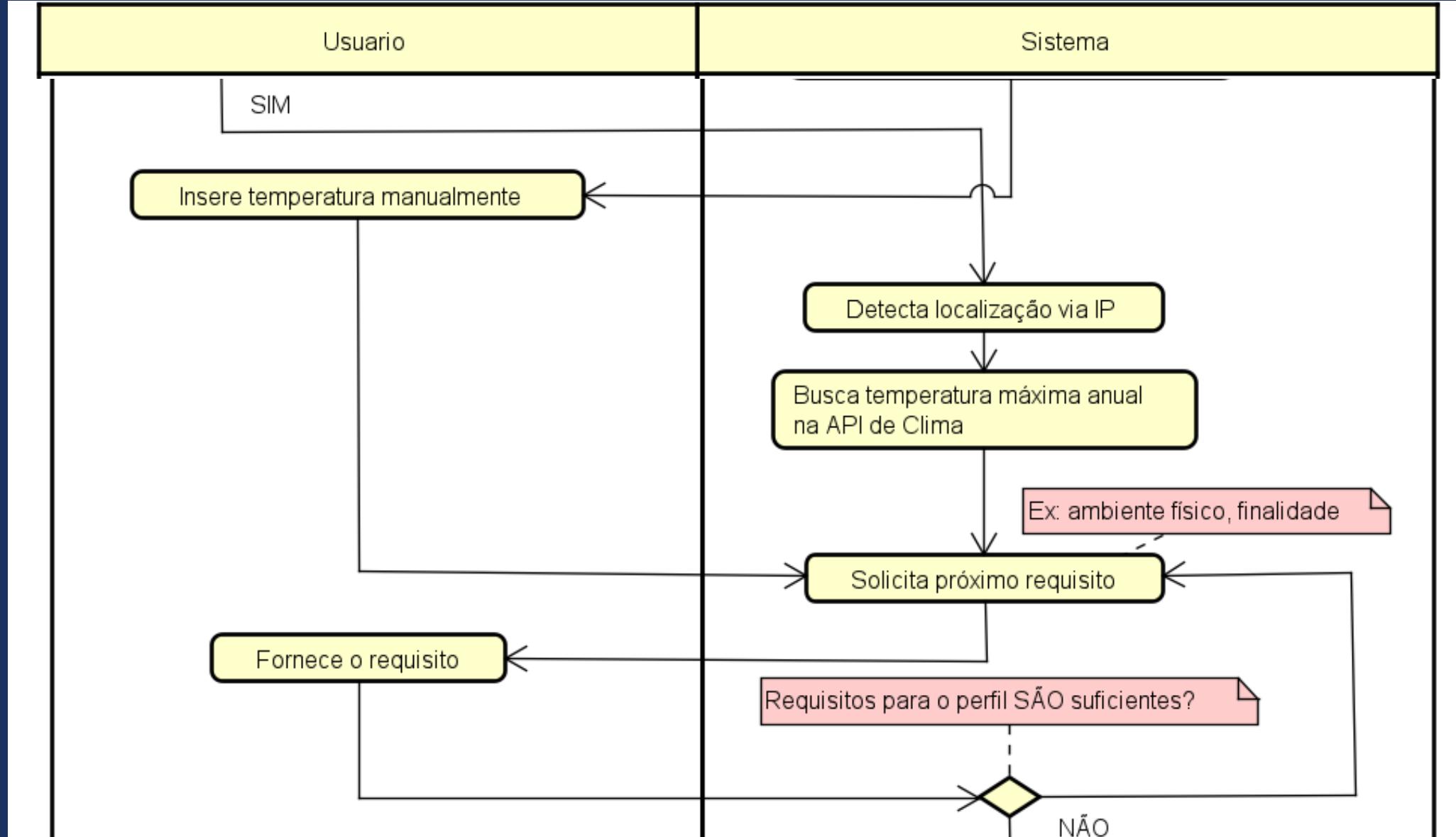
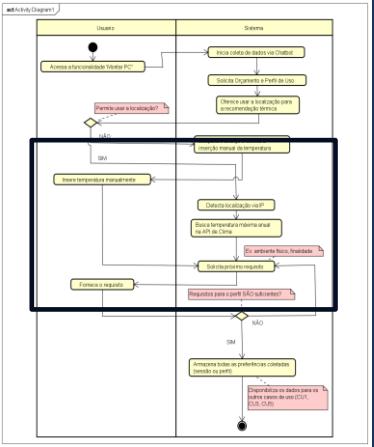
act Activity Diagram1



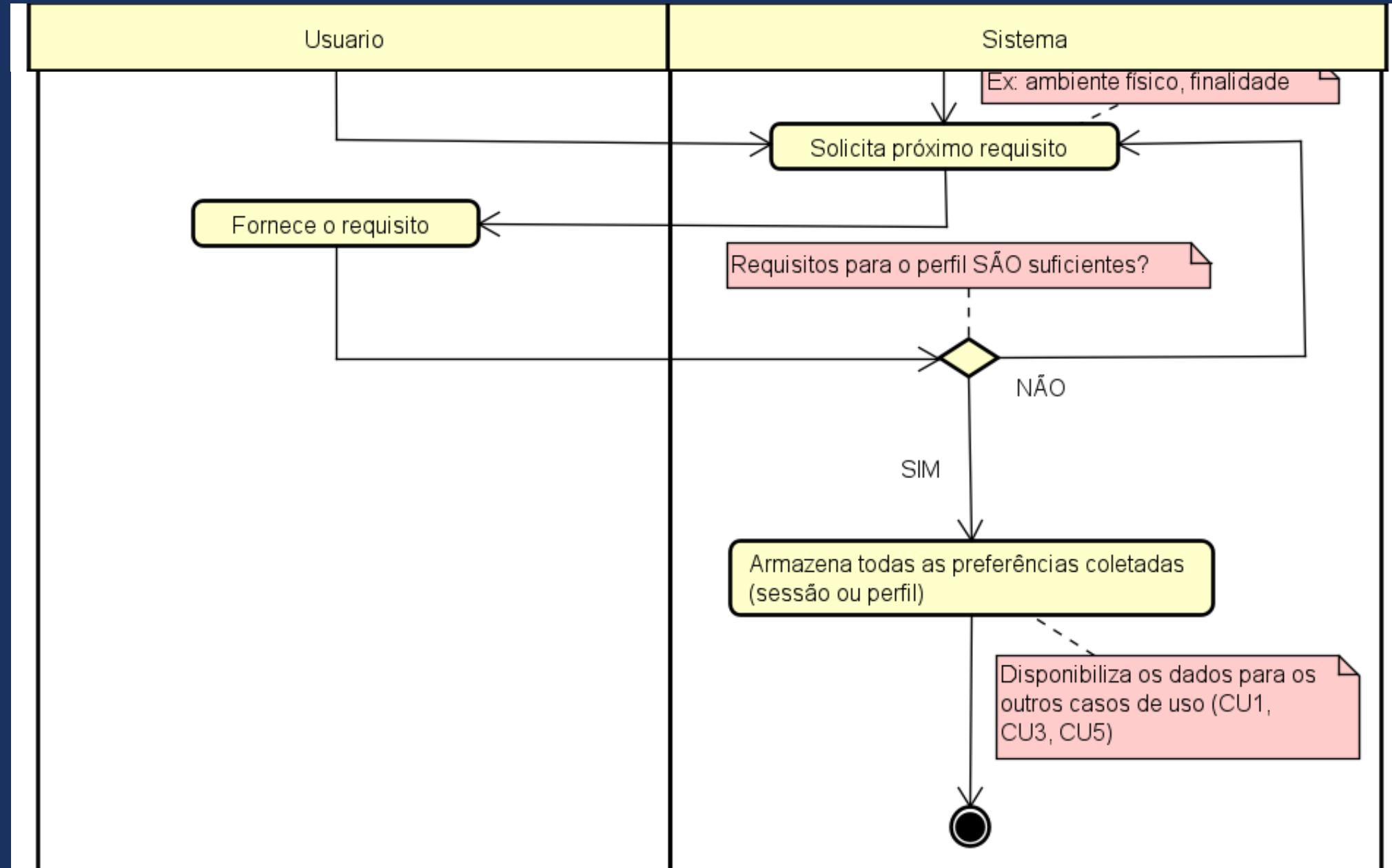
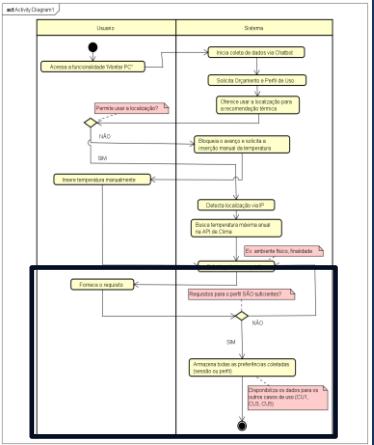
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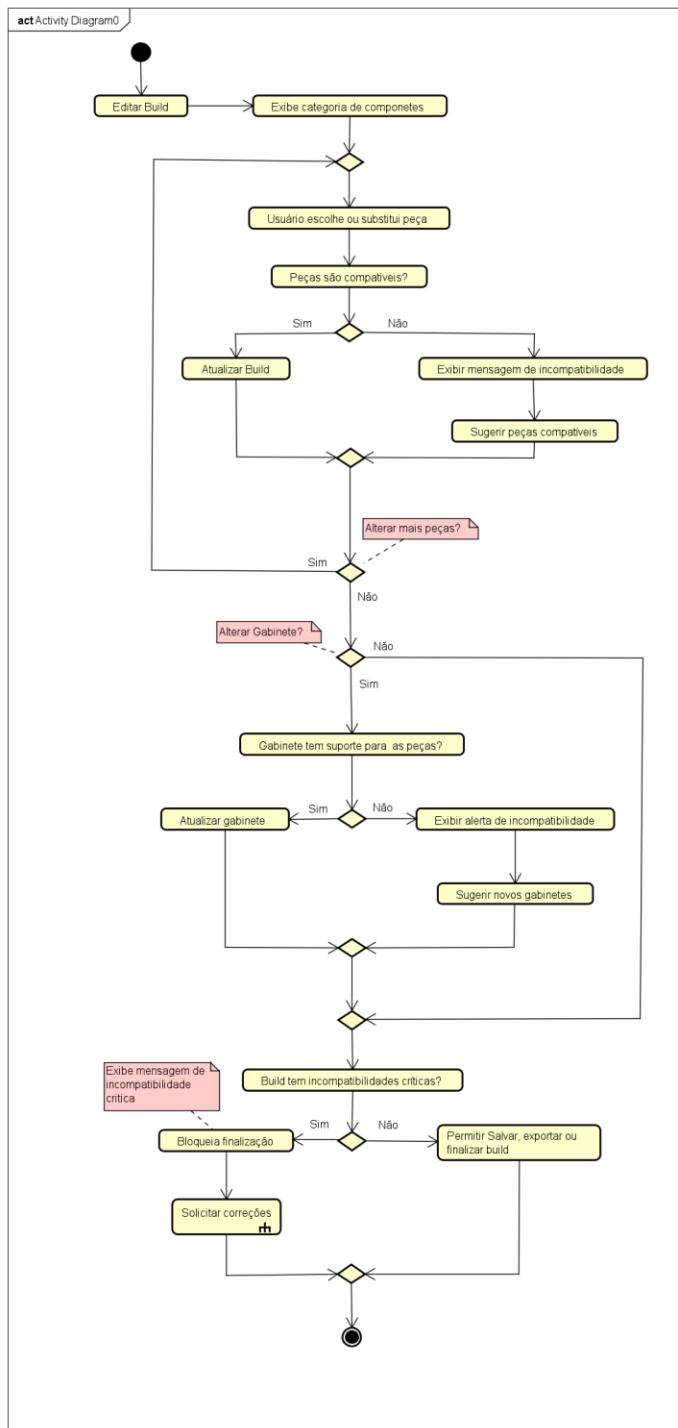
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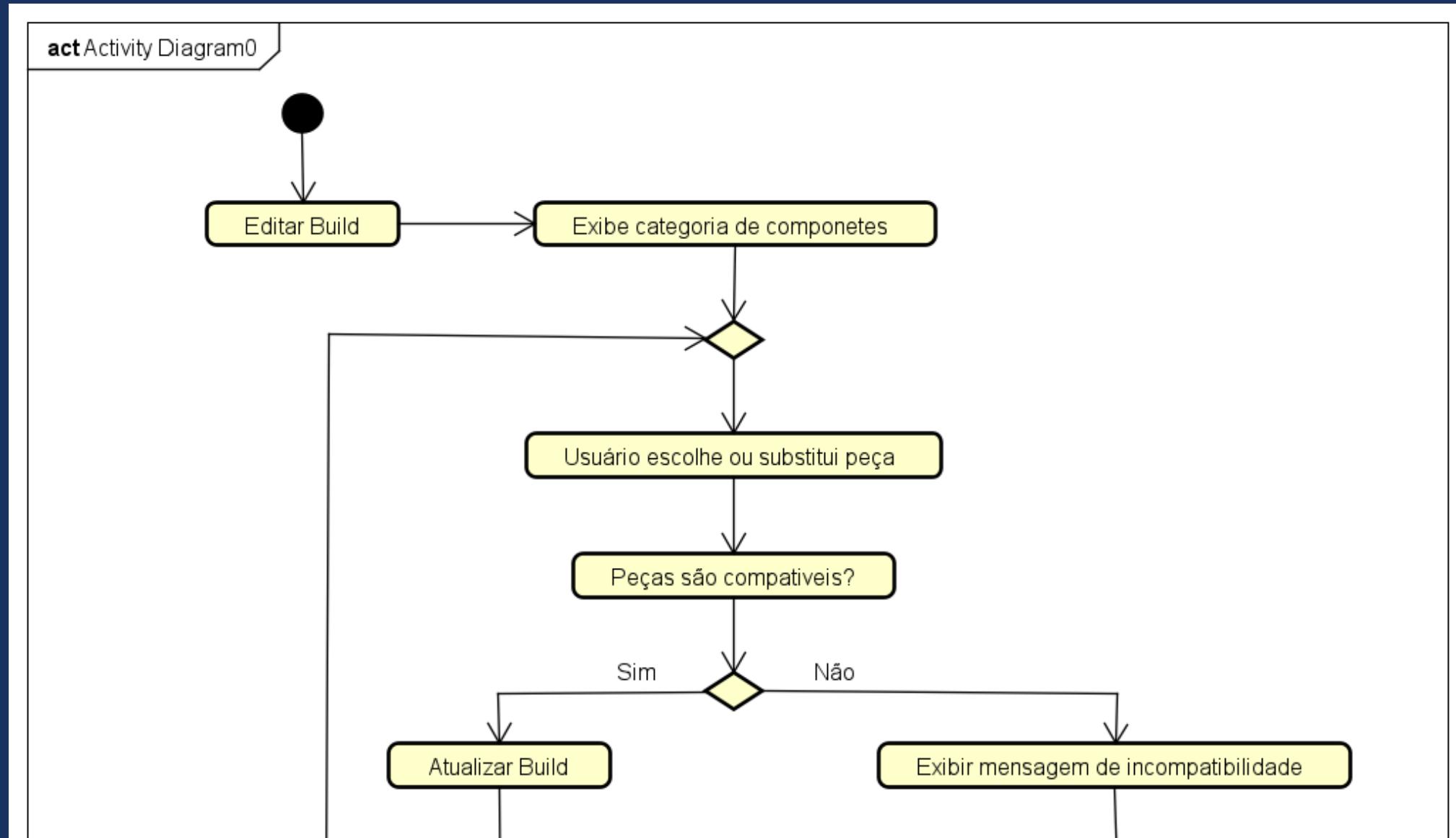
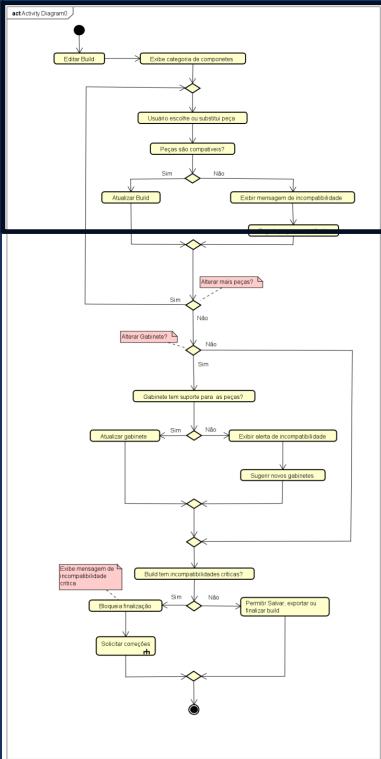
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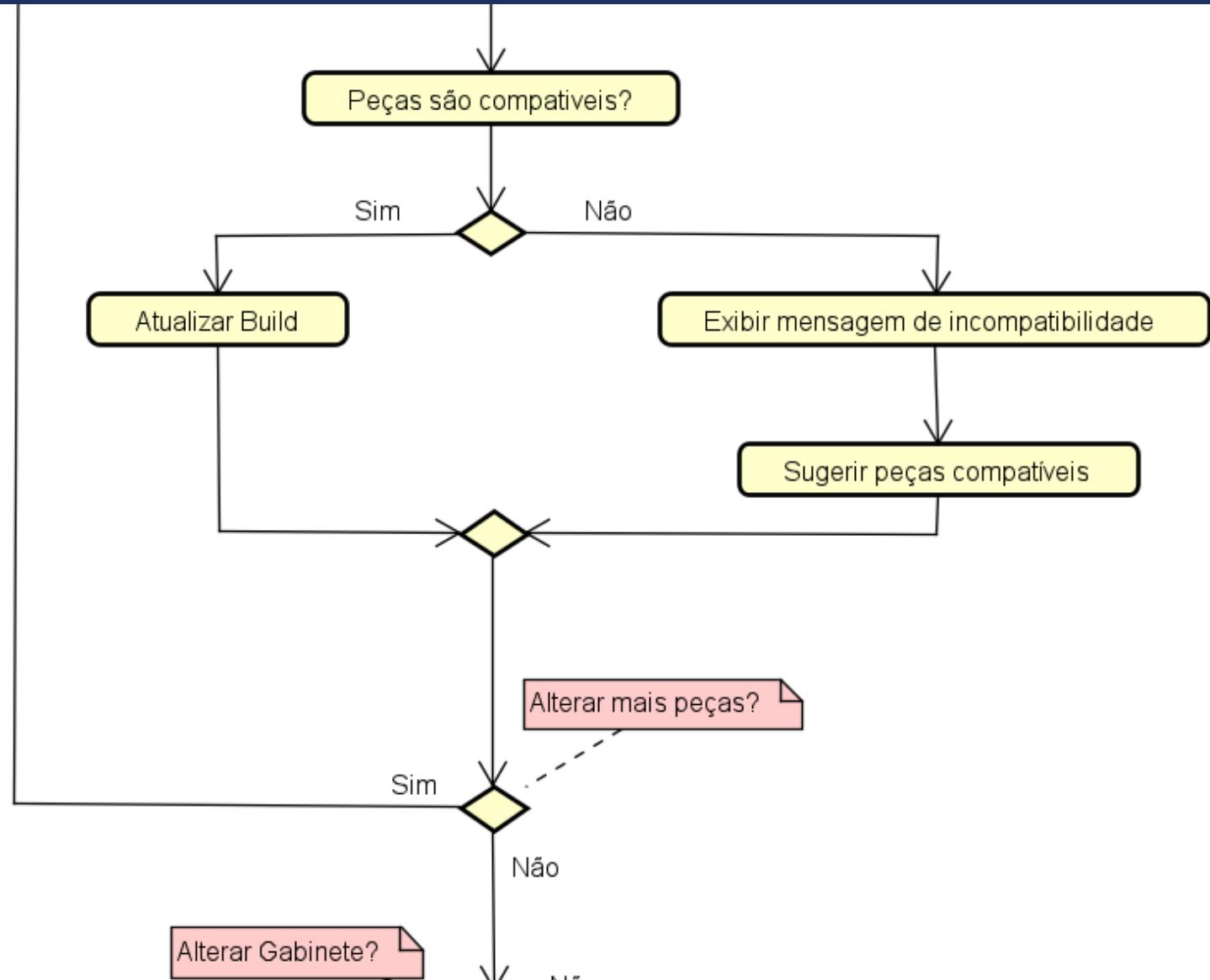
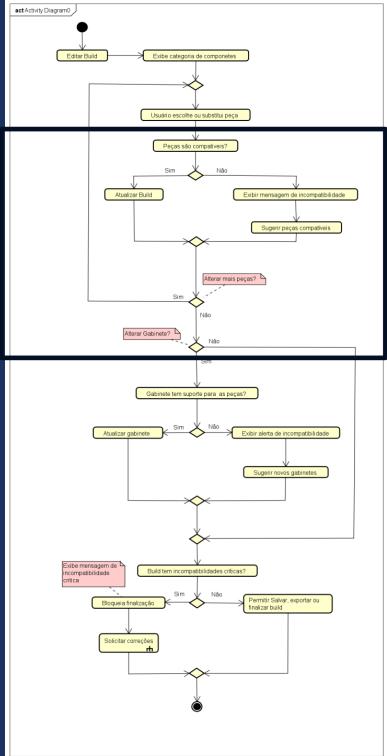
# Montagem manual e Validação da Build



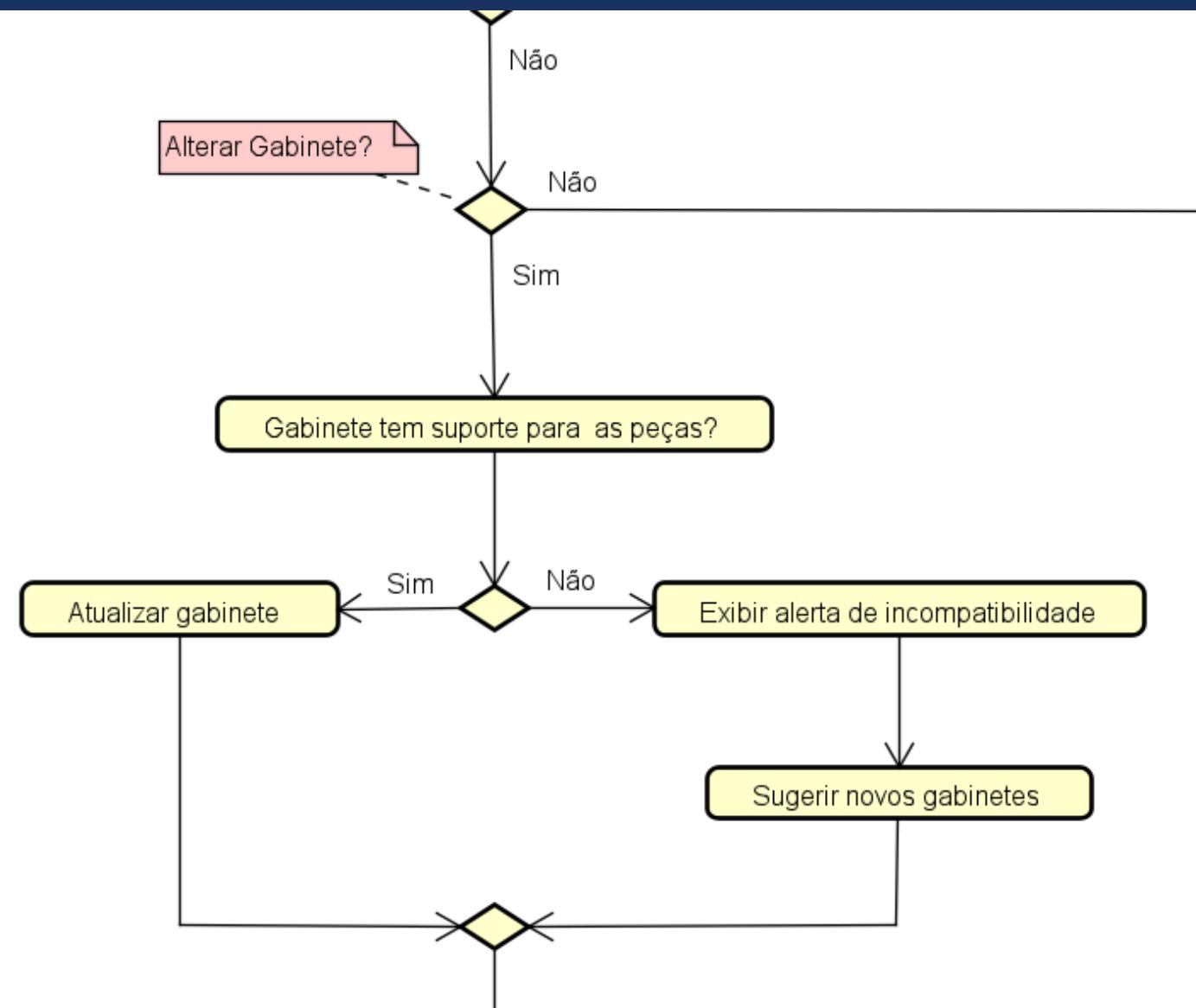
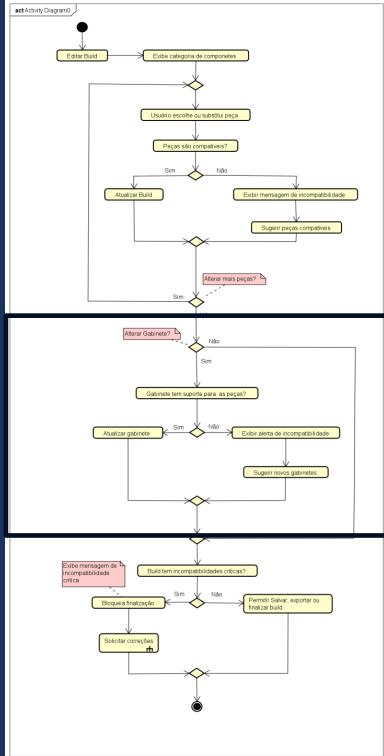
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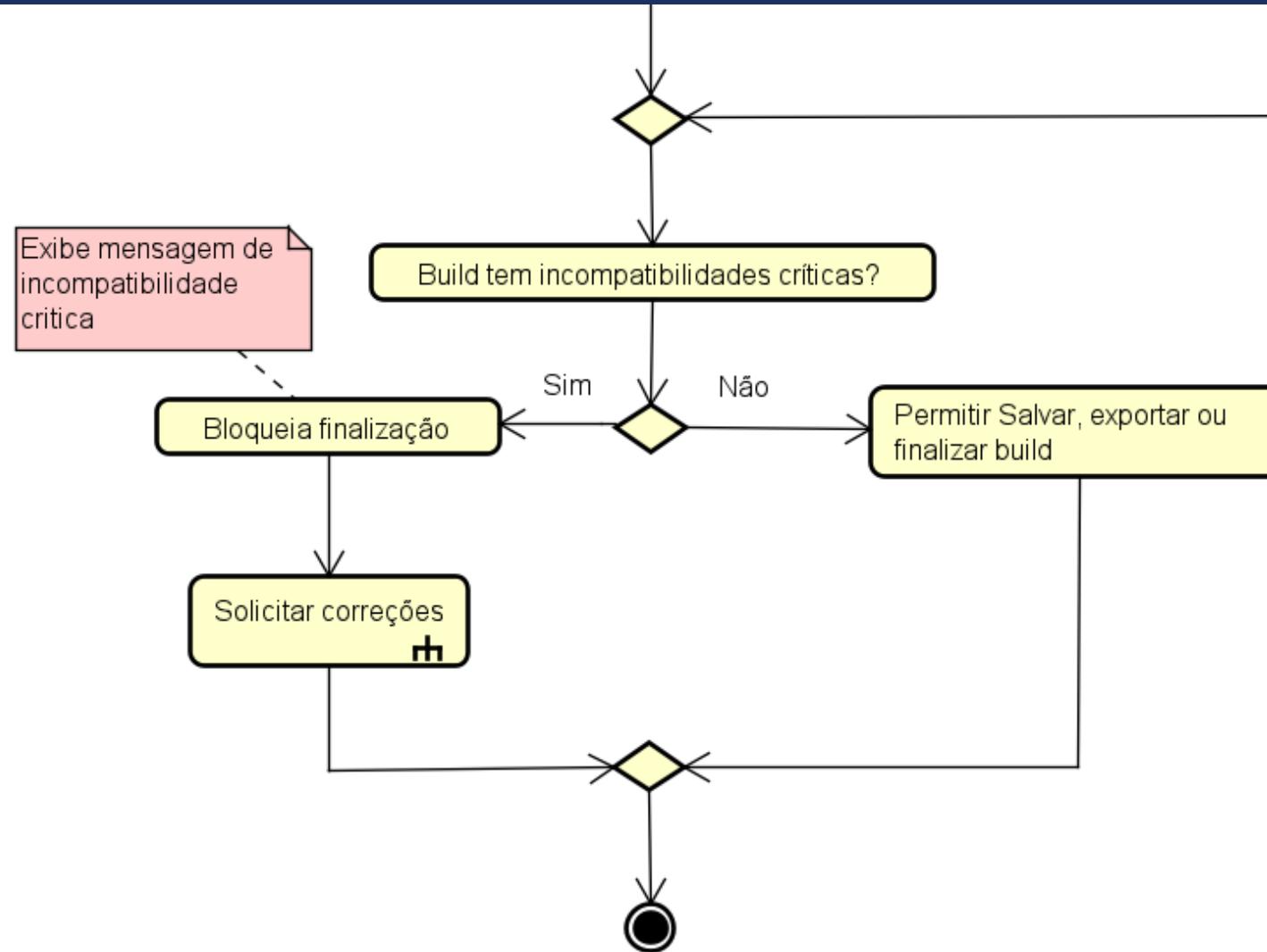
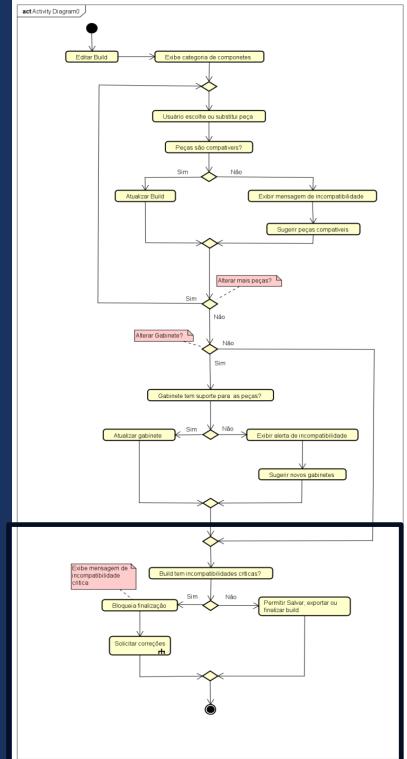
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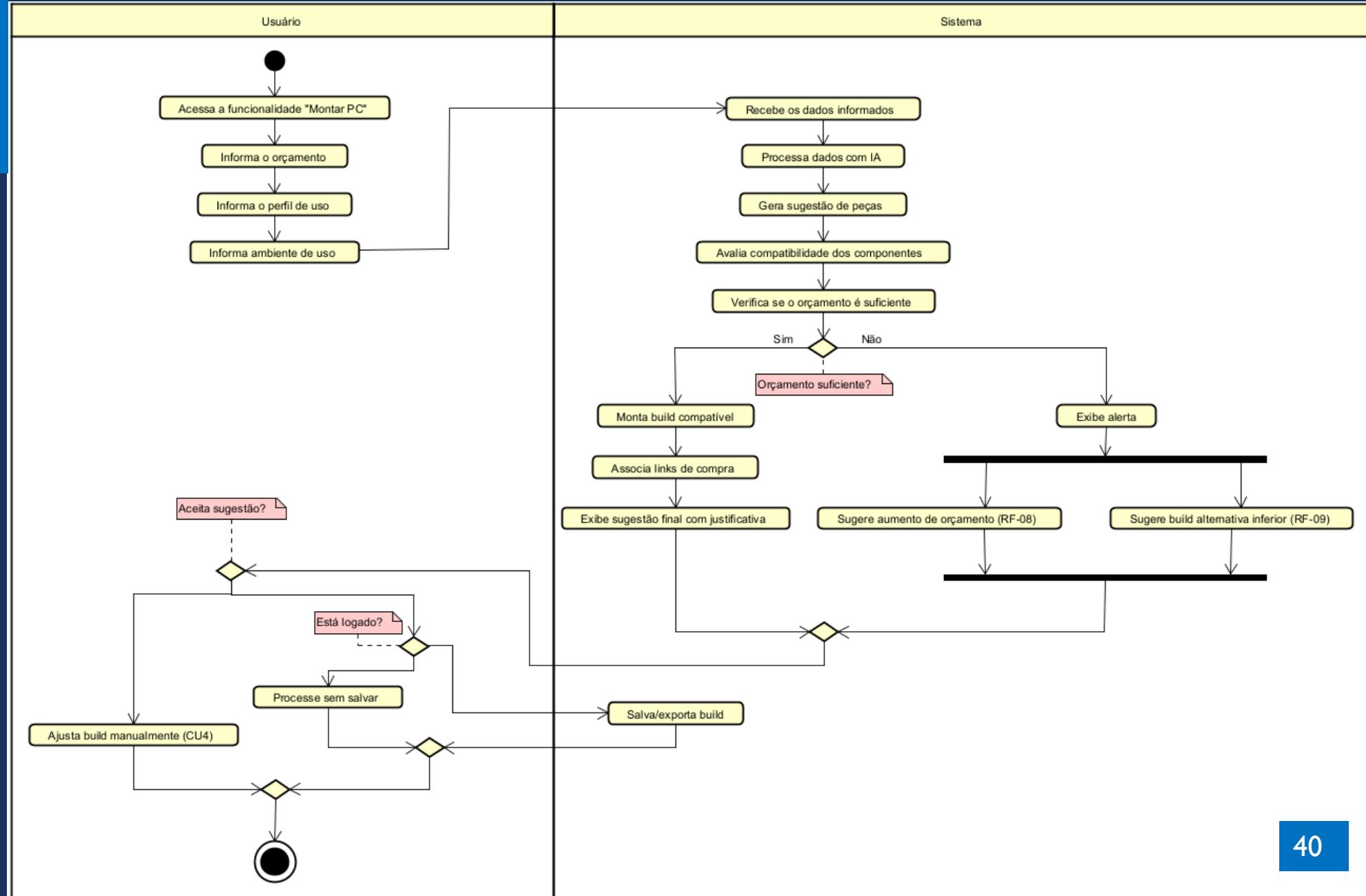
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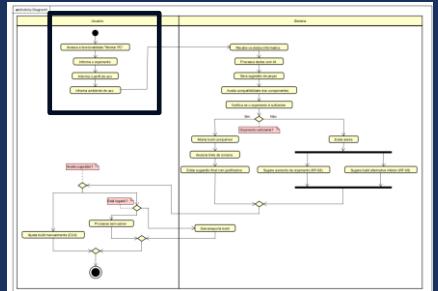
# Montagem manual e Validação da Build



# Configuração Automatizada de PC



# Configuração Automatizada de PC



Usuário



Acessa a funcionalidade "Montar PC"



Informa o orçamento

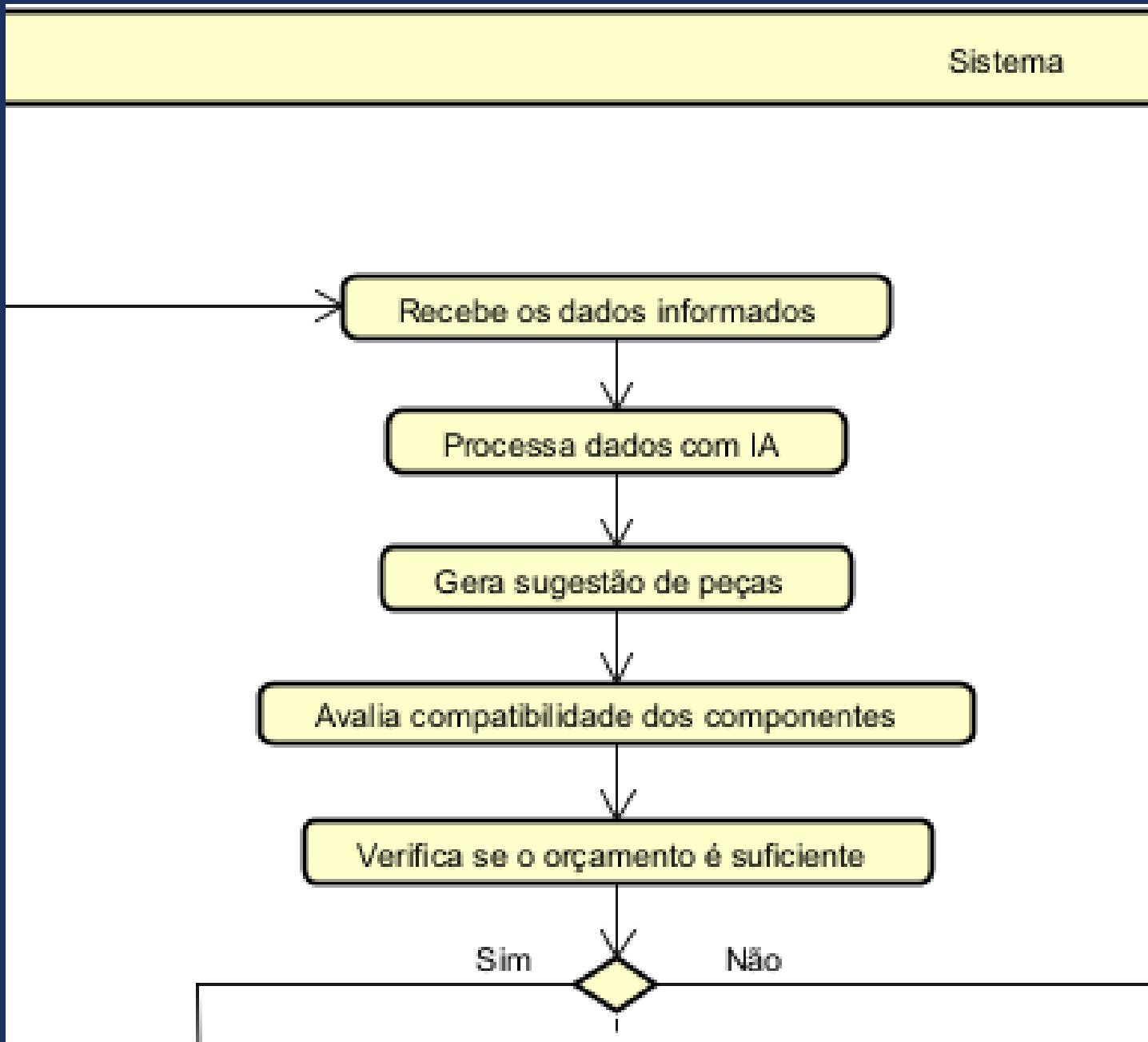
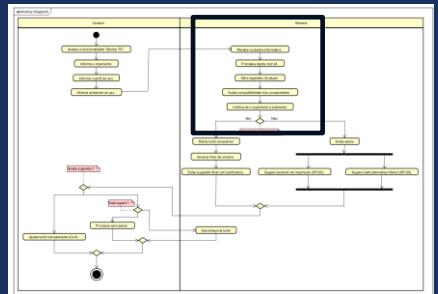


Informa o perfil de uso

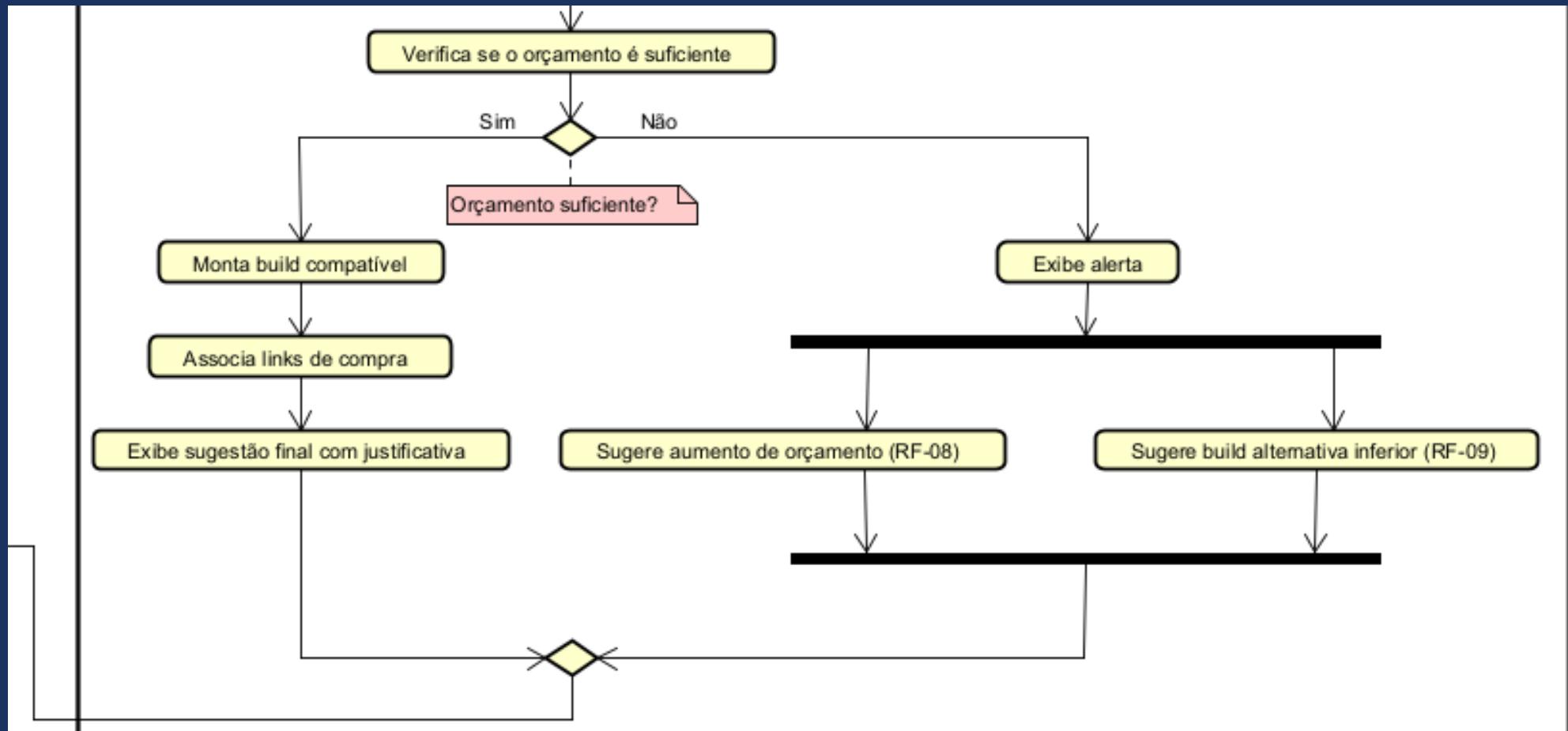
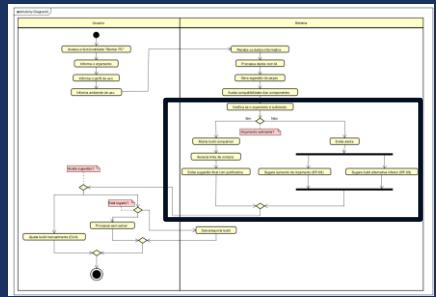


Informa ambiente de uso

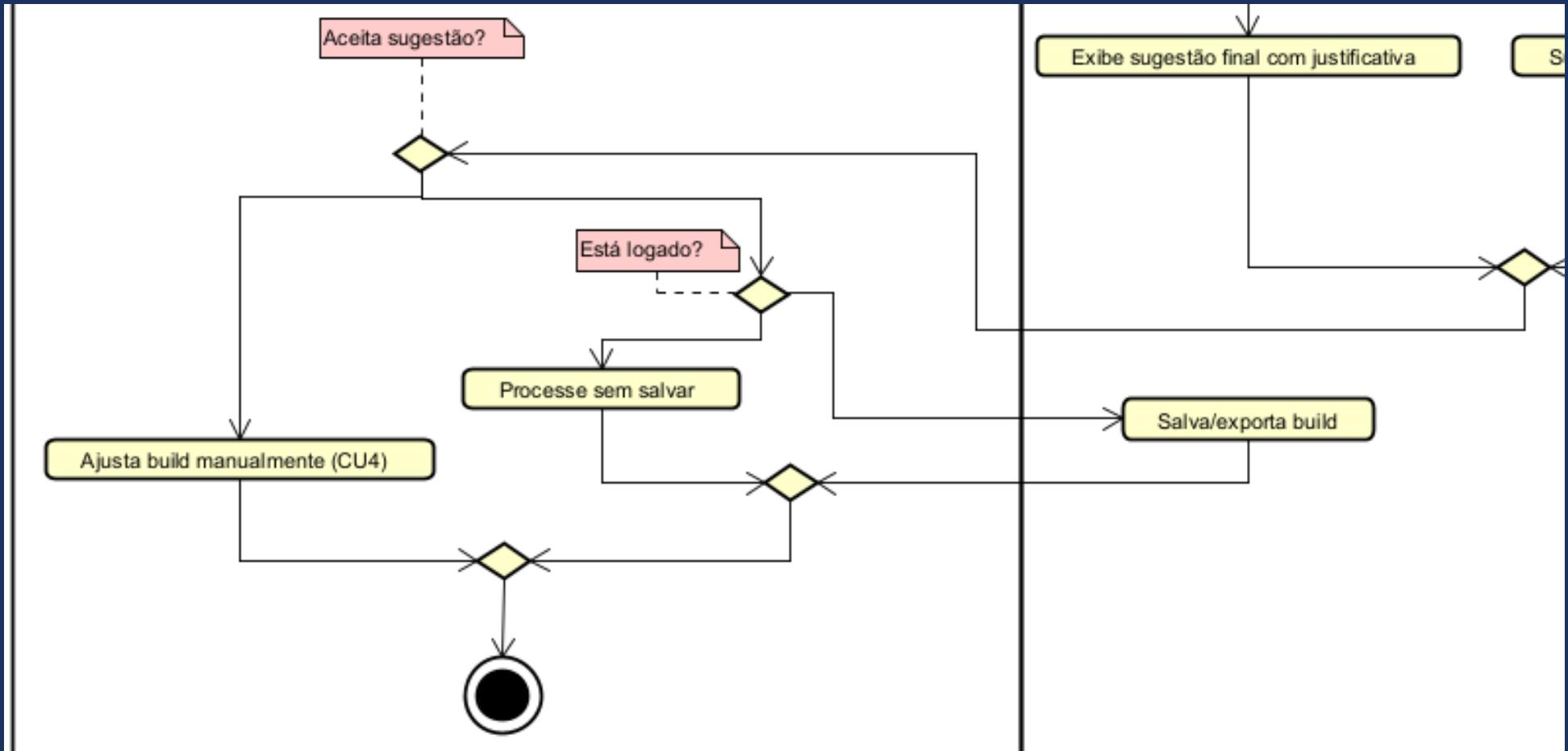
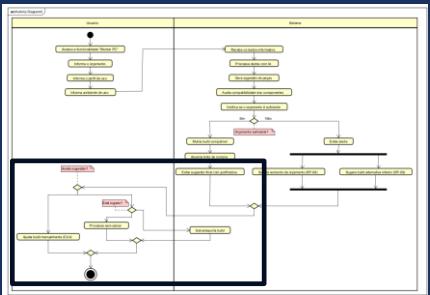
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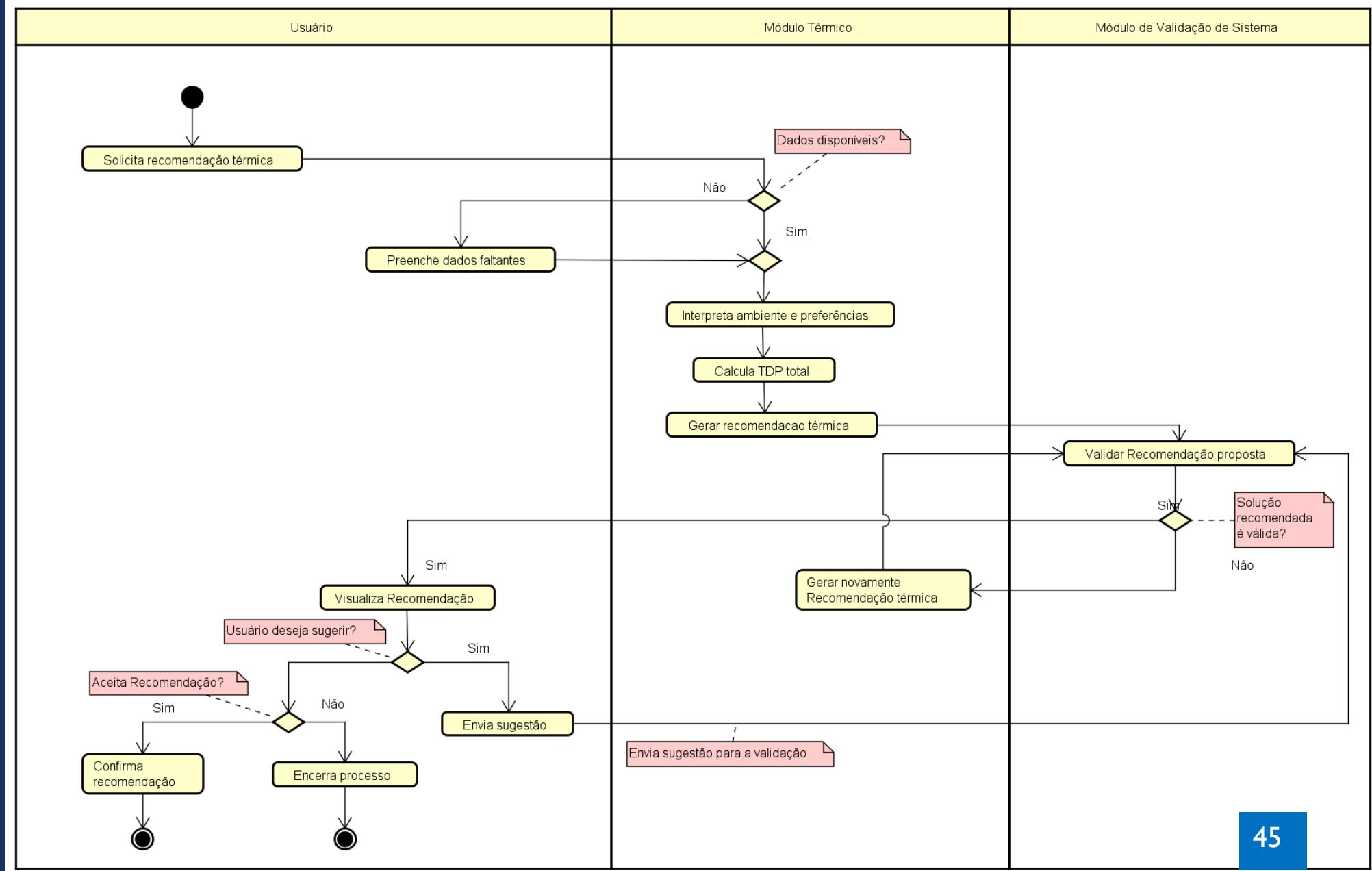
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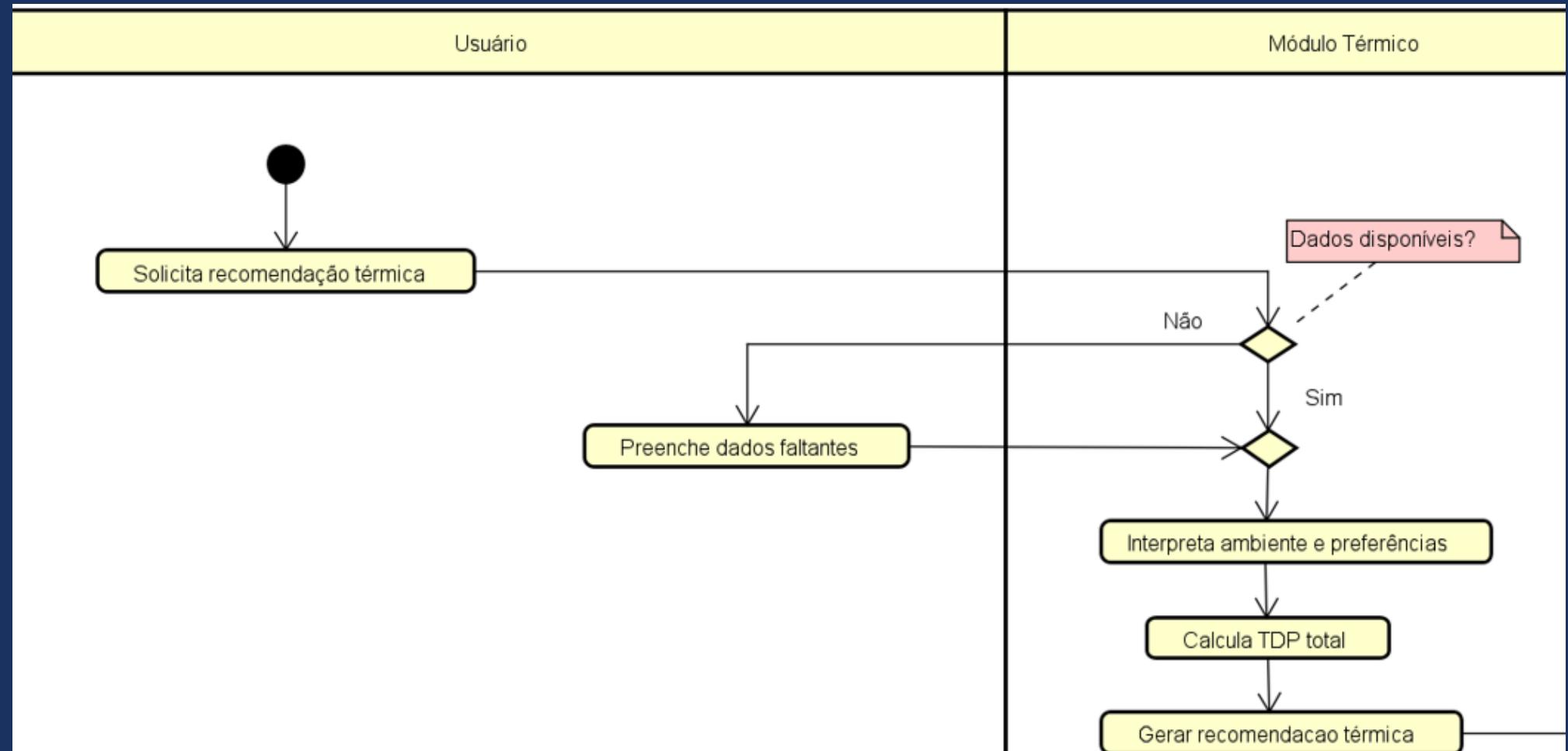
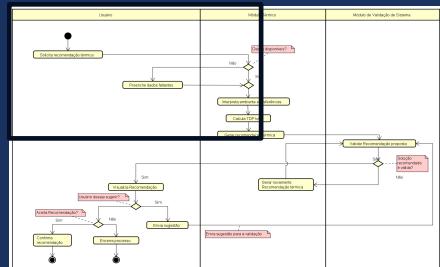
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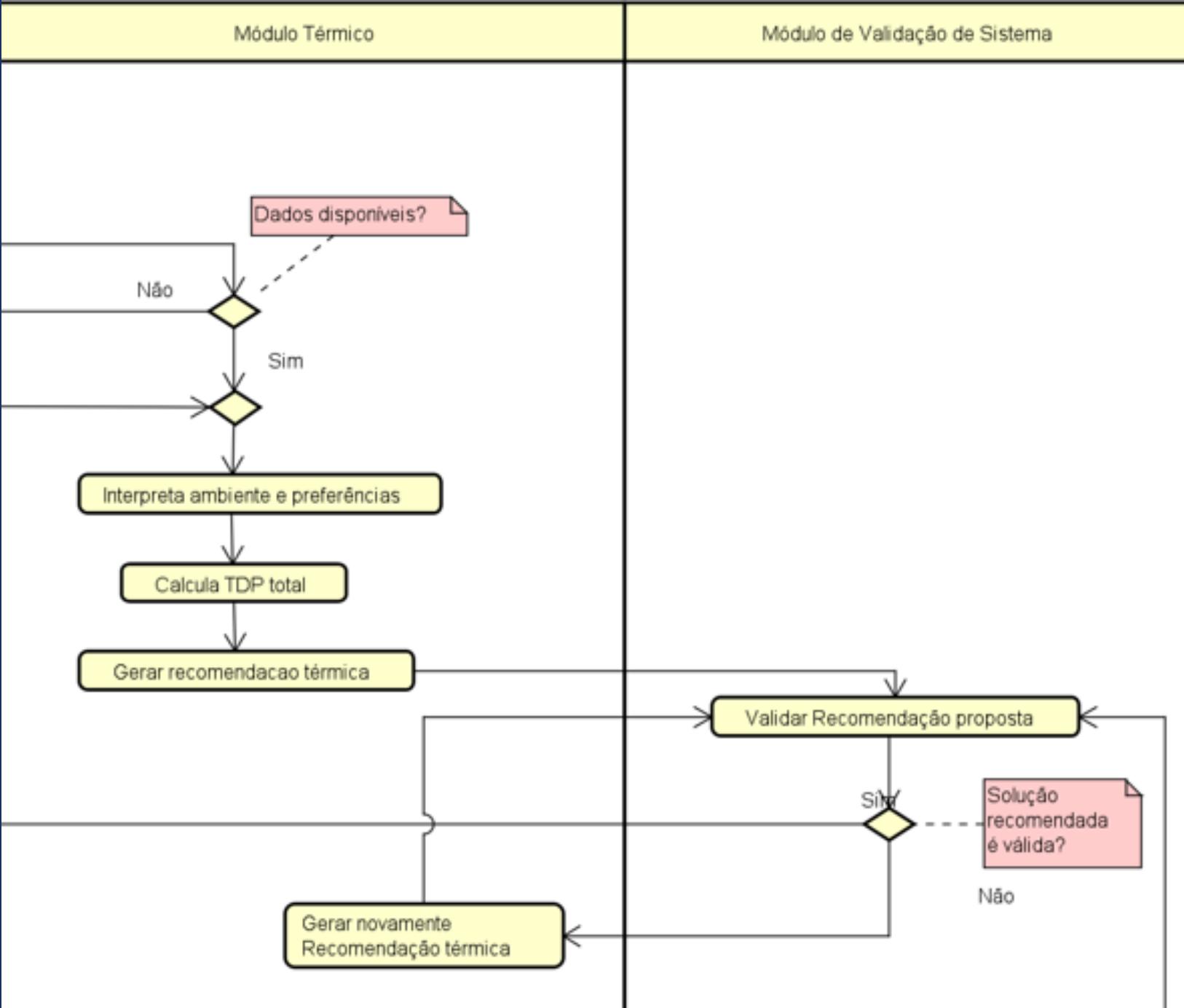
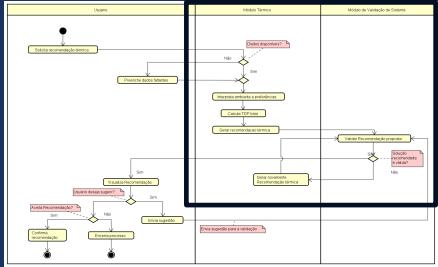
# Sistema de Refrigeração e



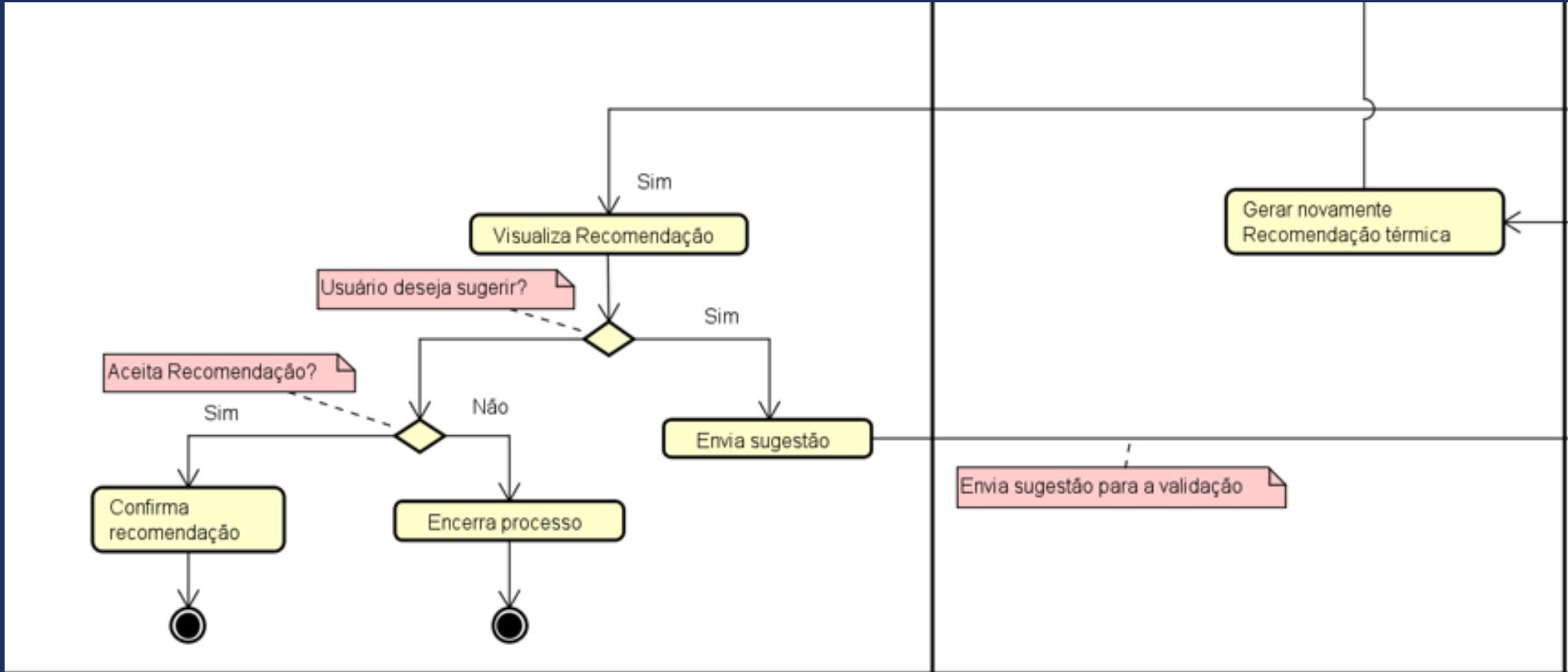
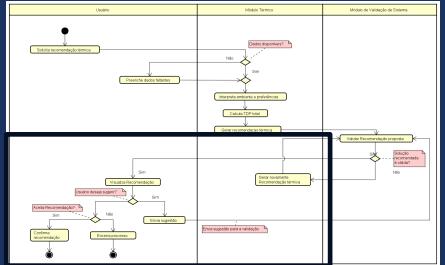
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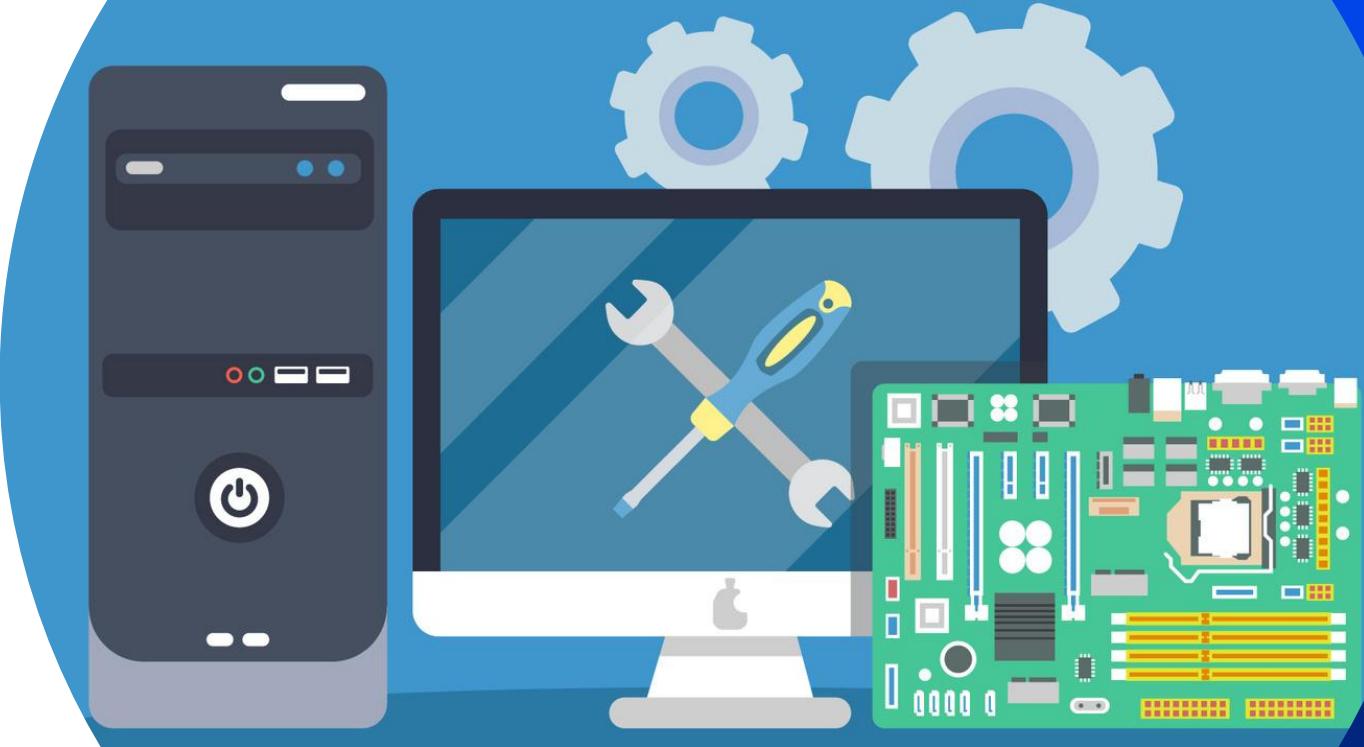
# Sistema de Refrigeração e



# Sistema de Refrigeração e

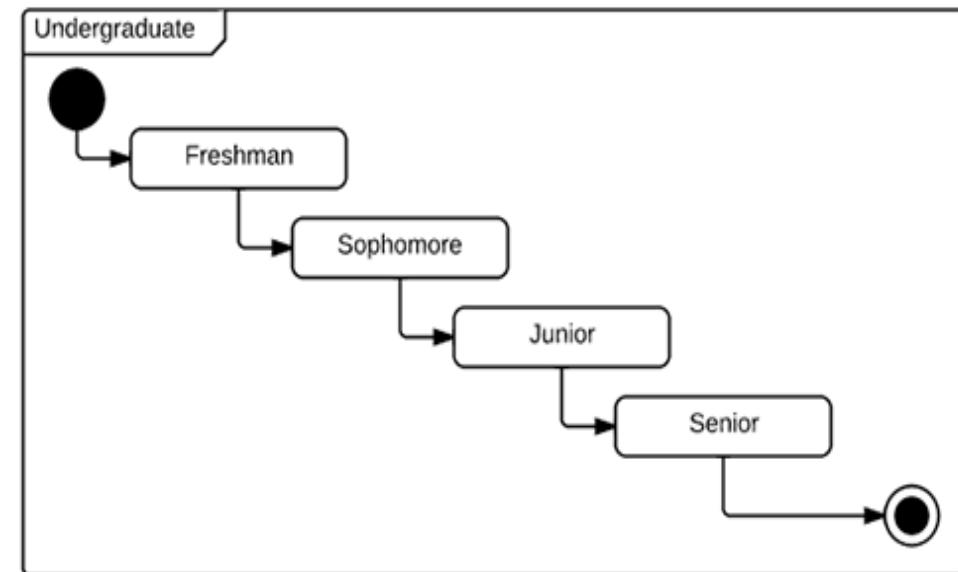


# Diagrama de Estados



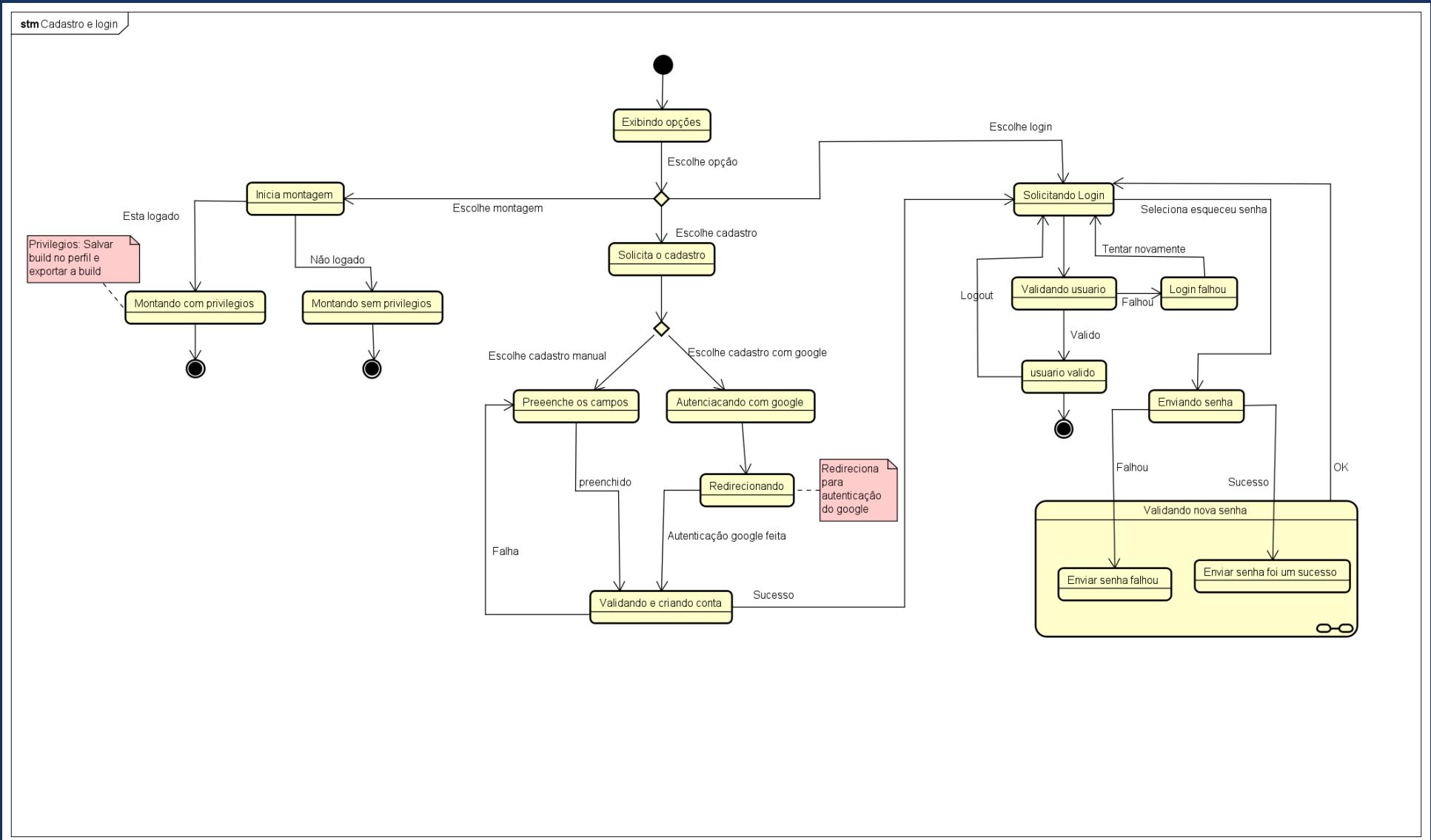
# EXPLICAÇÃO DO DIAGRAMA

- Diagrama **comportamental** que descreve o comportamento de um sistema quando um evento acontece, incluindo todos os estados, transições e ações possíveis de um objeto.
- Útil para modelar a lógica de **builds**, **autenticação**, etc.
- Elementos: estados, transições, eventos

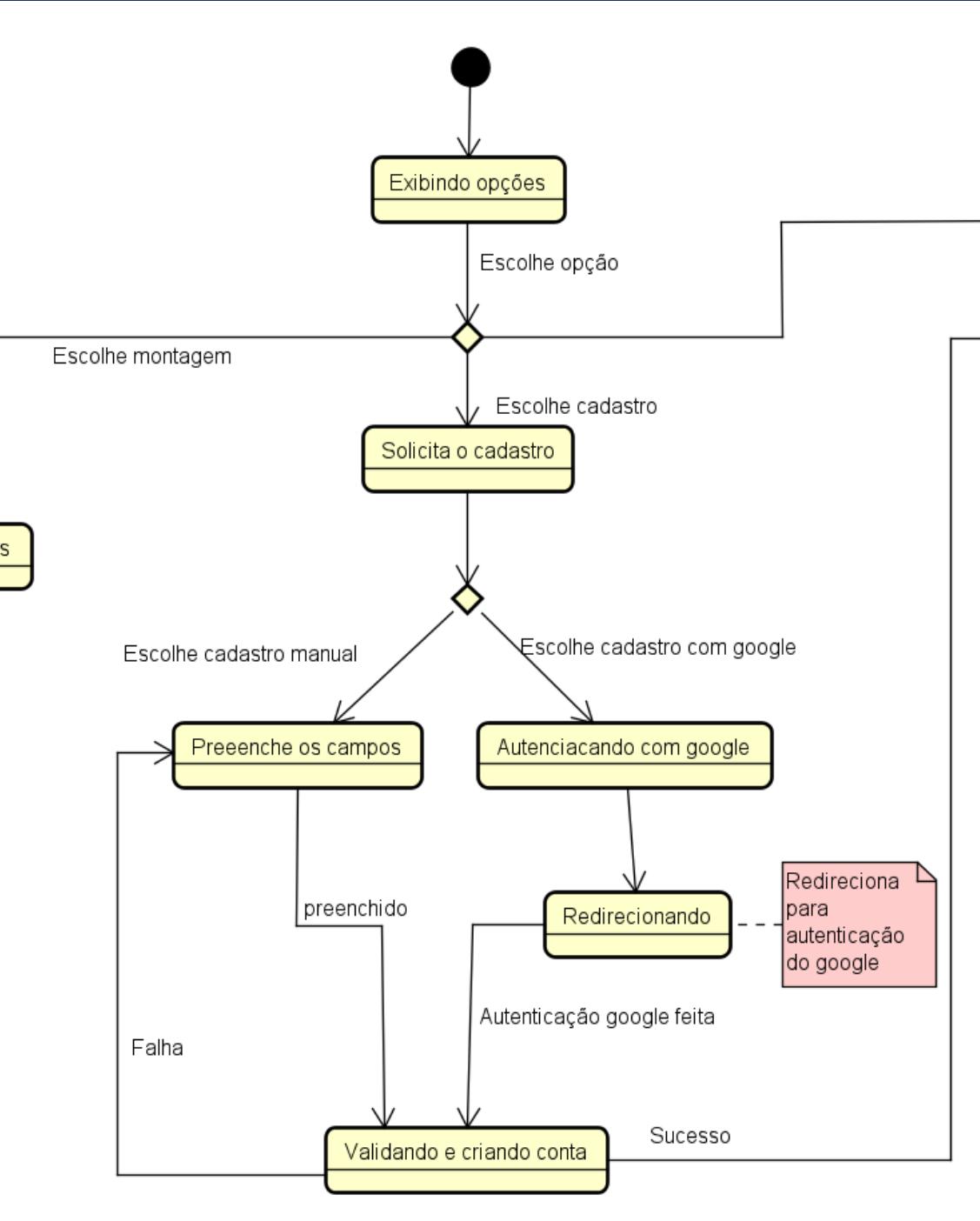
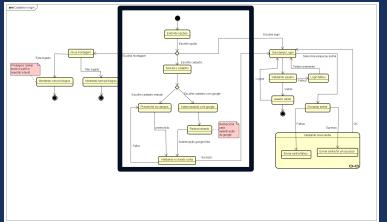


Fonte: <https://www.lucidchart.com/pages/pt/o-que-e-diagrama-de-maquinado-estados-uml>

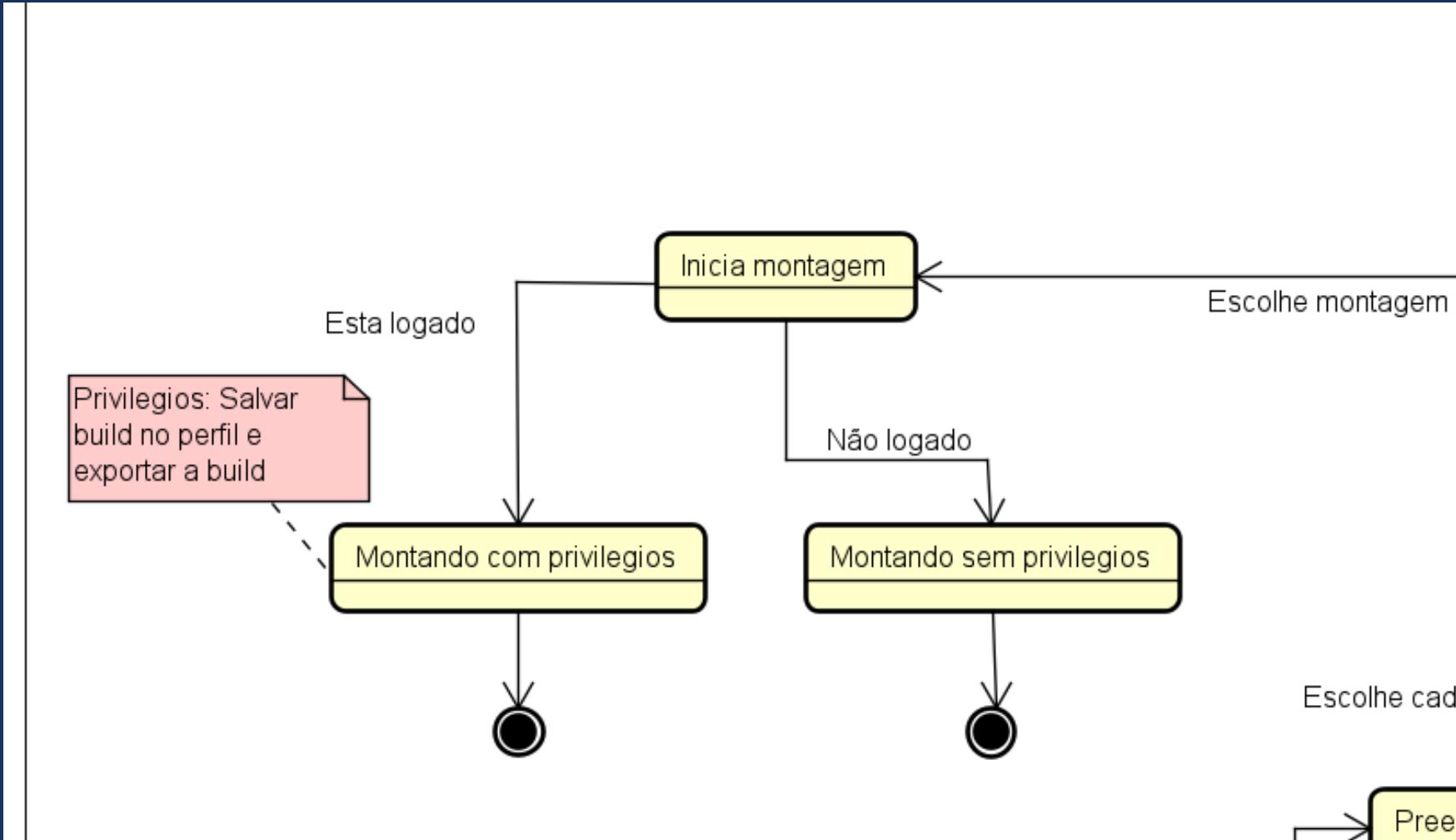
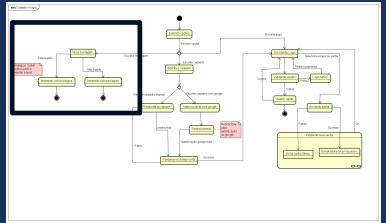
# Cadastro e Login



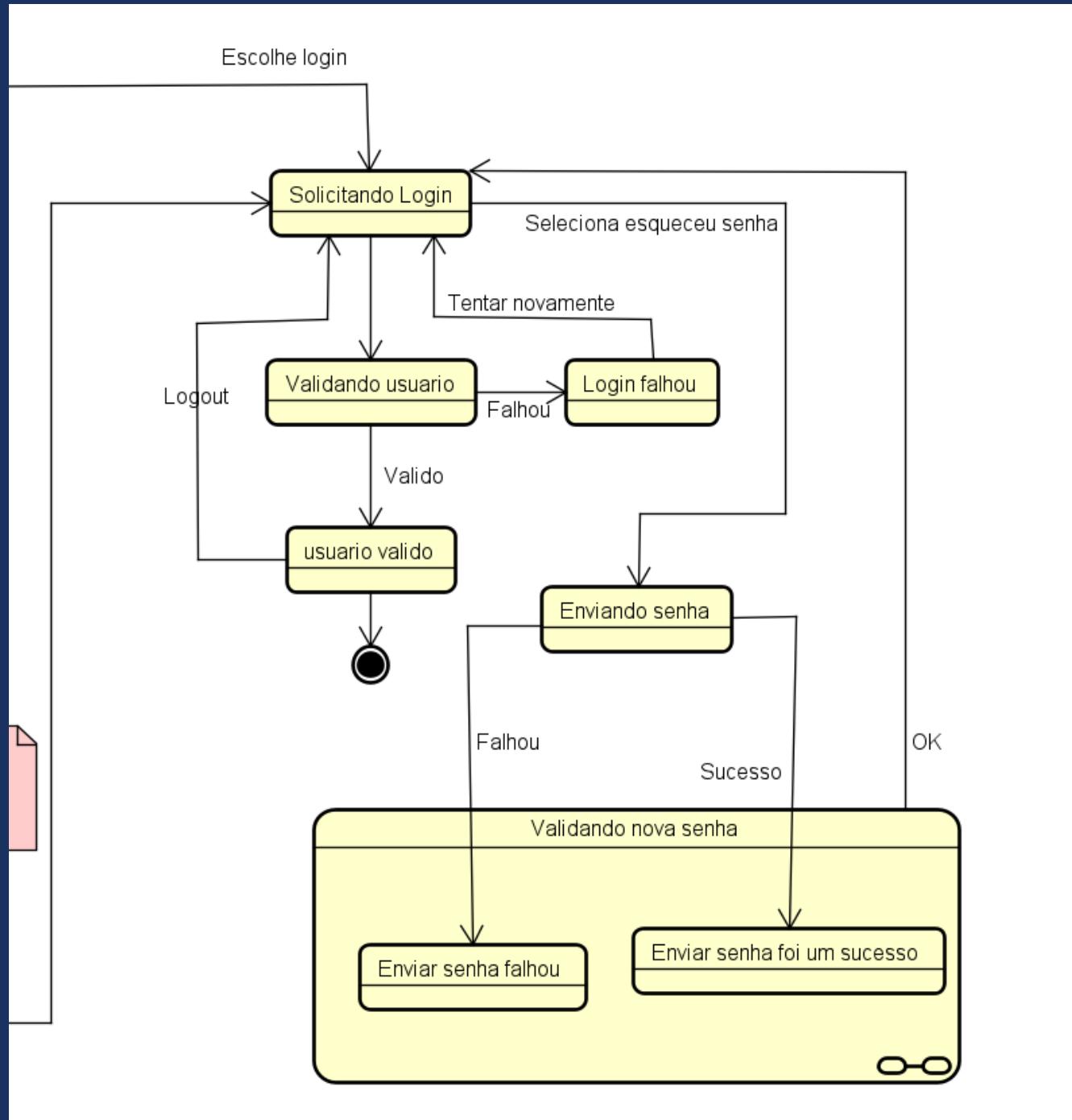
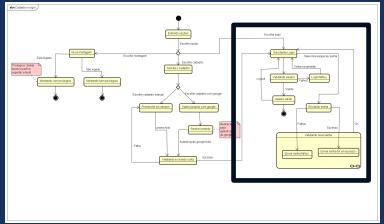
# Cadastro e Login



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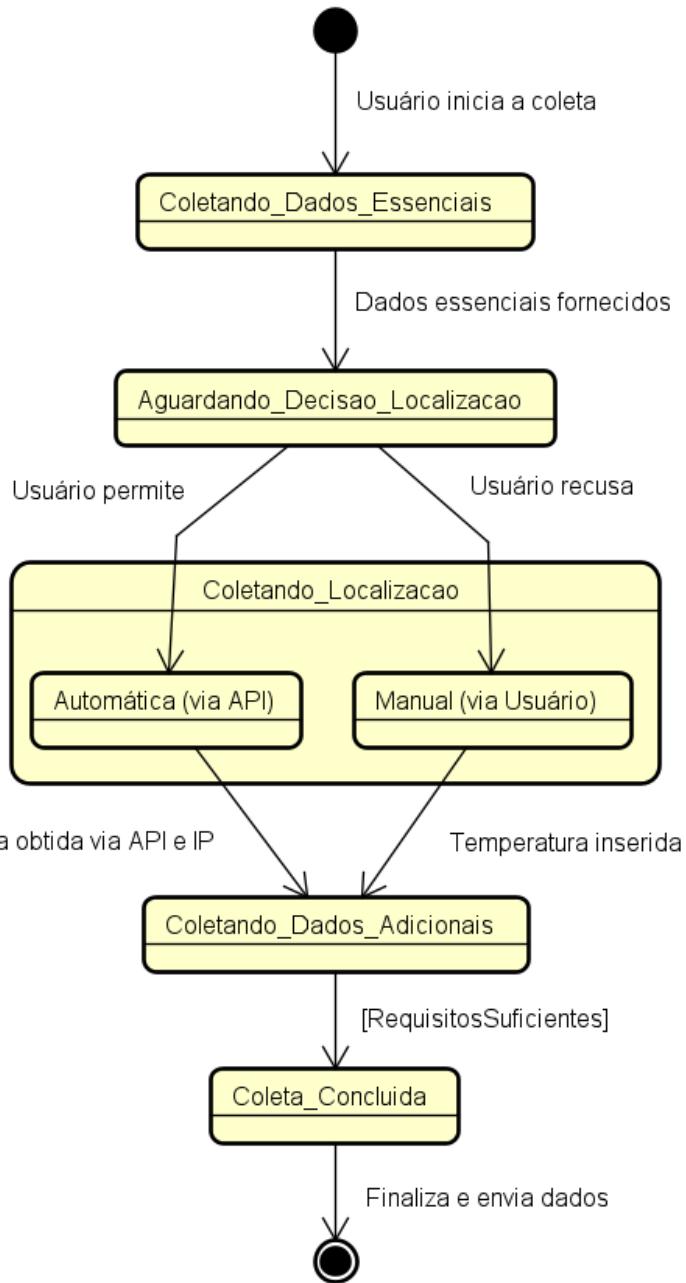


# Cadastro e Login

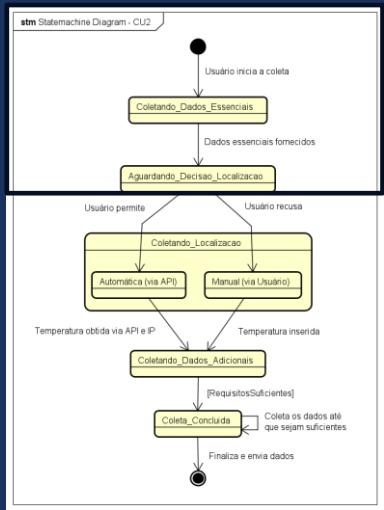


# Coleta de requisitos e Preferências do Usuário

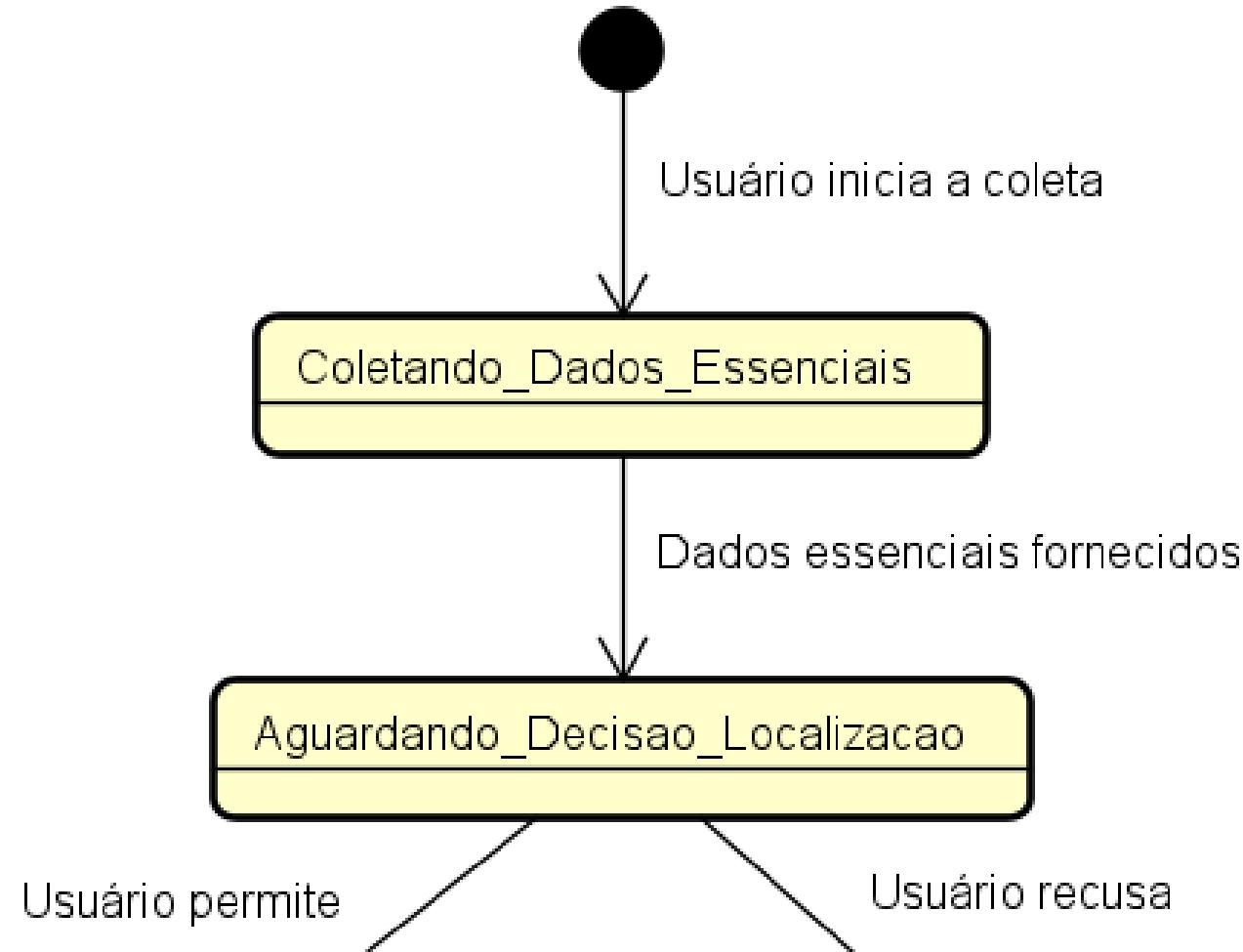
stm Statemachine Diagram - CU2



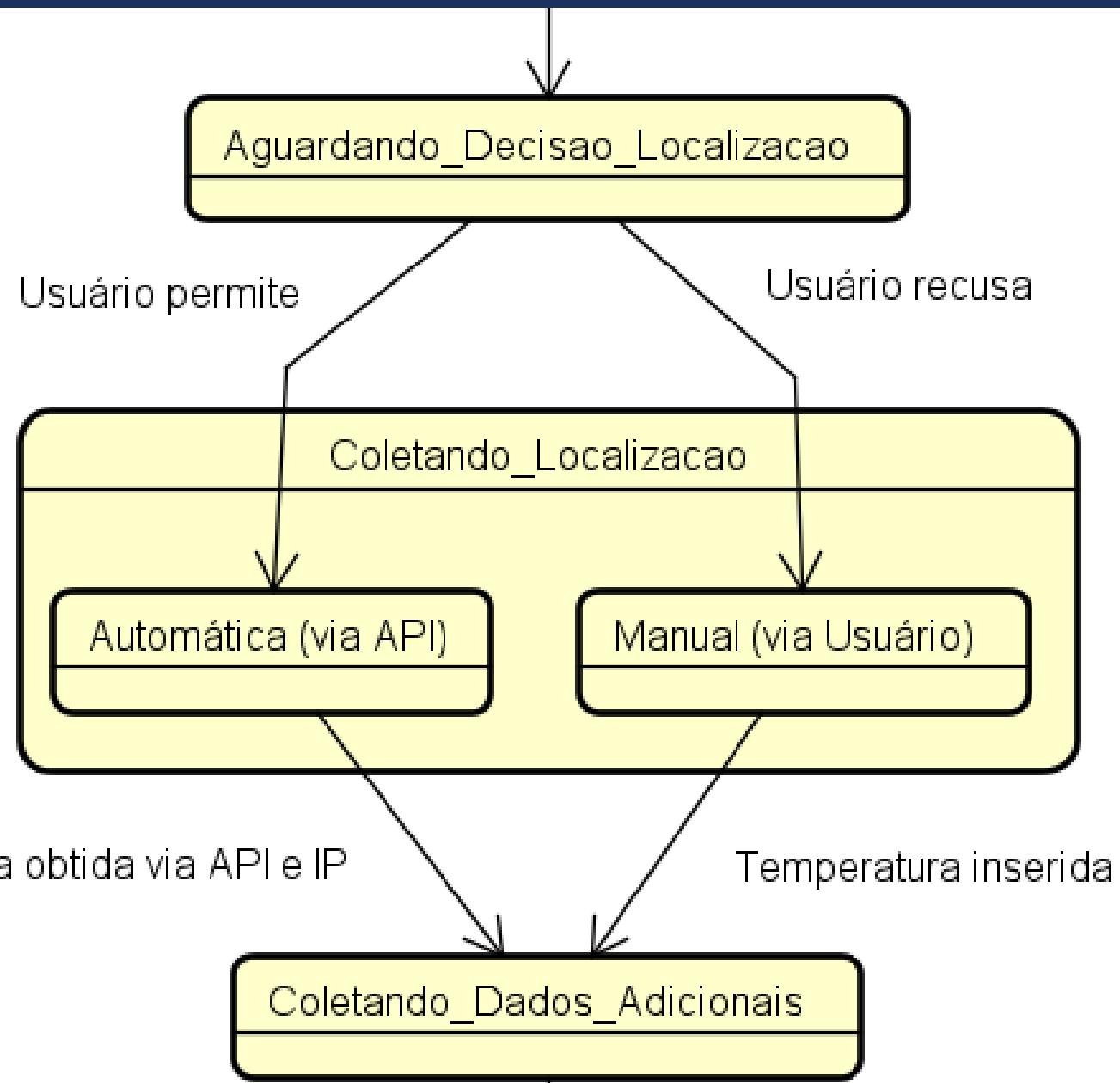
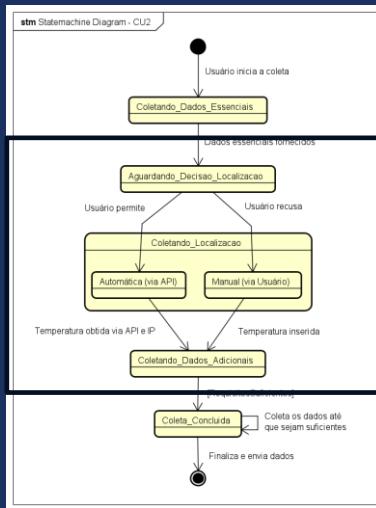
# Coleta de requisitos e Preferências do Usuário



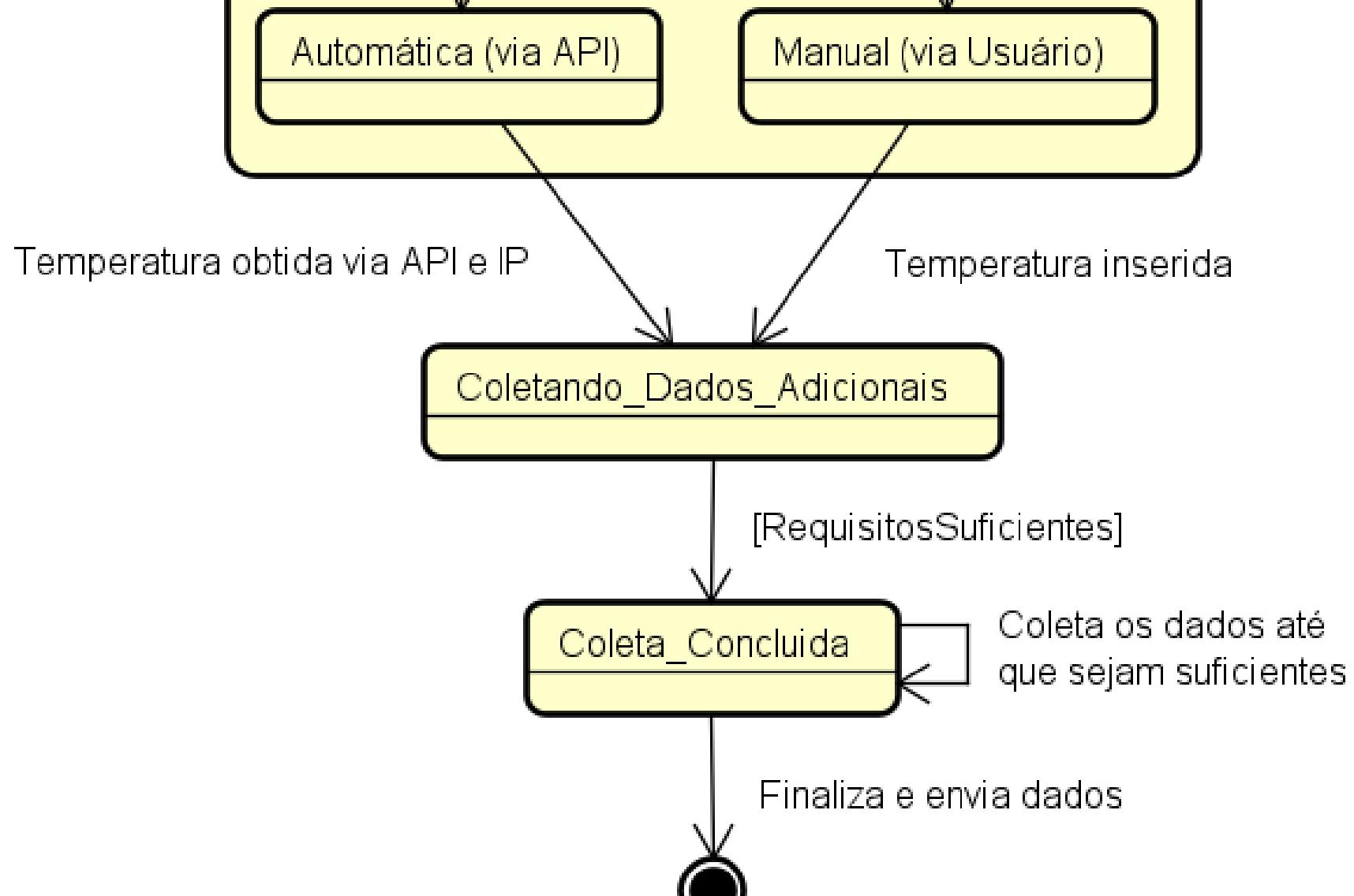
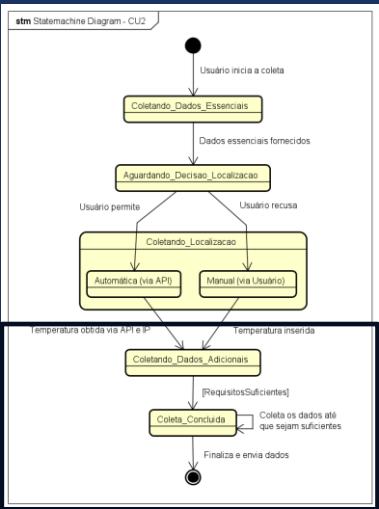
stm Statemachine Diagram - CU2



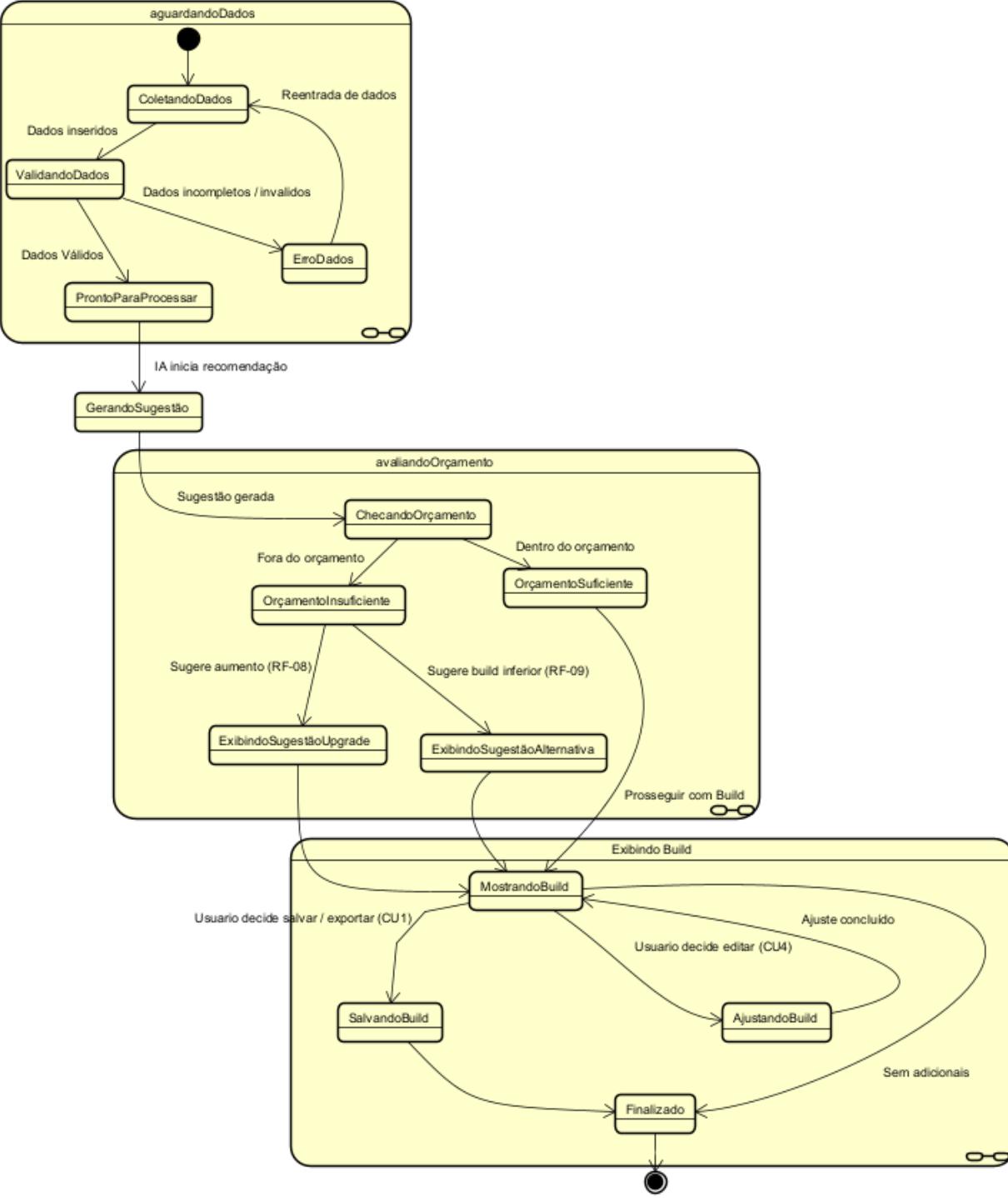
# Coleta de requisitos e Preferências do Usuário



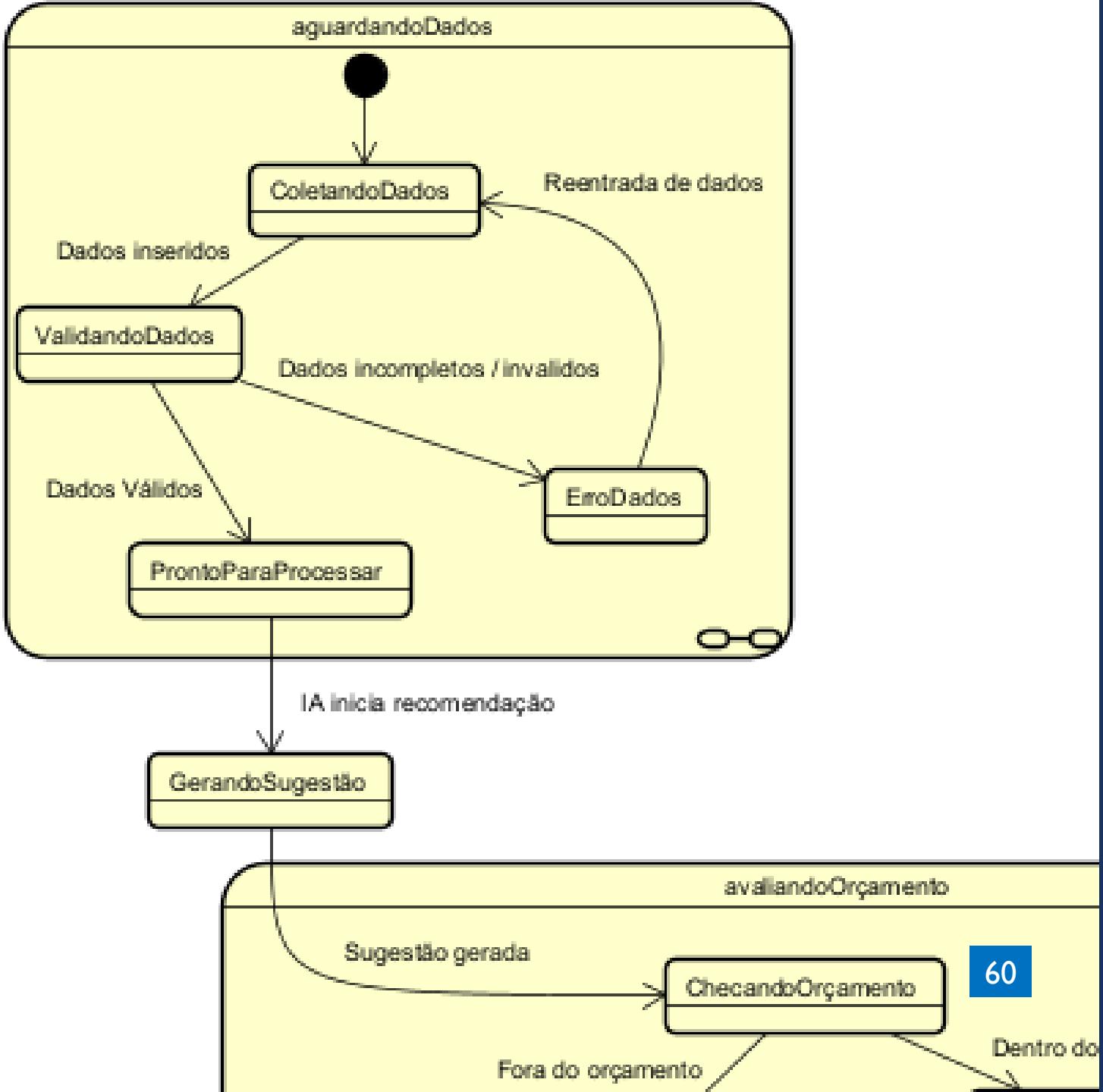
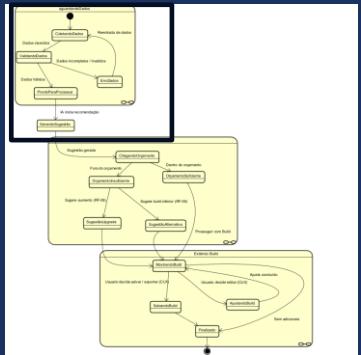
# Coleta de requisitos e Preferências do Usuário



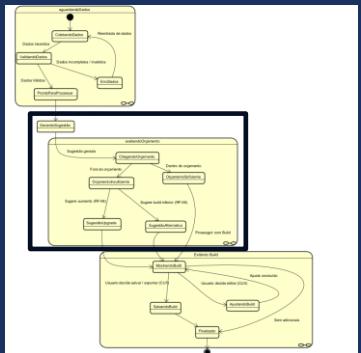
# Configuração Automatizada de PC



# Configuração Automatizada de PC



# Configuração Automatizada de PC



IA inicia recomendação

Gerando Sugestão

avaliandoOrçamento

Sugestão gerada

ChecandoOrçamento

Dentro do orçamento

Fora do orçamento

OrçamentoInsuficiente

OrçamentoSuficiente

Sugere aumento (RF-08)

Sugere build inferior (RF-09)

ExibindoSugestãoUpgrade

ExibindoSugestãoAlternativa

Prosseguir com Build

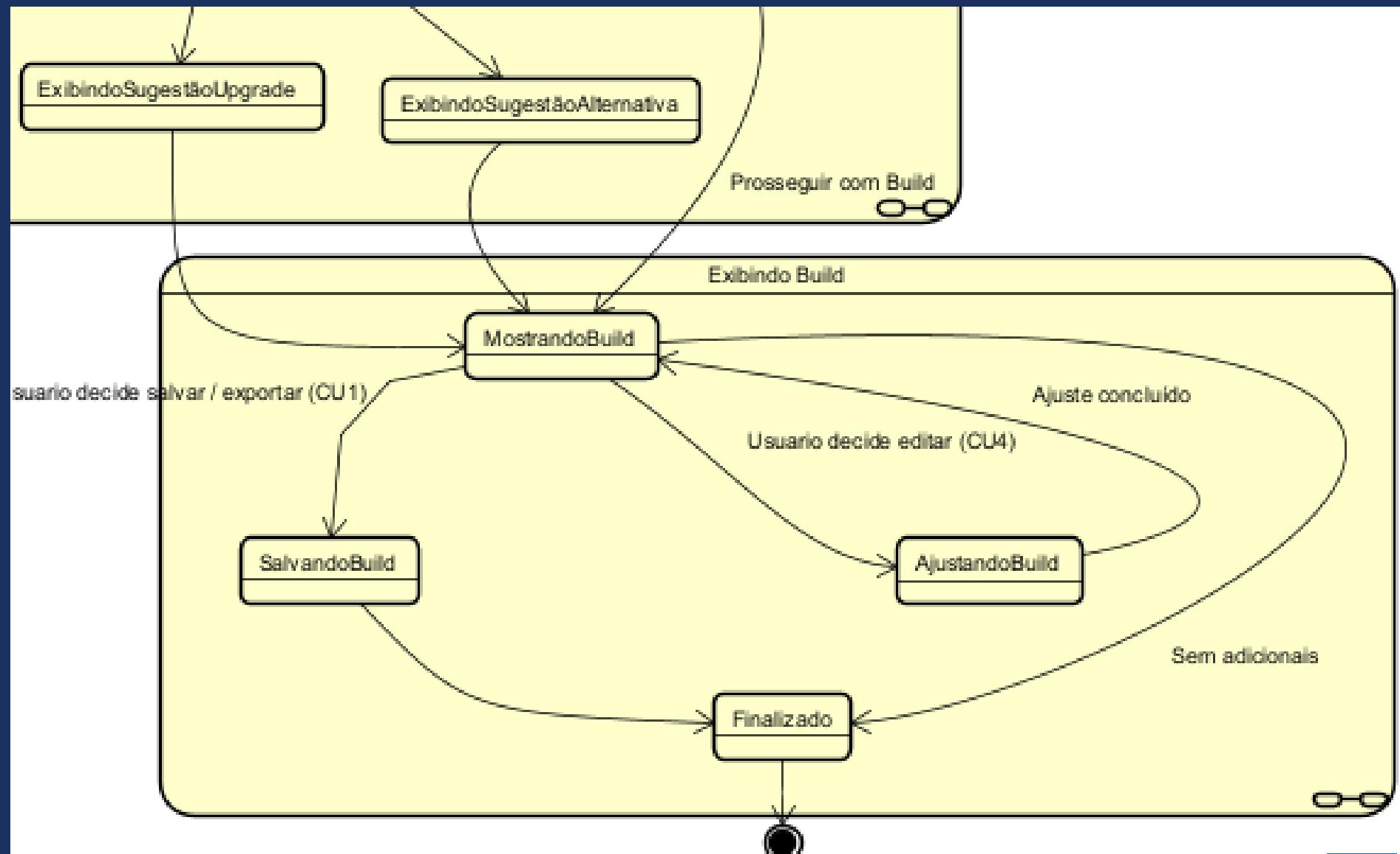
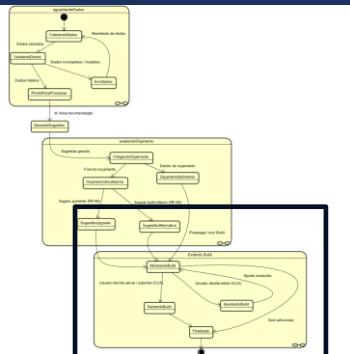
Exibindo Build

Usuario decide salvar / exportar (CU 1)

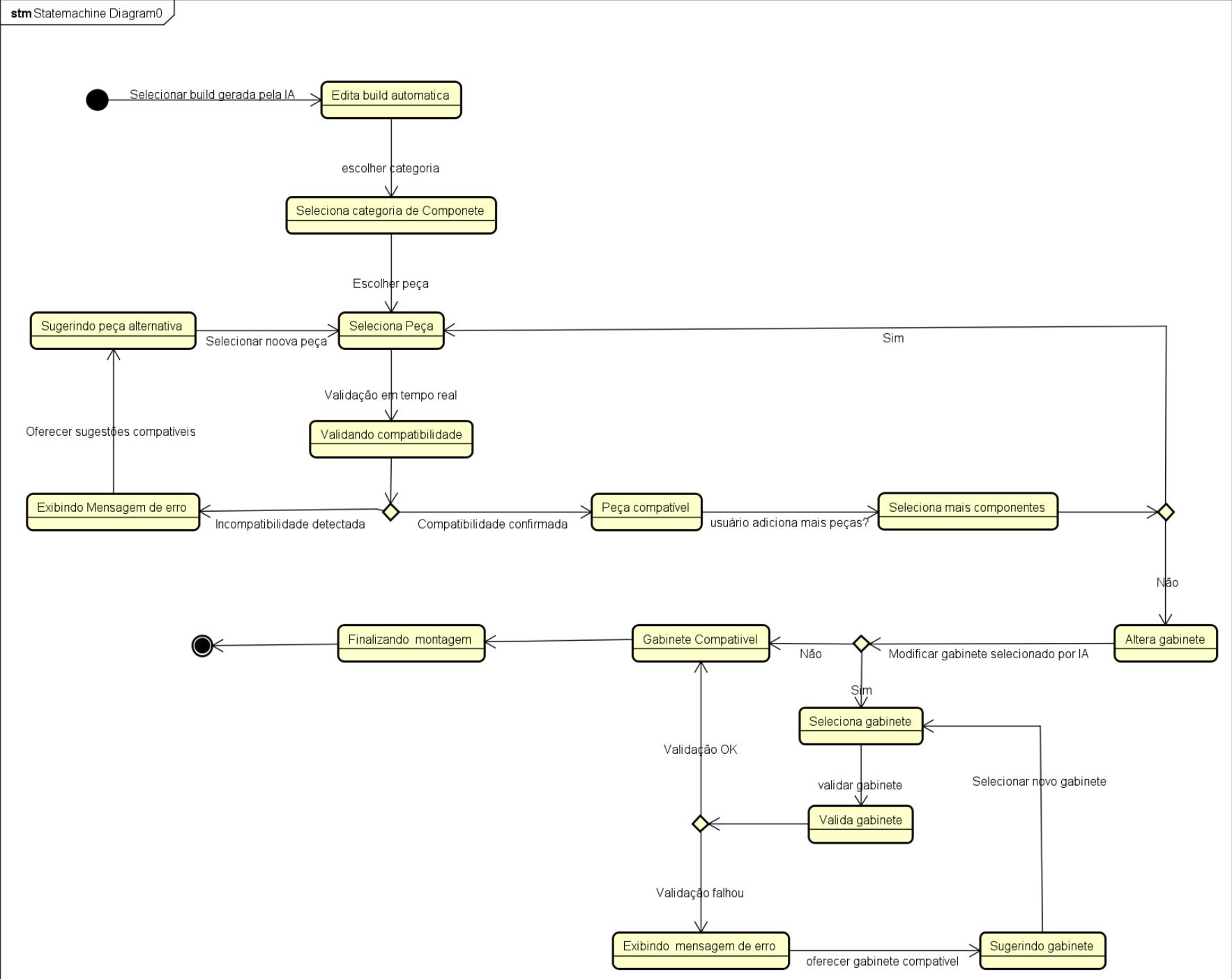
MostrandoBuild

Usuario decide editar (C)

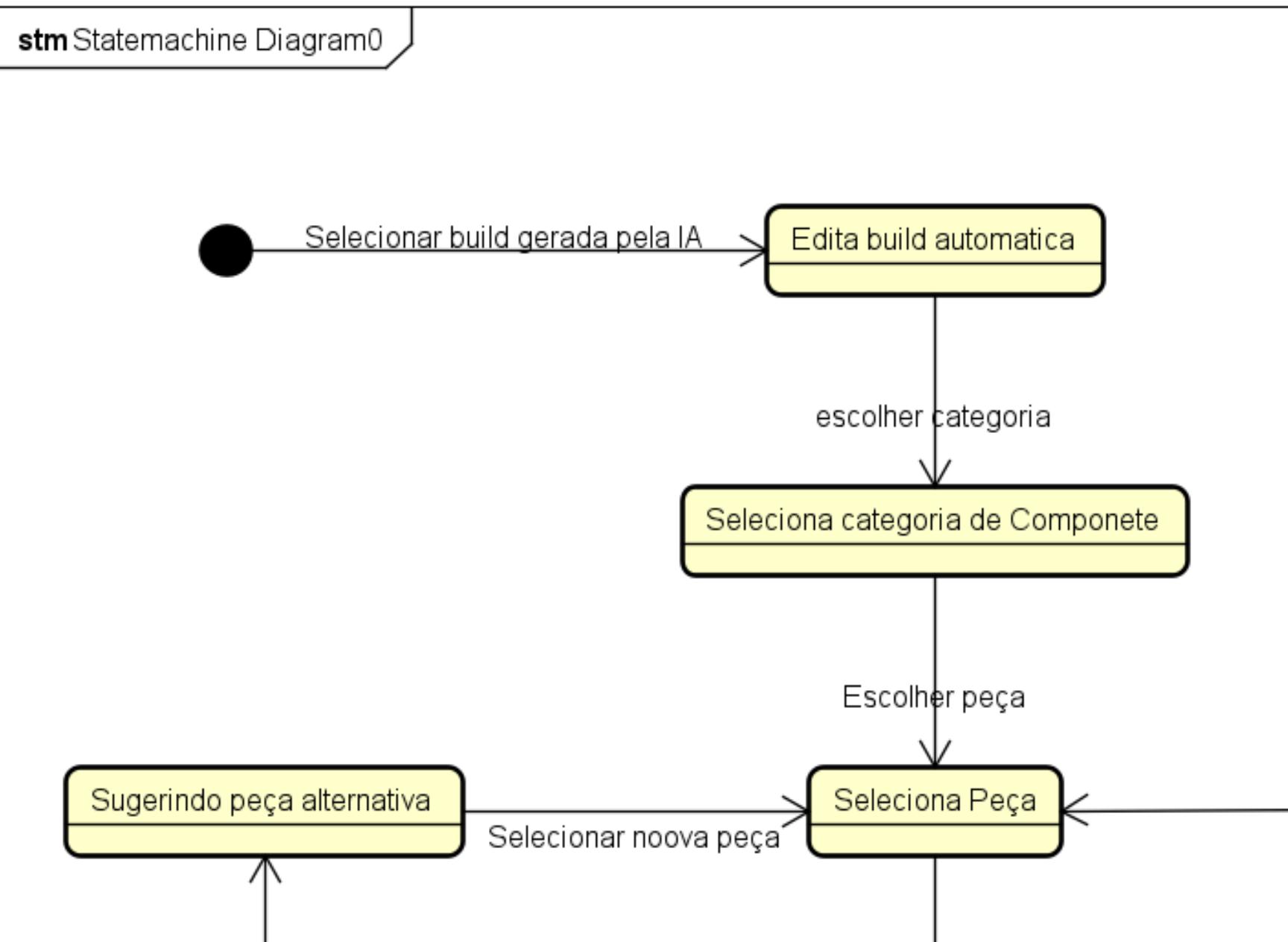
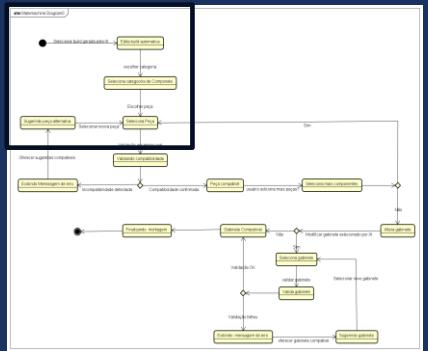
# Configuração Automatizada de PC



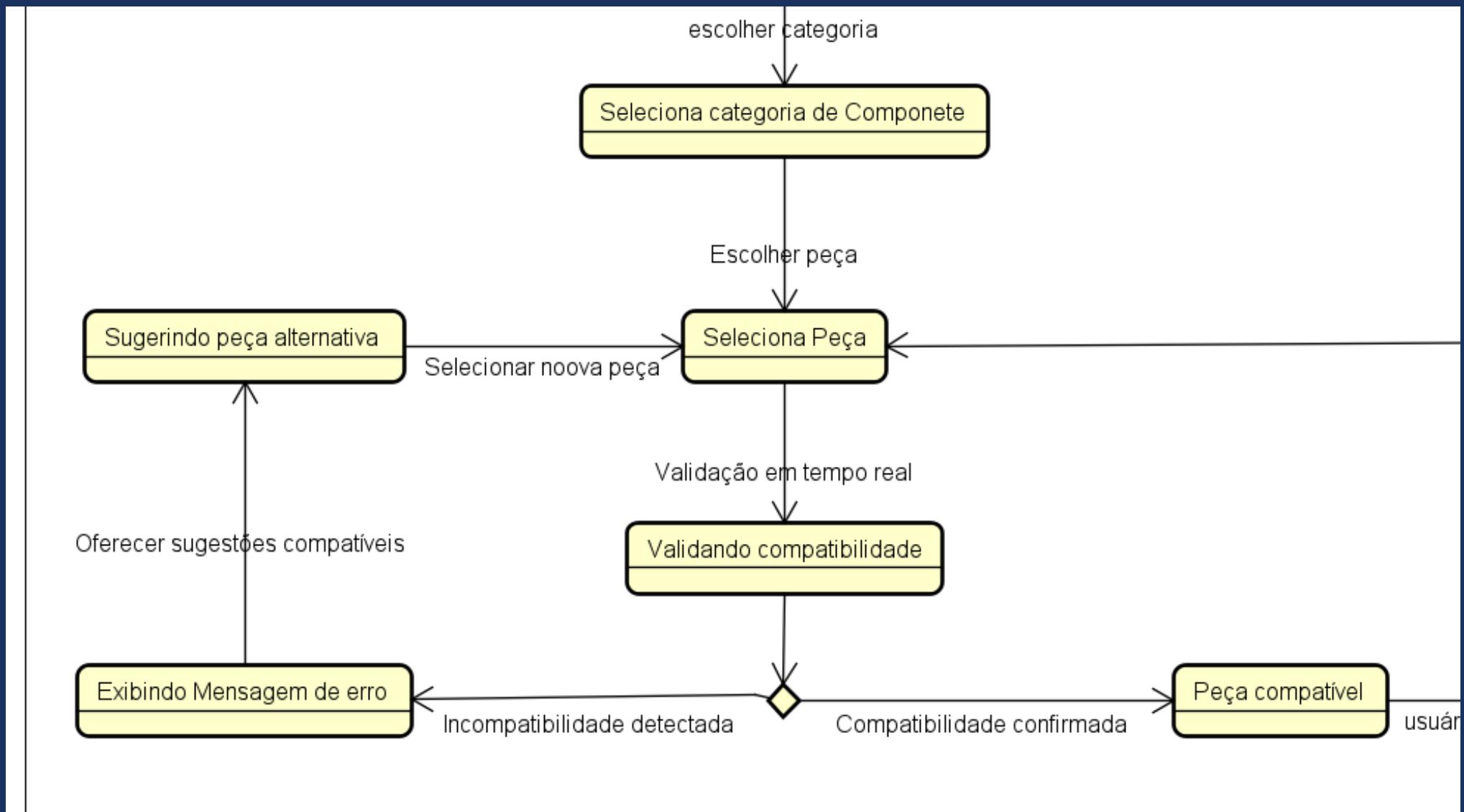
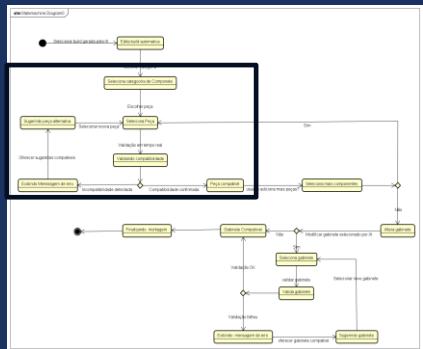
# Montagem manual e Validação da Build



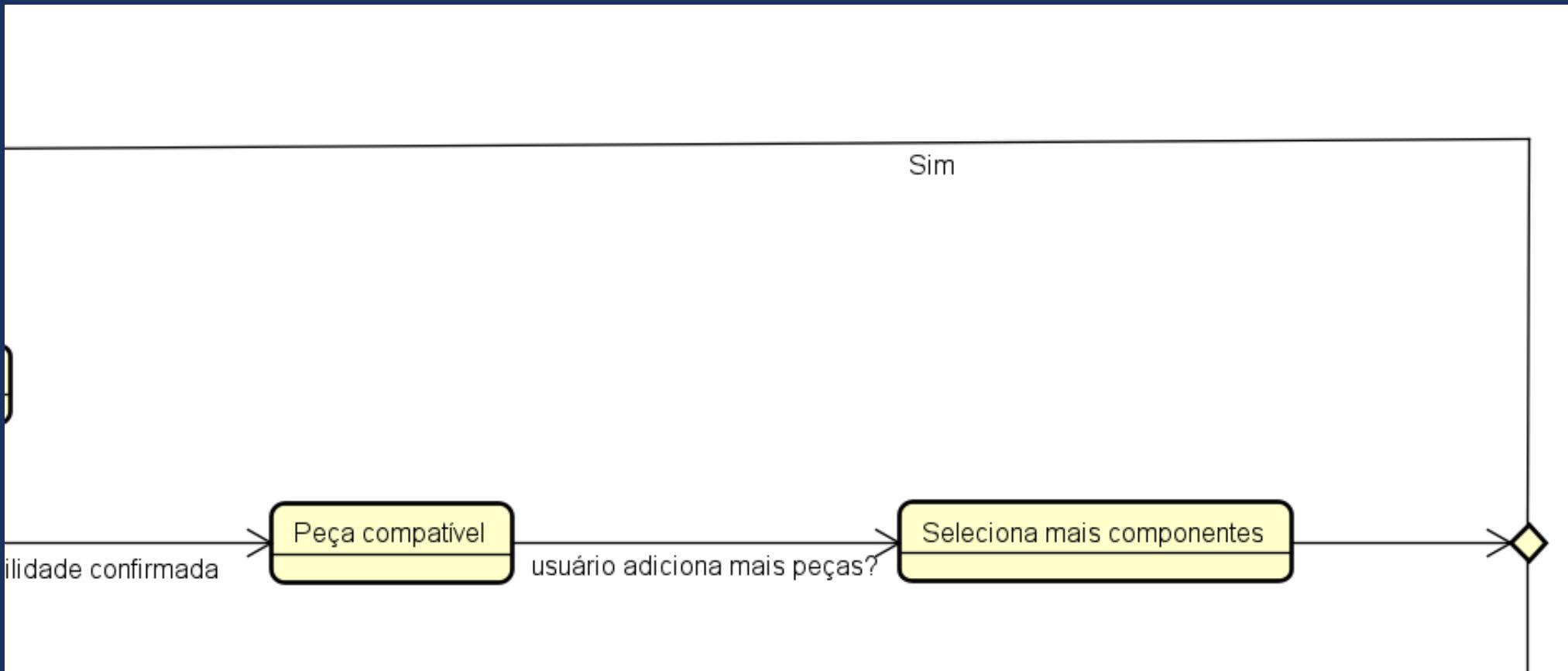
# Montagem manual e Validação da Build



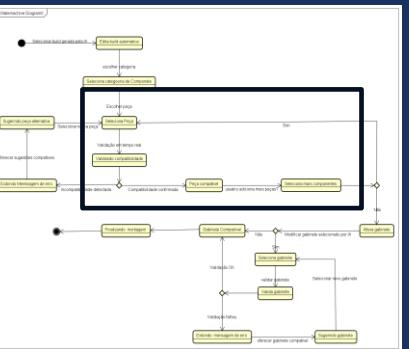
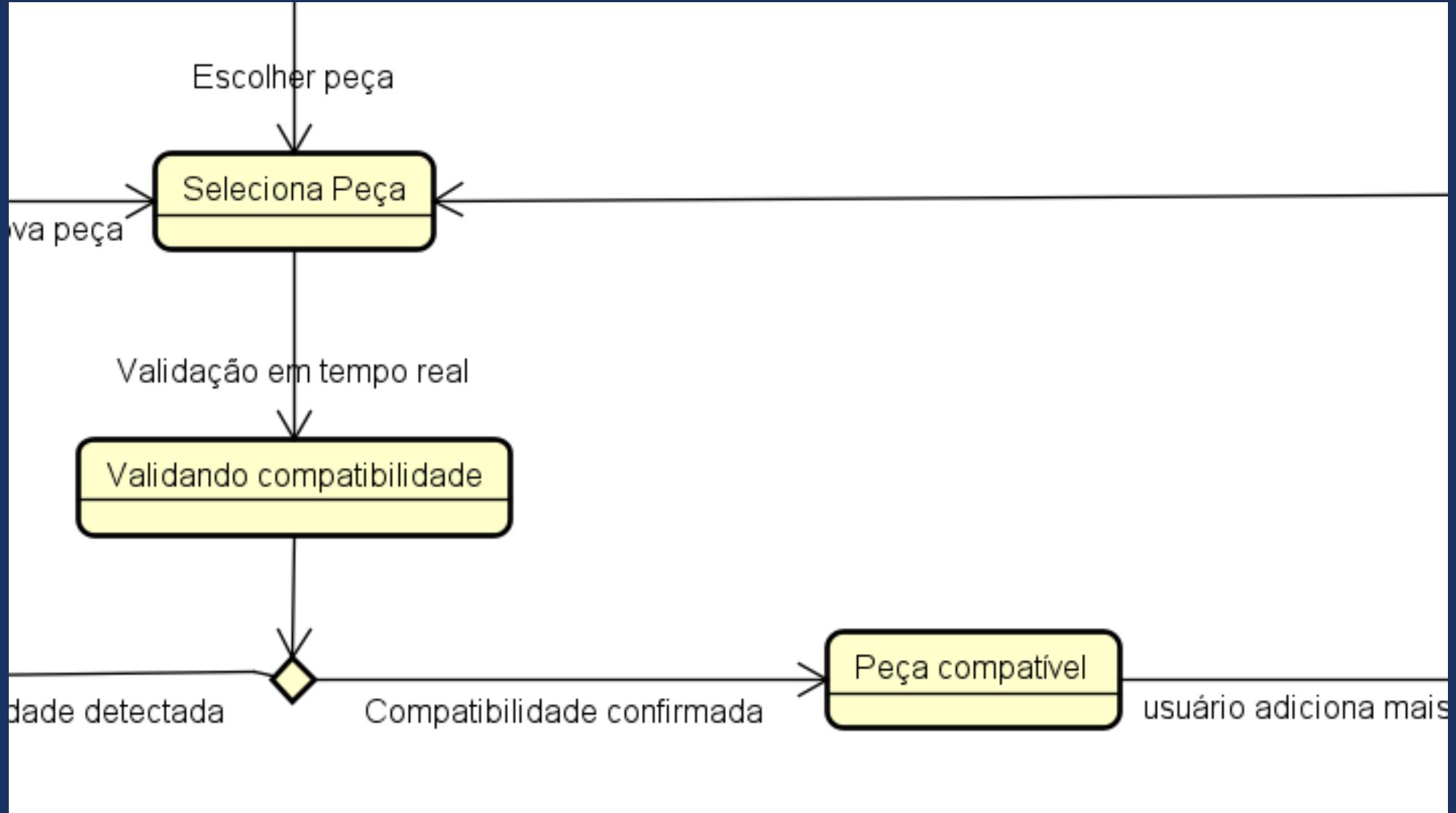
# Montagem manual e Validação da Build



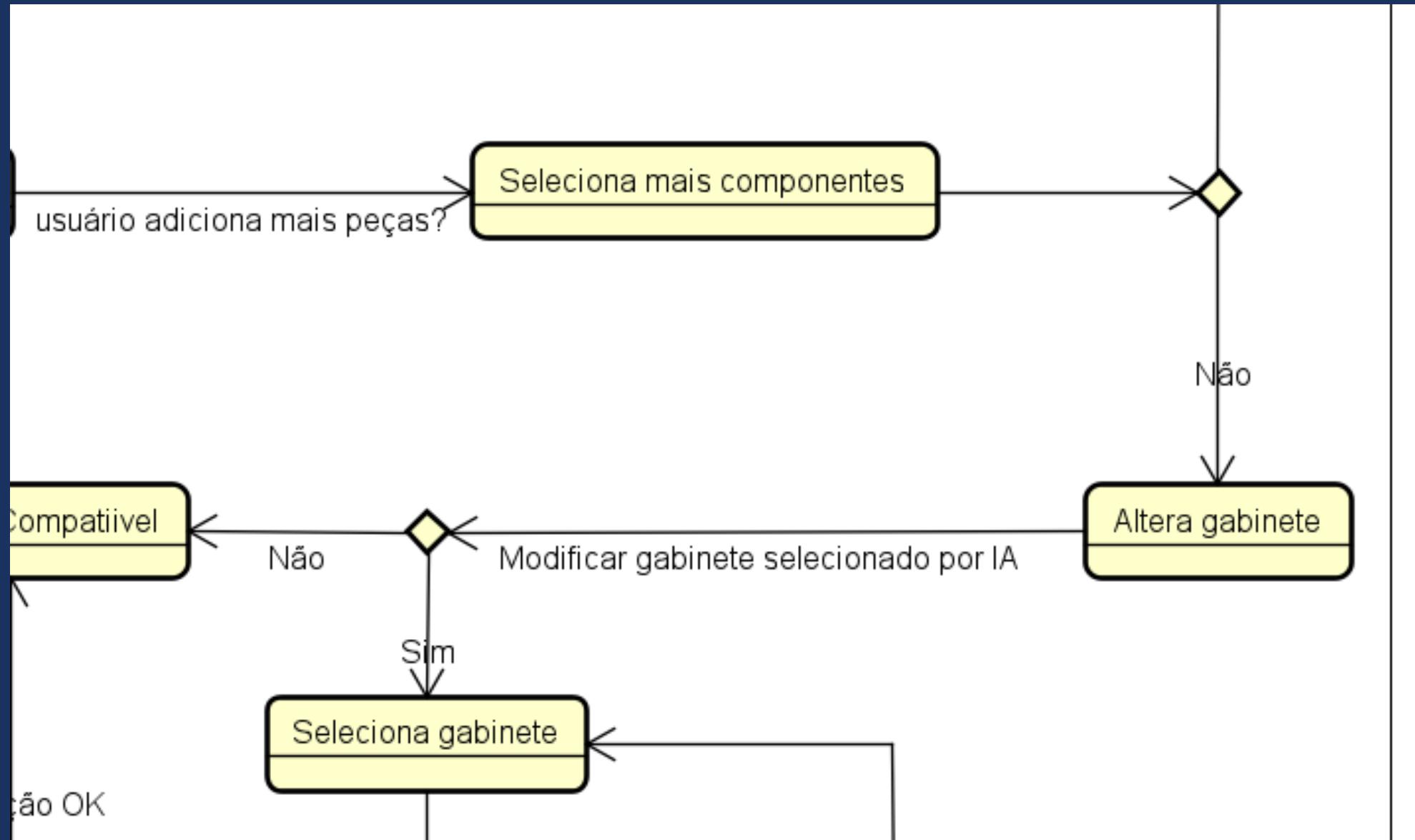
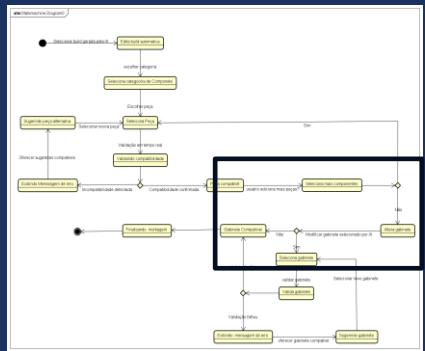
# Montagem manual e Validação da Build



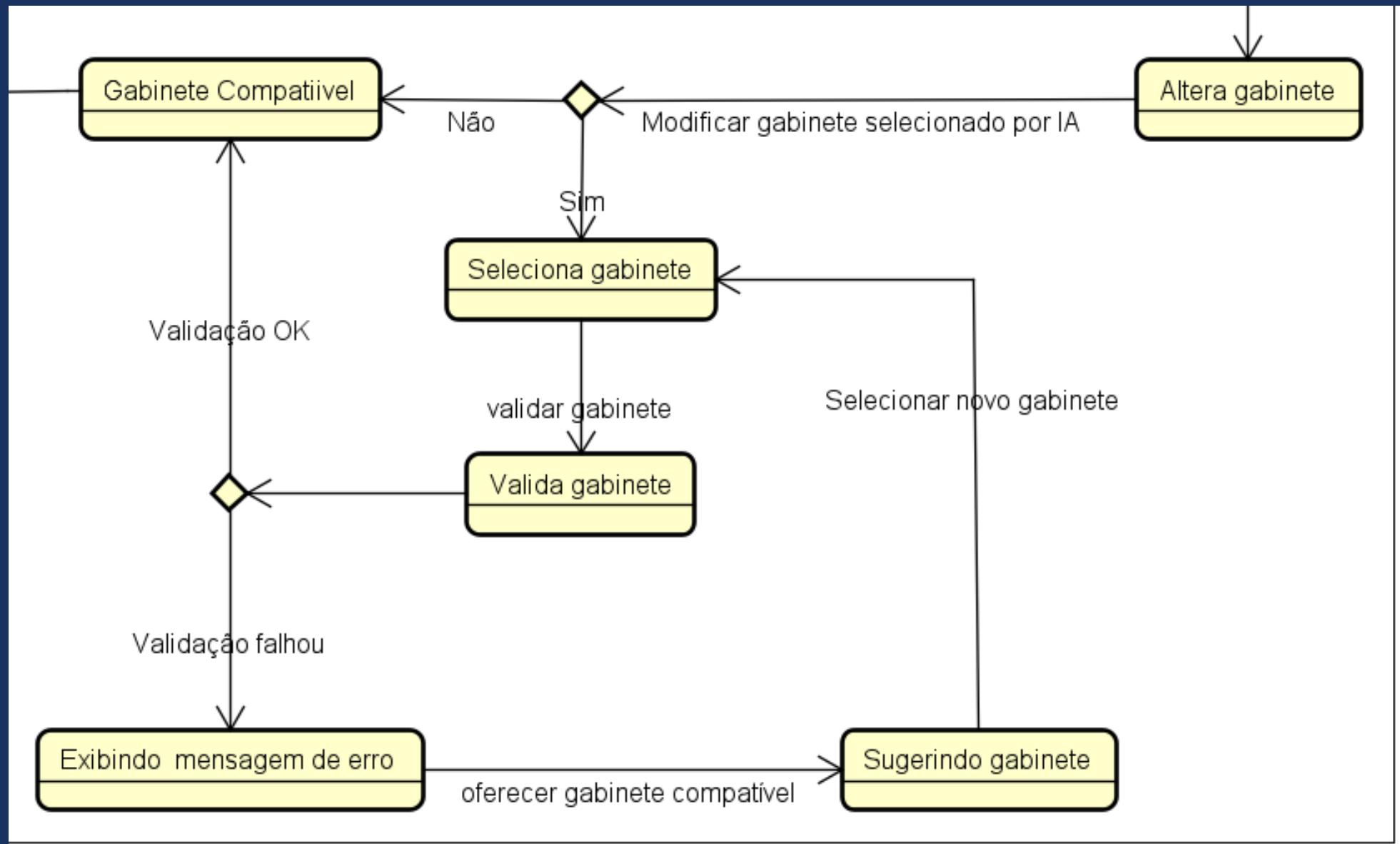
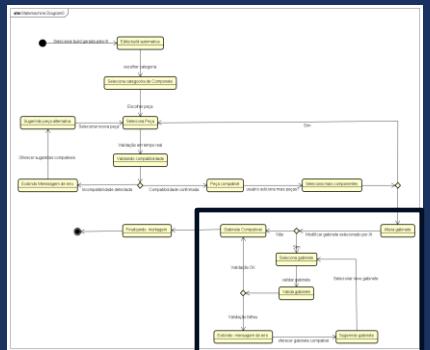
# Montagem manual e Validação da Build



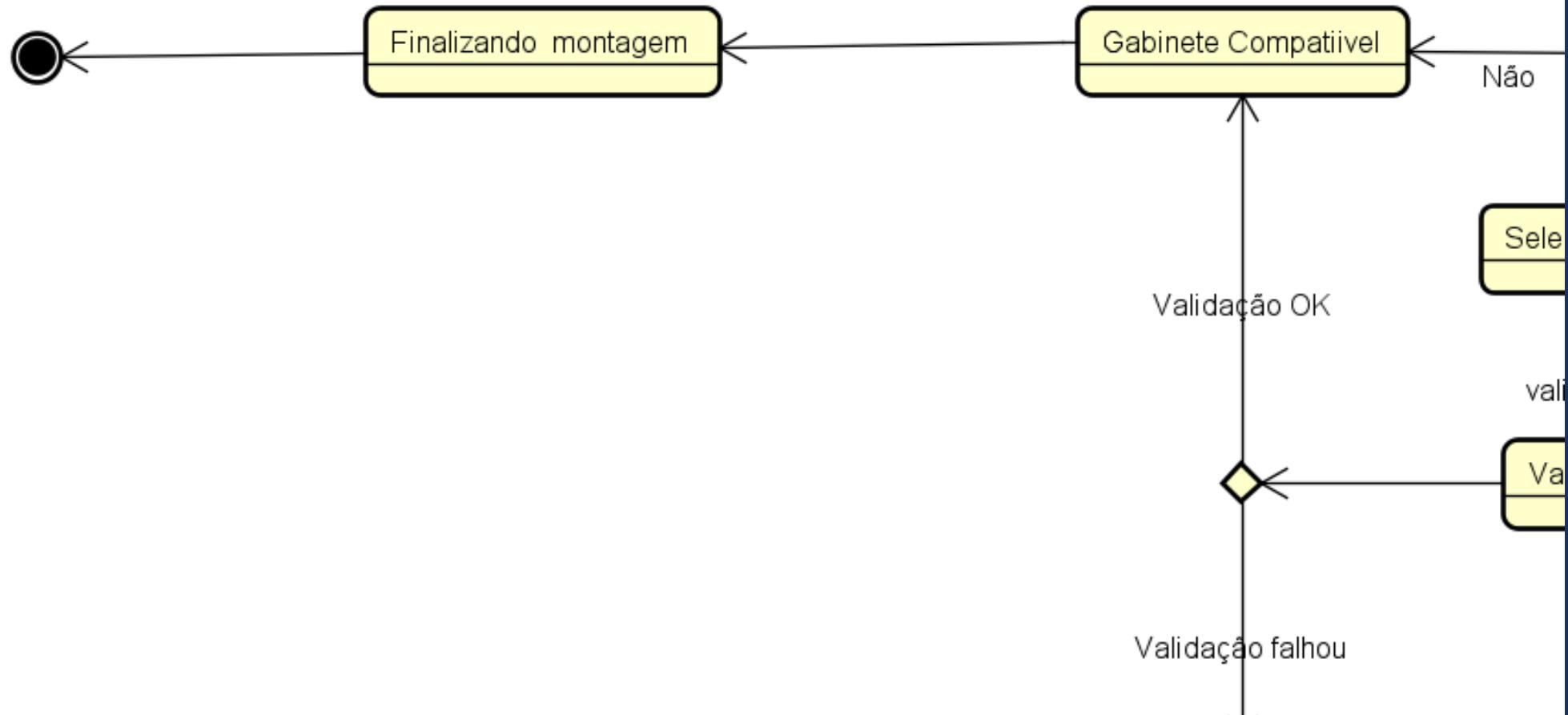
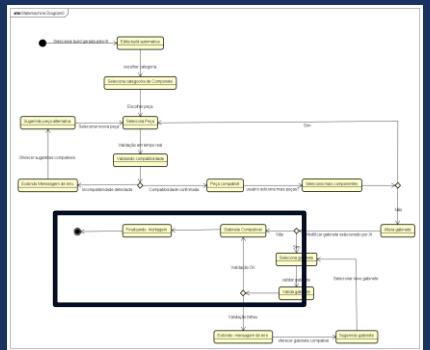
# Montagem manual e Validação da Build



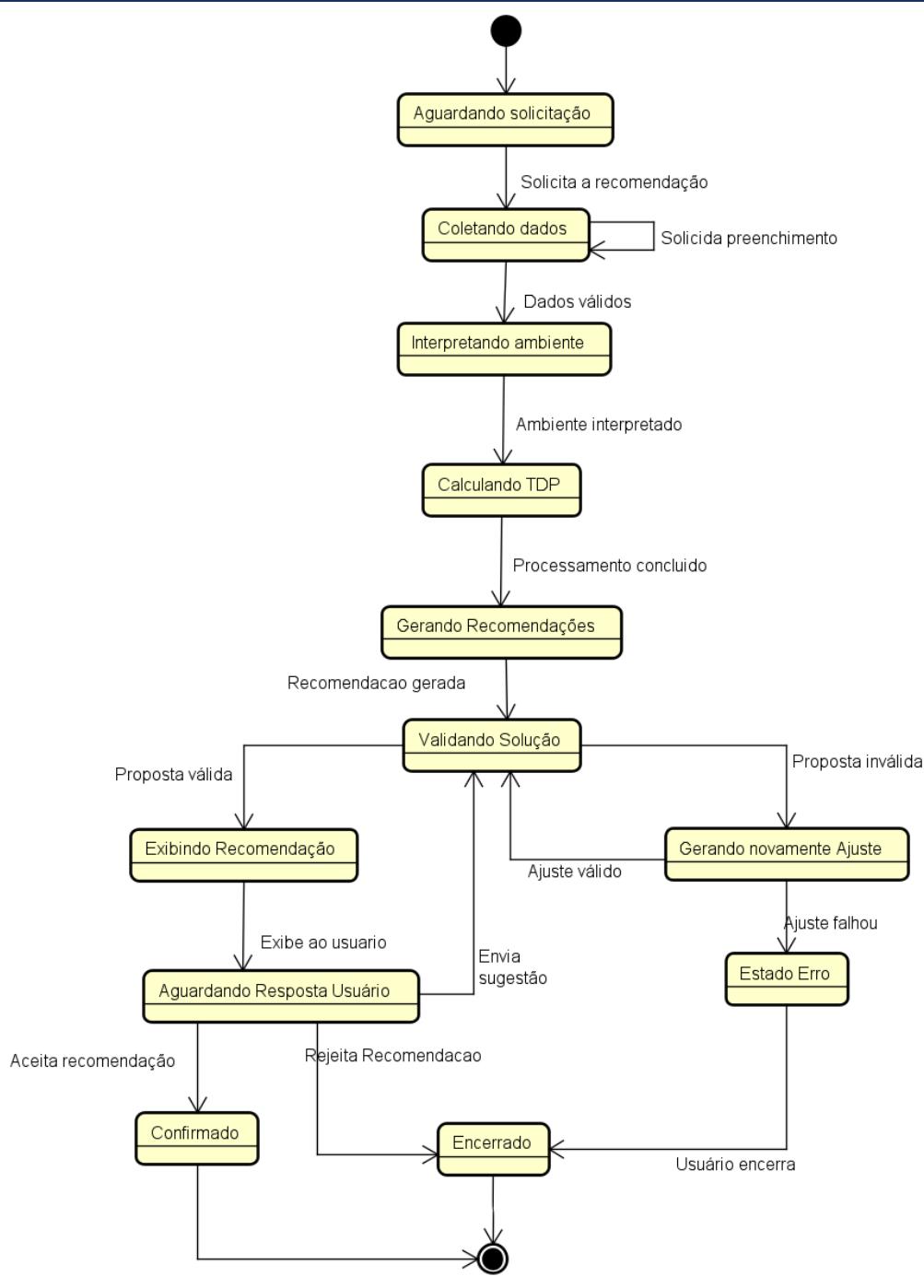
# Montagem manual e Validação da Build



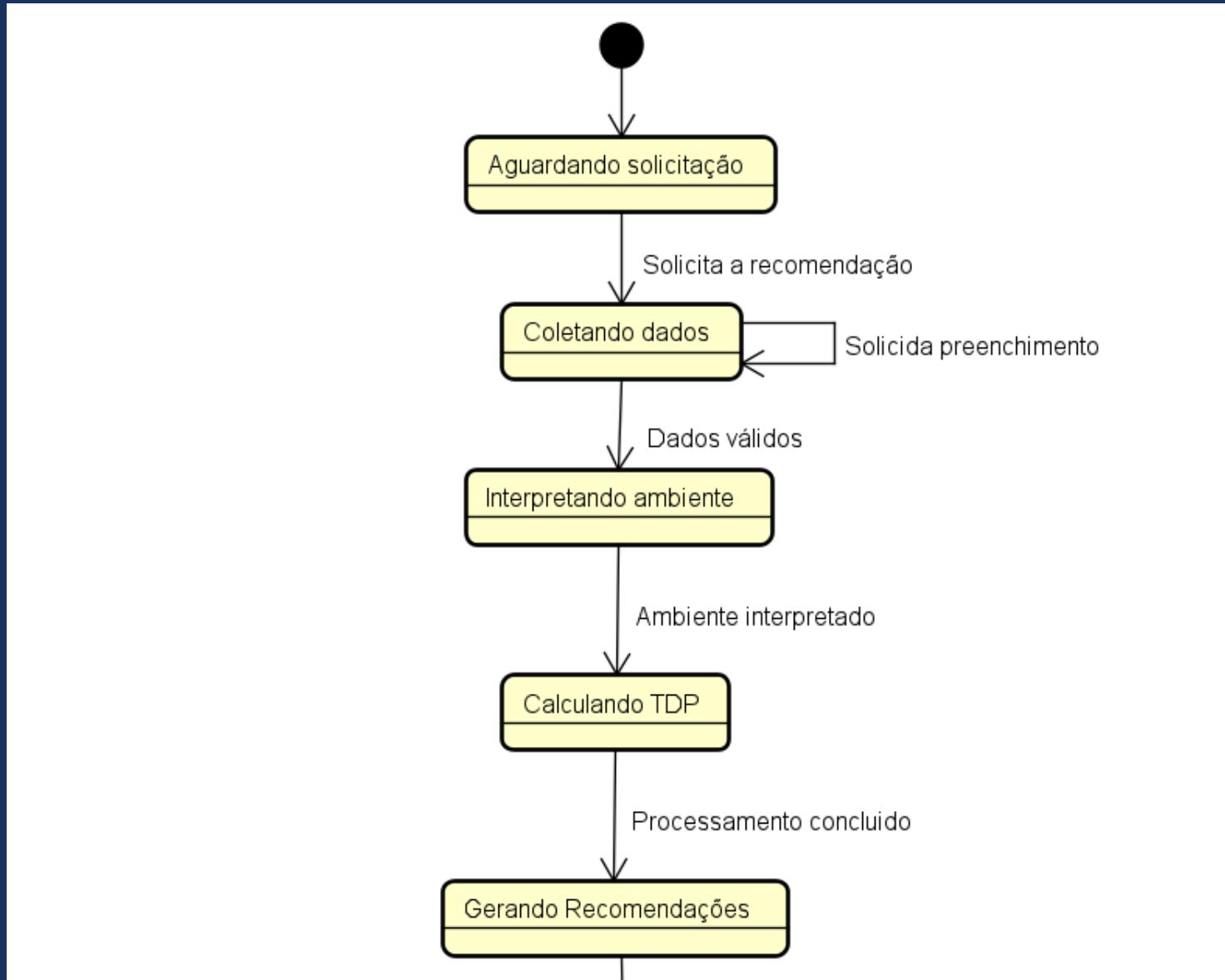
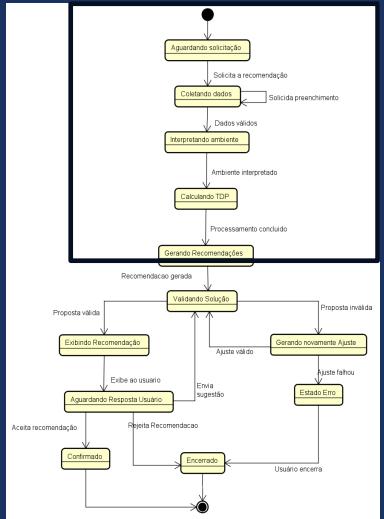
# Montagem manual e Validação da Build



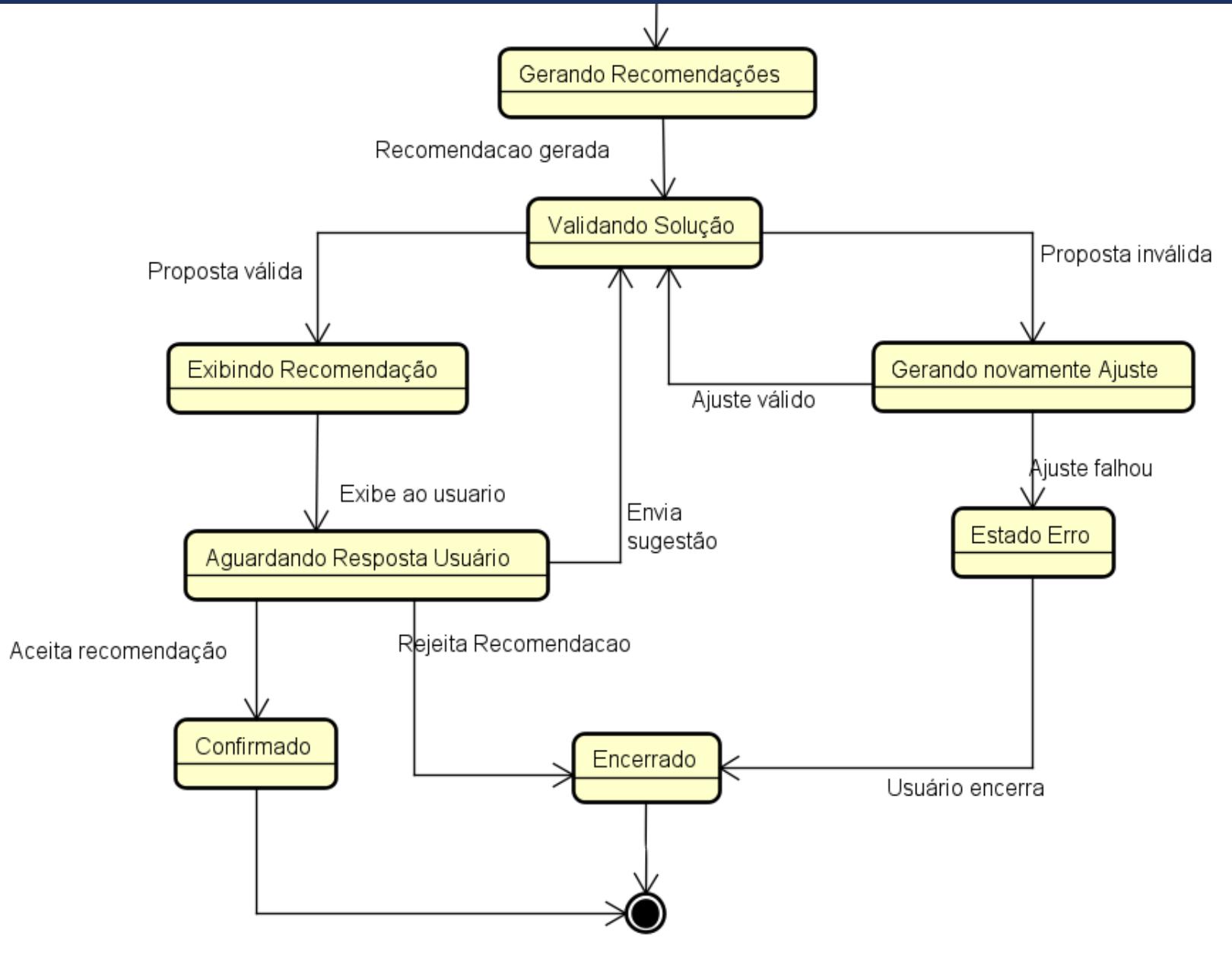
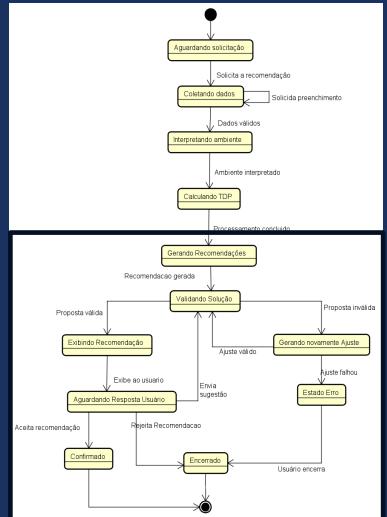
# Sistema de Refrigeração



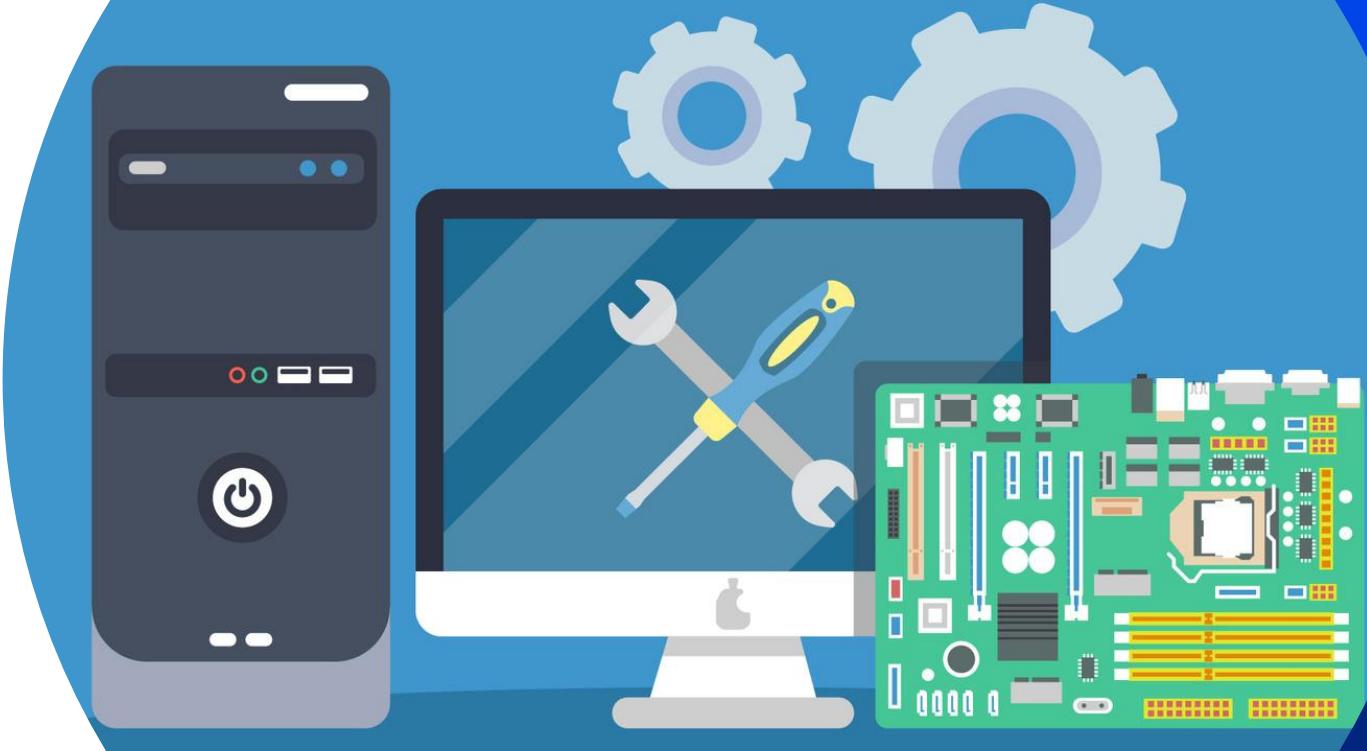
# Sistema de Refrigeração



# Sistema de Refrigeração

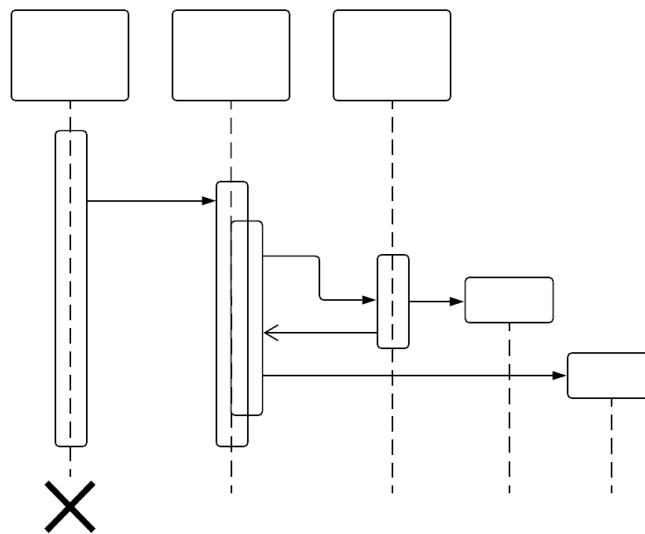


# Diagrama de Sequência



# EXPLICAÇÃO DO DIAGRAMA

- Mostra a **ordem das interações entre objetos** ao longo do tempo
- Elementos: atores, objetos, mensagens, linhas de vida, barras de ativação, etc.



# SIMBOLOGIA DO DIAGRAMA DE SEQUENCIA

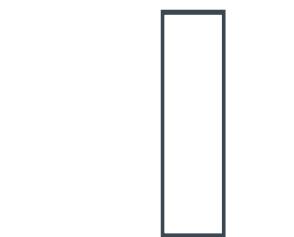


- Simboliza um ator que interage com o sistema

:User

-----|

- Simboliza a linha de vida, representa a passagem de tempo



- Caixa de ativação: Representa o tempo necessário para que um objeto conclua uma ação



- Mensagem Síncrona: Representa uma chamada de método que espera resposta

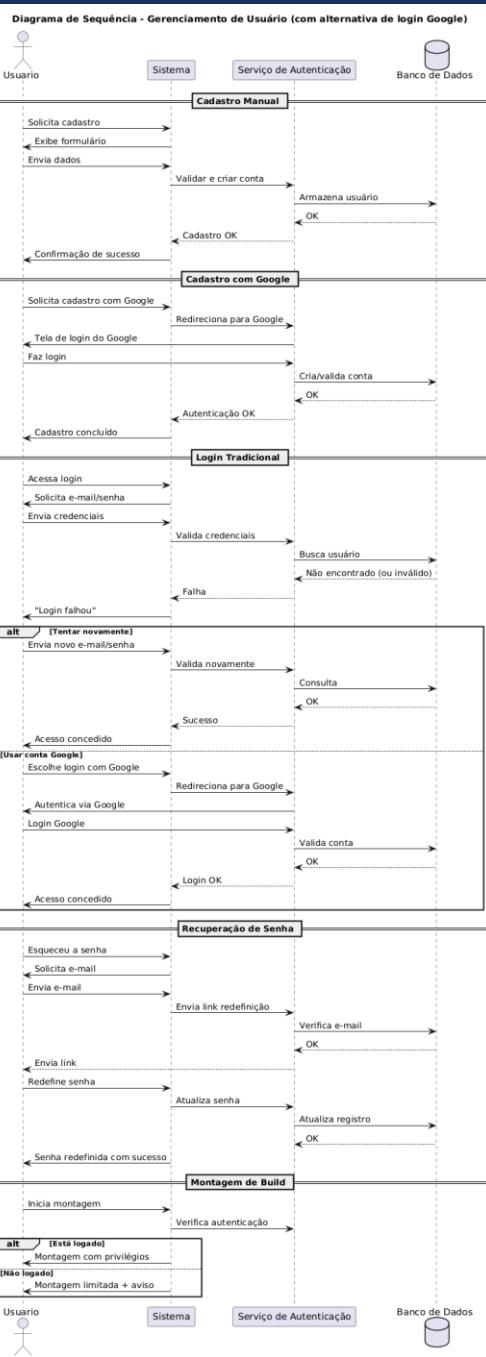


- Mensagem Assíncrona: Representa um envio de sinal que não espera resposta.

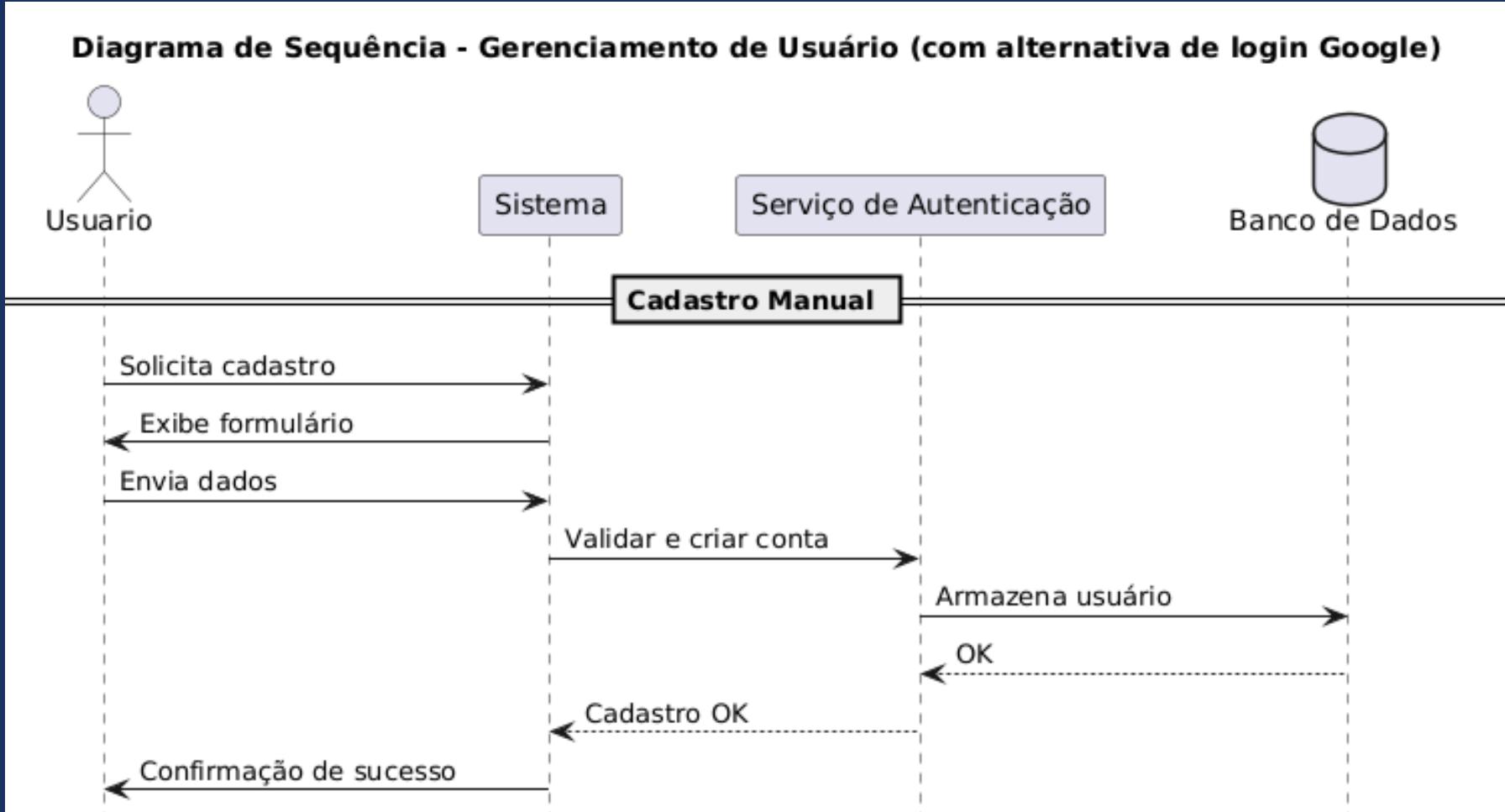
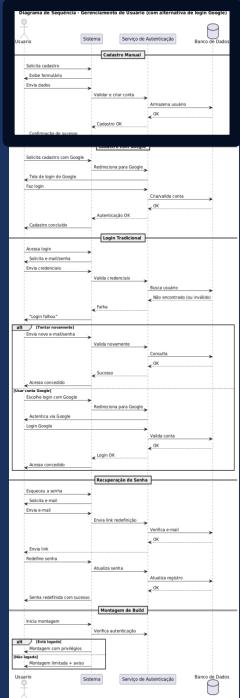


- Mensagem de retorno: Mostra a resposta após uma chamada síncrona.

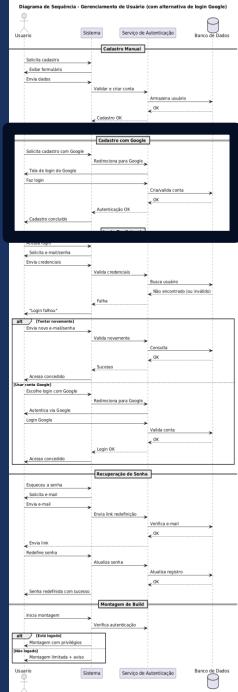
# Cadastro e Login



# Cadastro e Login



# Cadastro e Login



## Cadastro com Google

Solicita cadastro com Google

Redireciona para Google

Tela de login do Google

Faz login

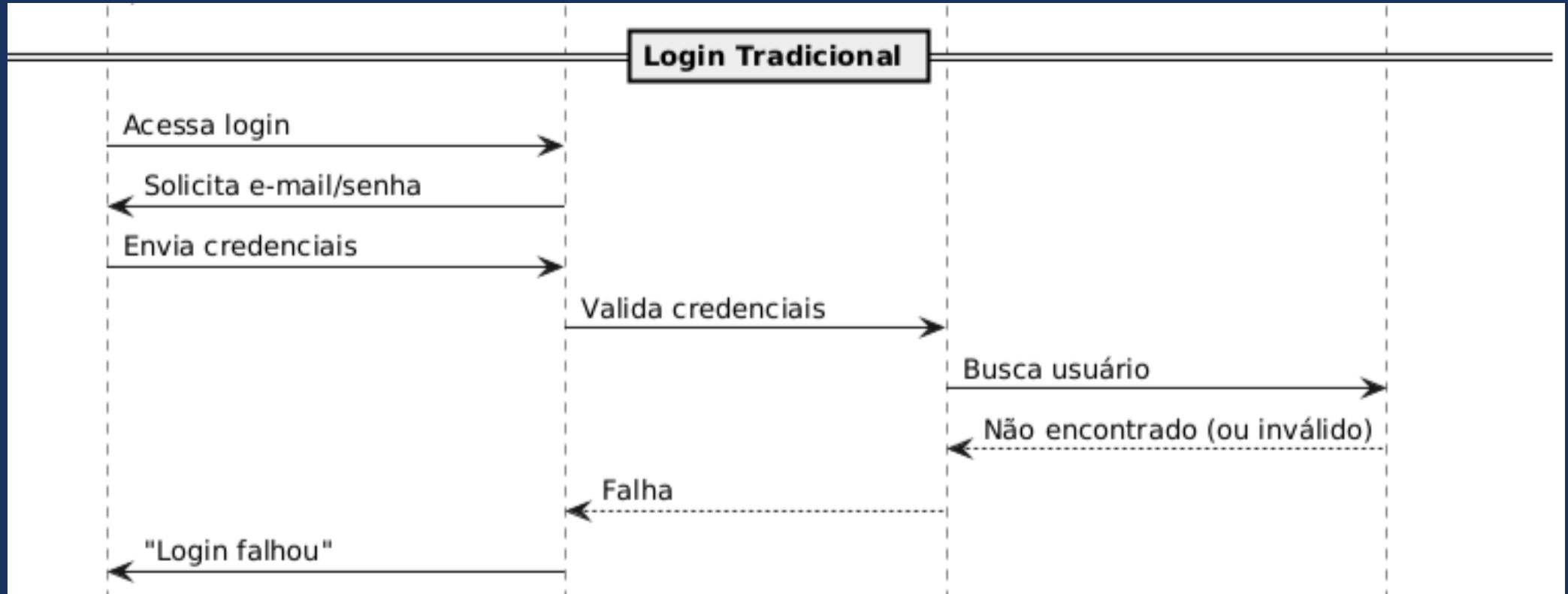
Cria/valida conta

OK

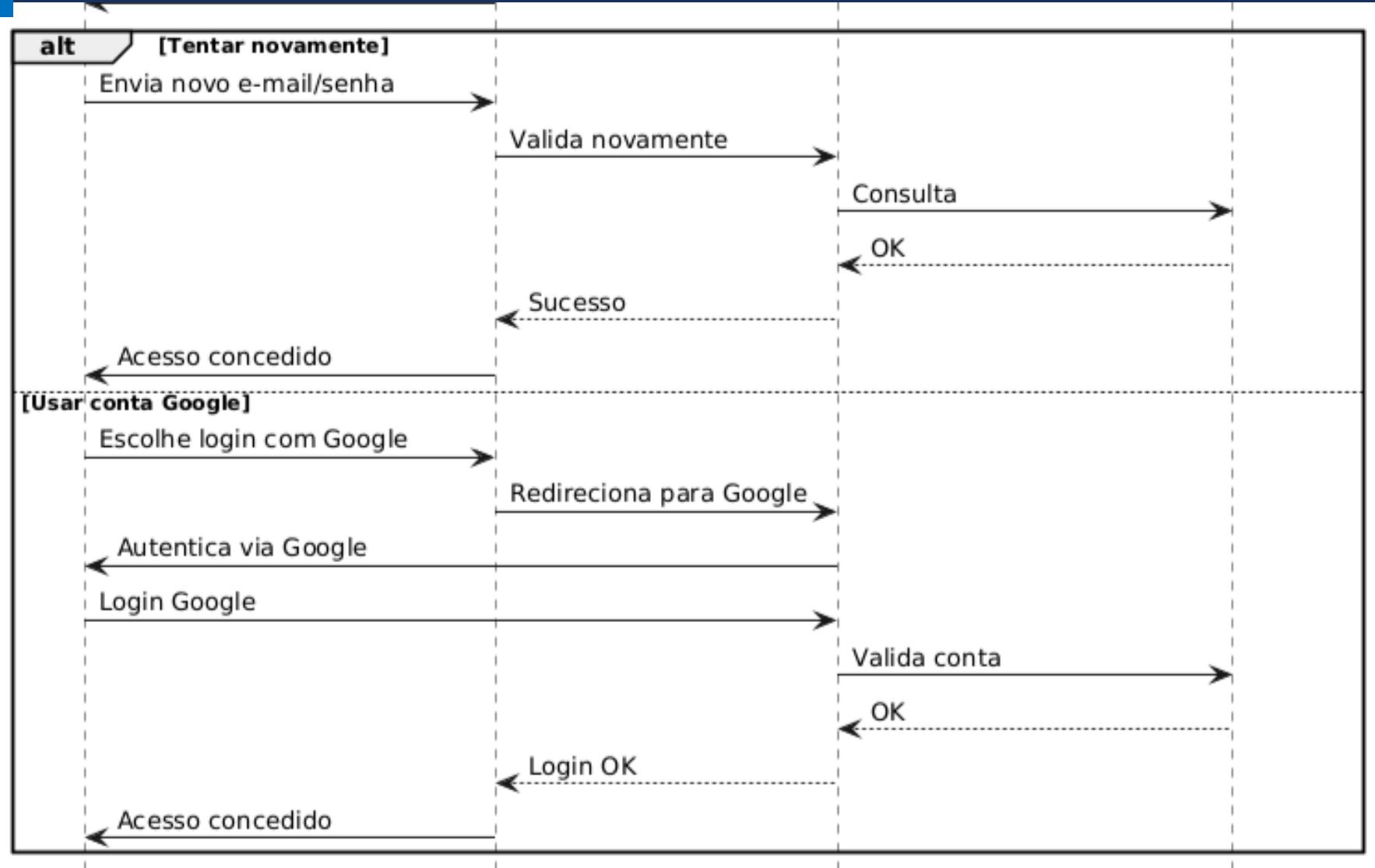
Autenticação OK

Cadastro concluído

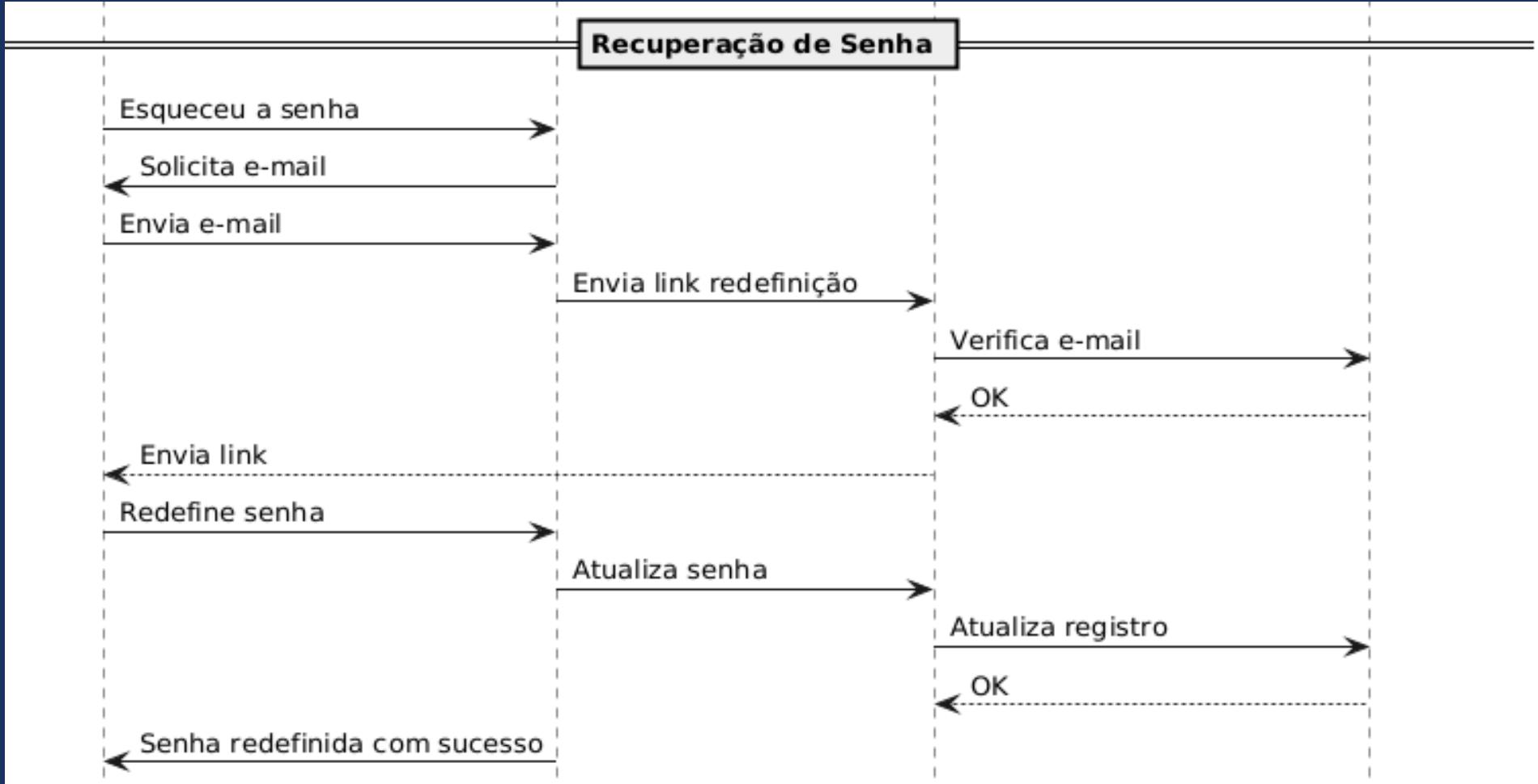
# Cadastro e Login



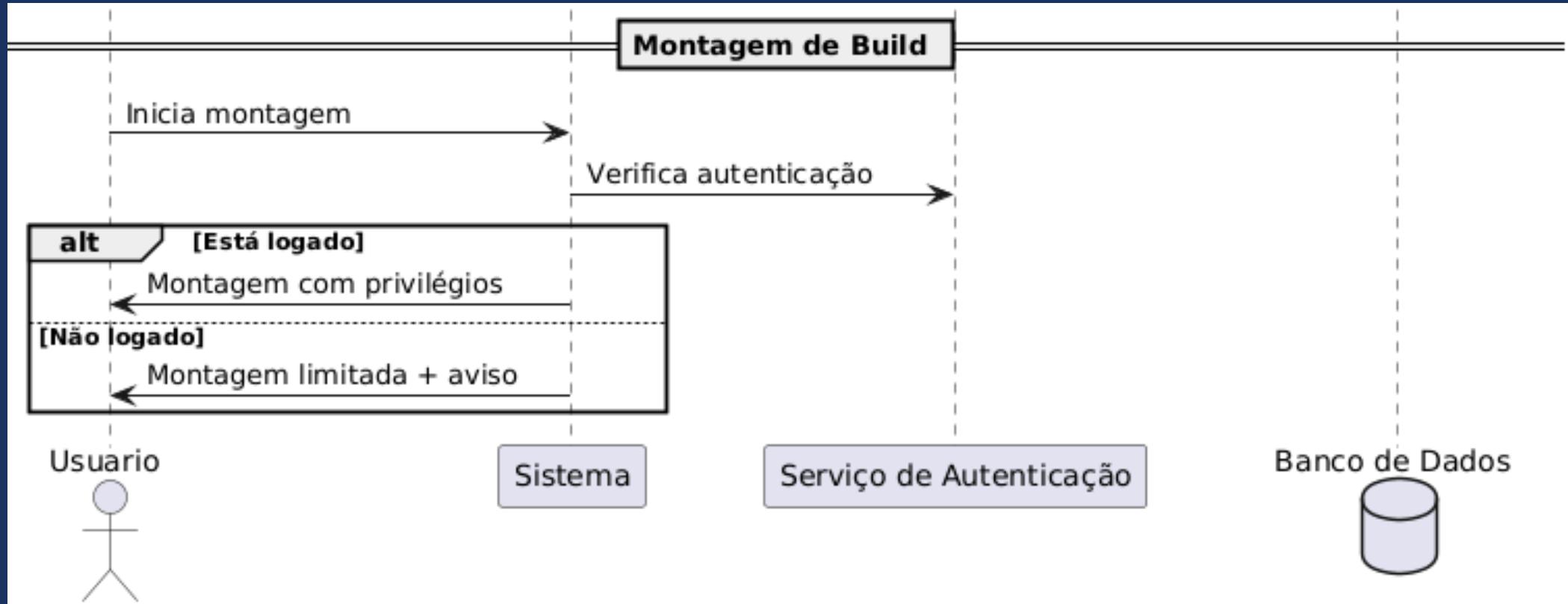
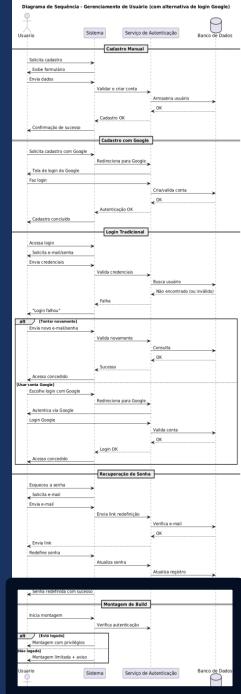
# Cadastro e Login



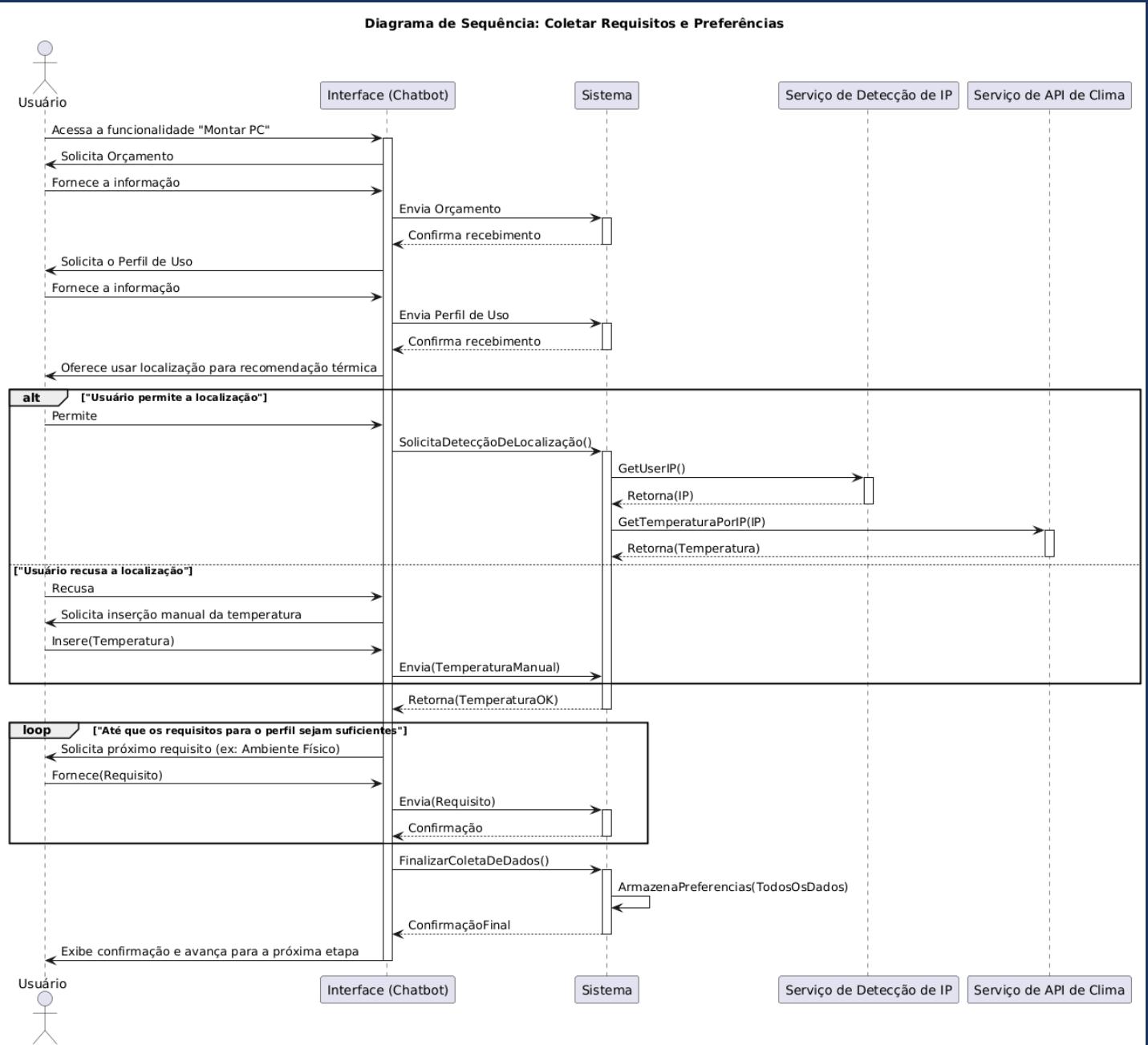
# Cadastro e Login



# Cadastro e Login



# Coleta de requisitos e Preferências do Usuário



# Coleta de requisitos e Preferências do Usuário

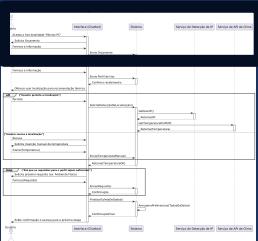
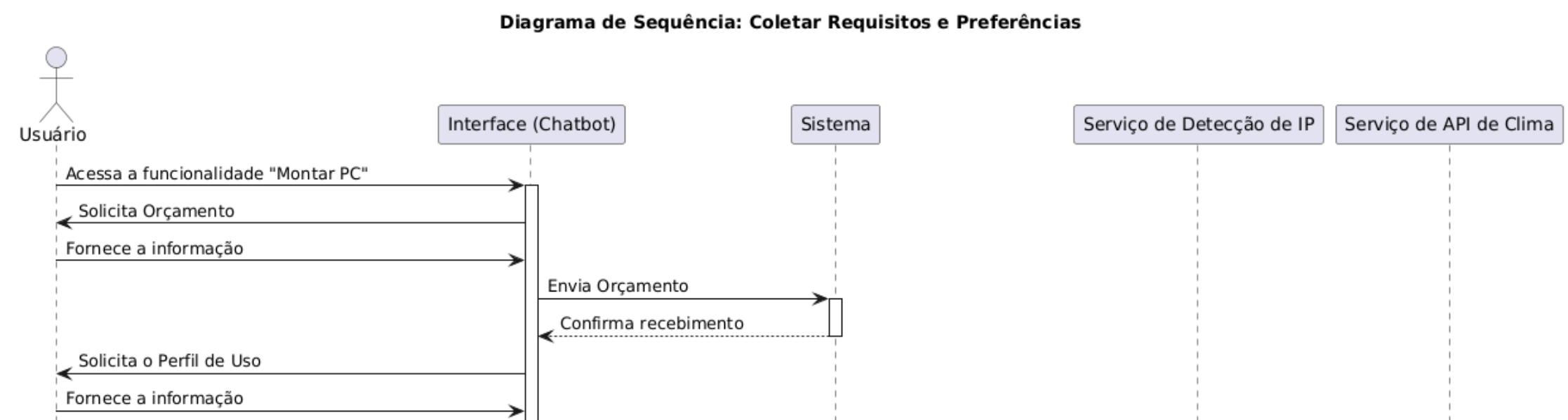
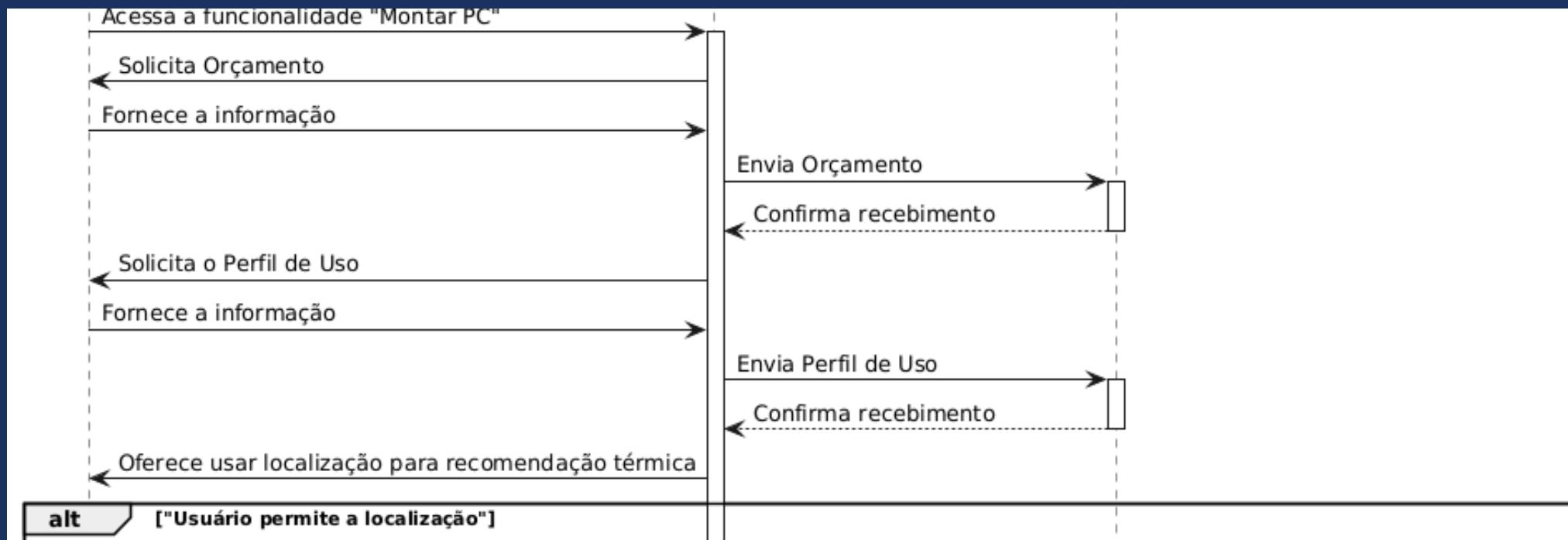
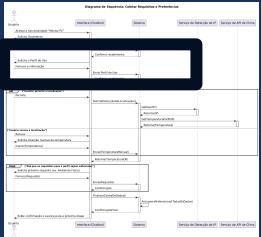


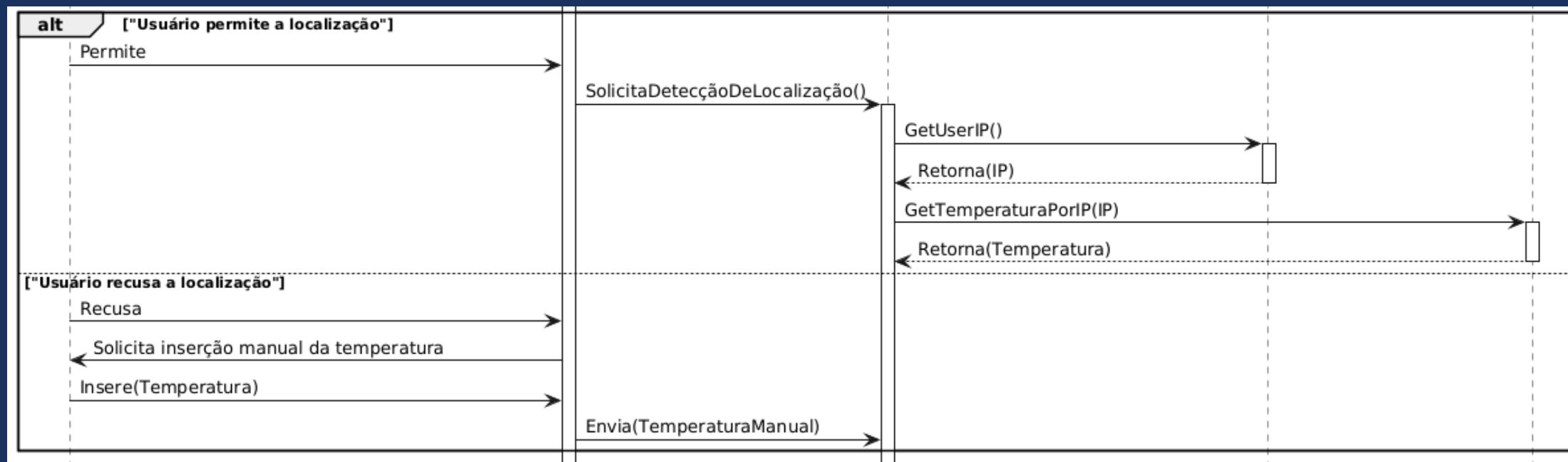
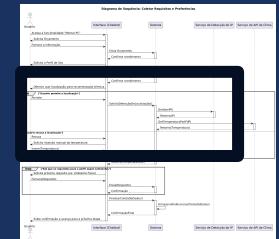
Diagrama de Sequência: Coletar Requisitos e Preferências



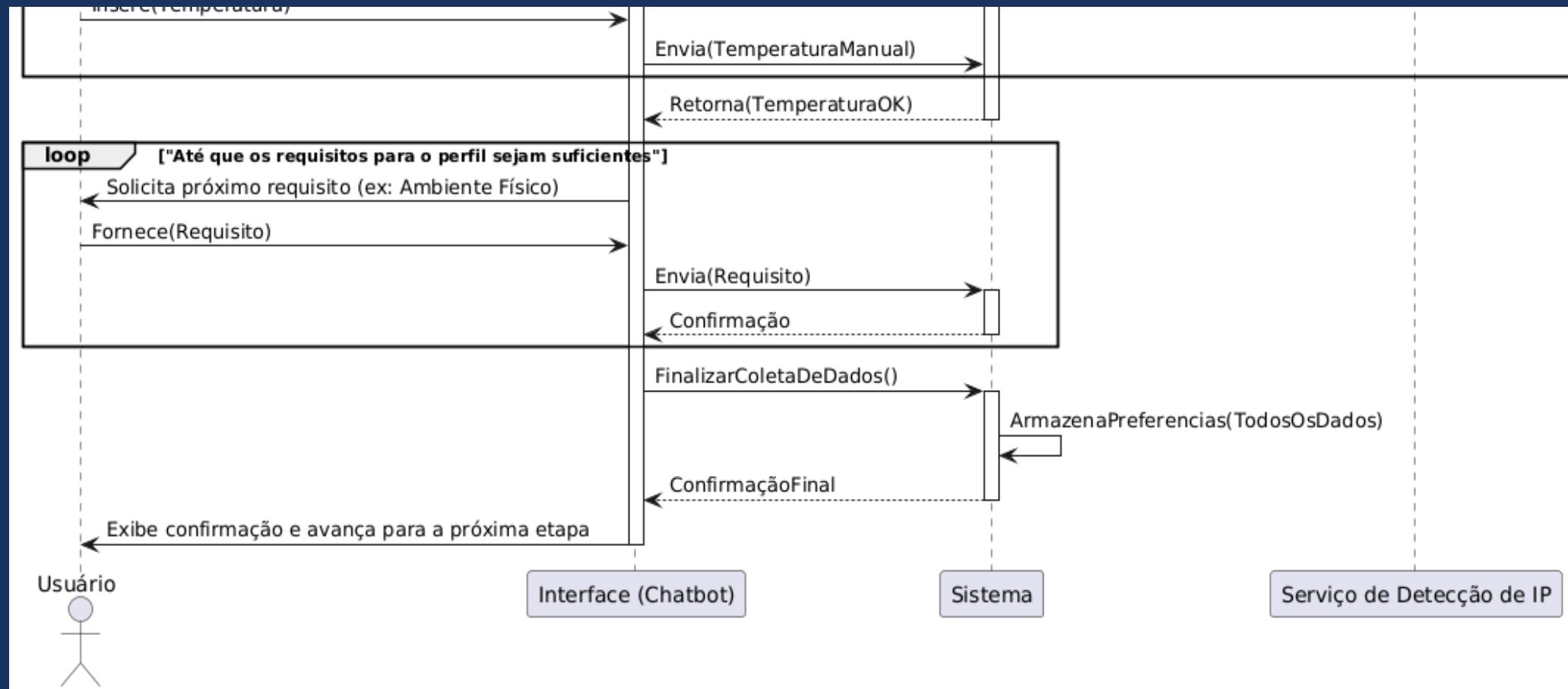
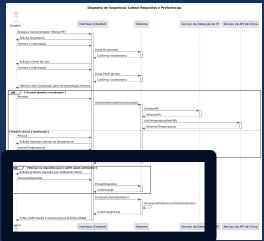
# Coleta de requisitos e Preferências do Usuário



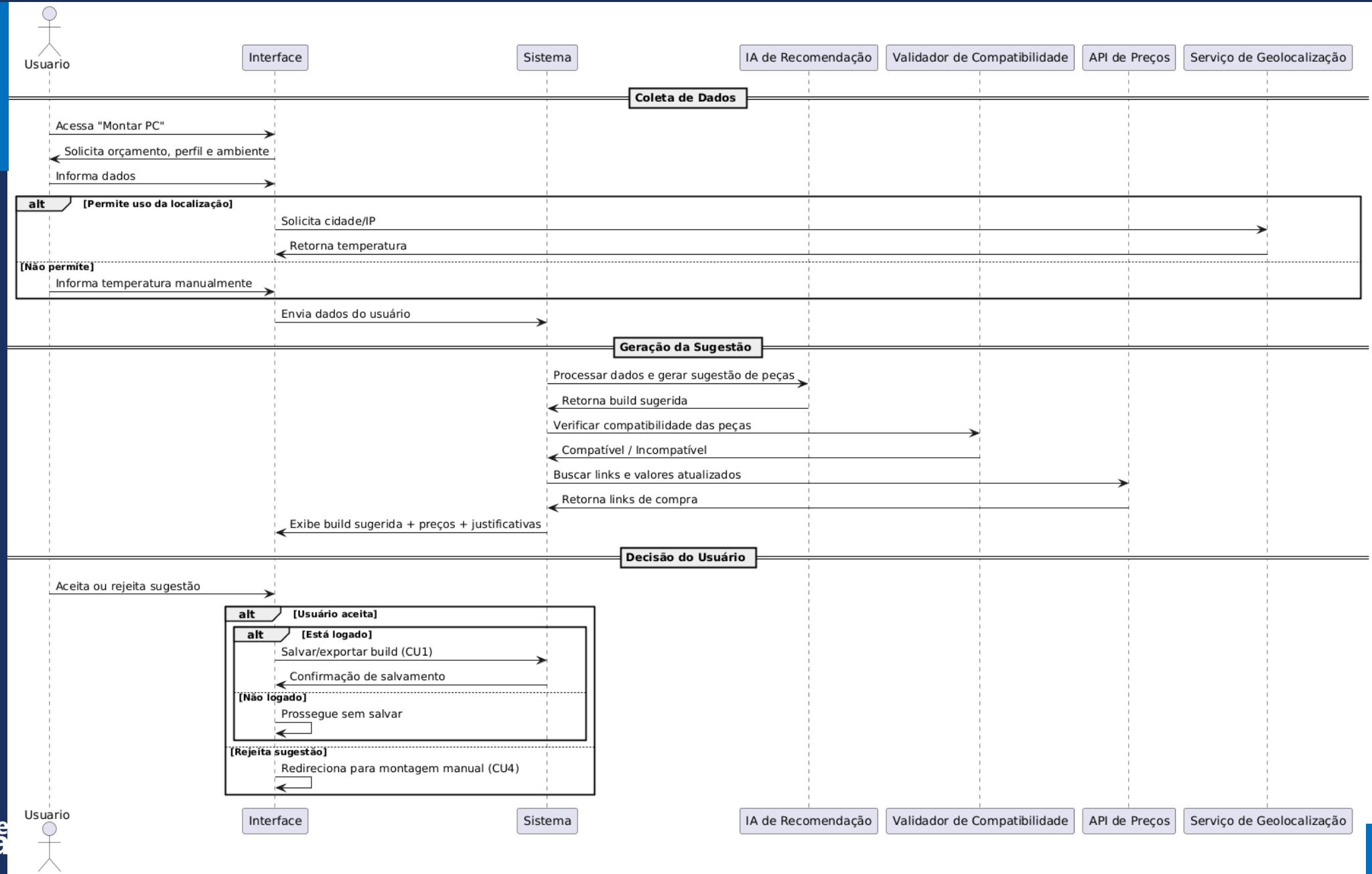
# Coleta de requisitos e Preferências do Usuário



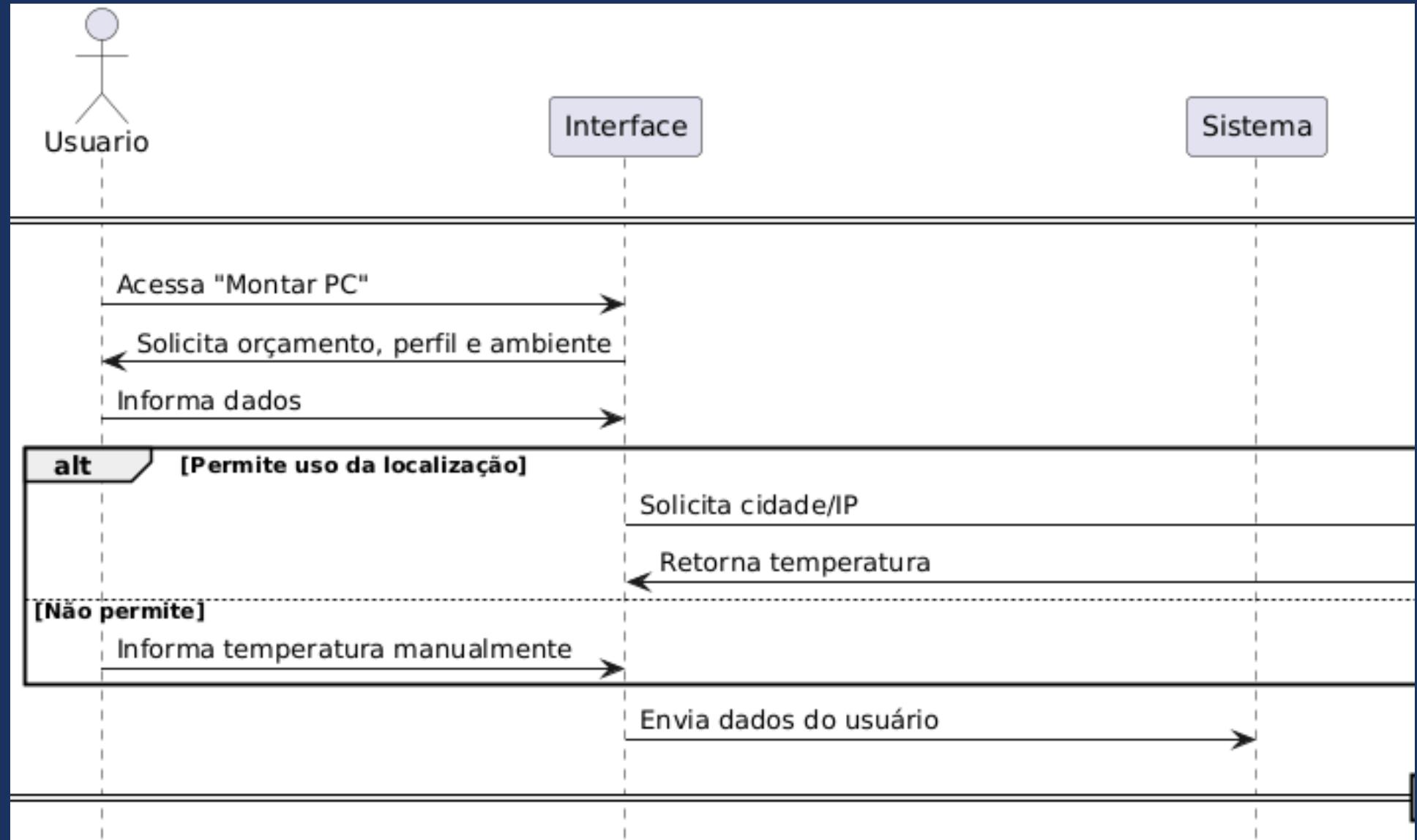
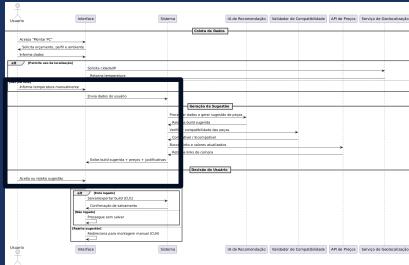
# Coleta de requisitos e Preferências do Usuário



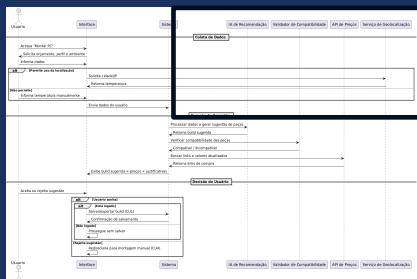
# Configuração Automatizada de PC



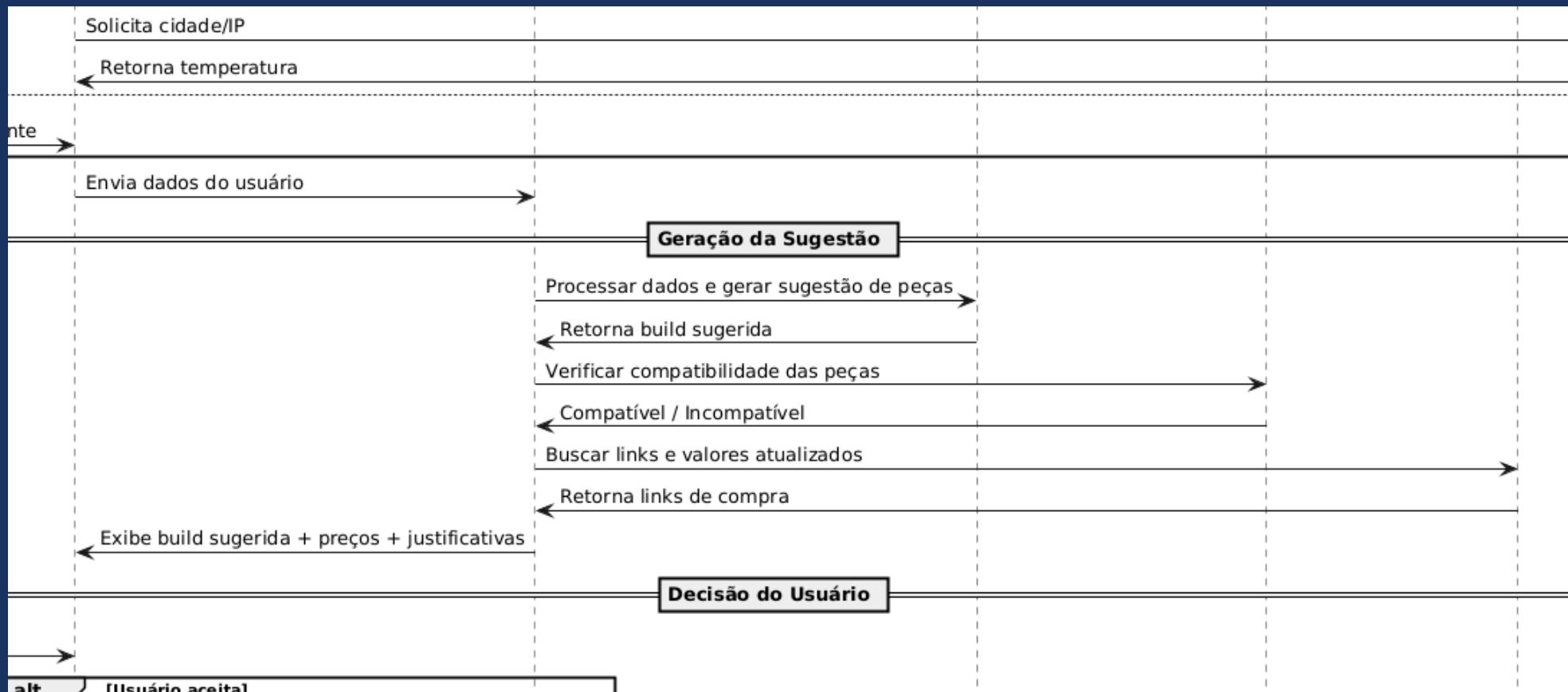
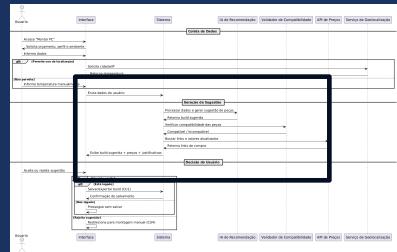
# Configuração Automatizada de PC



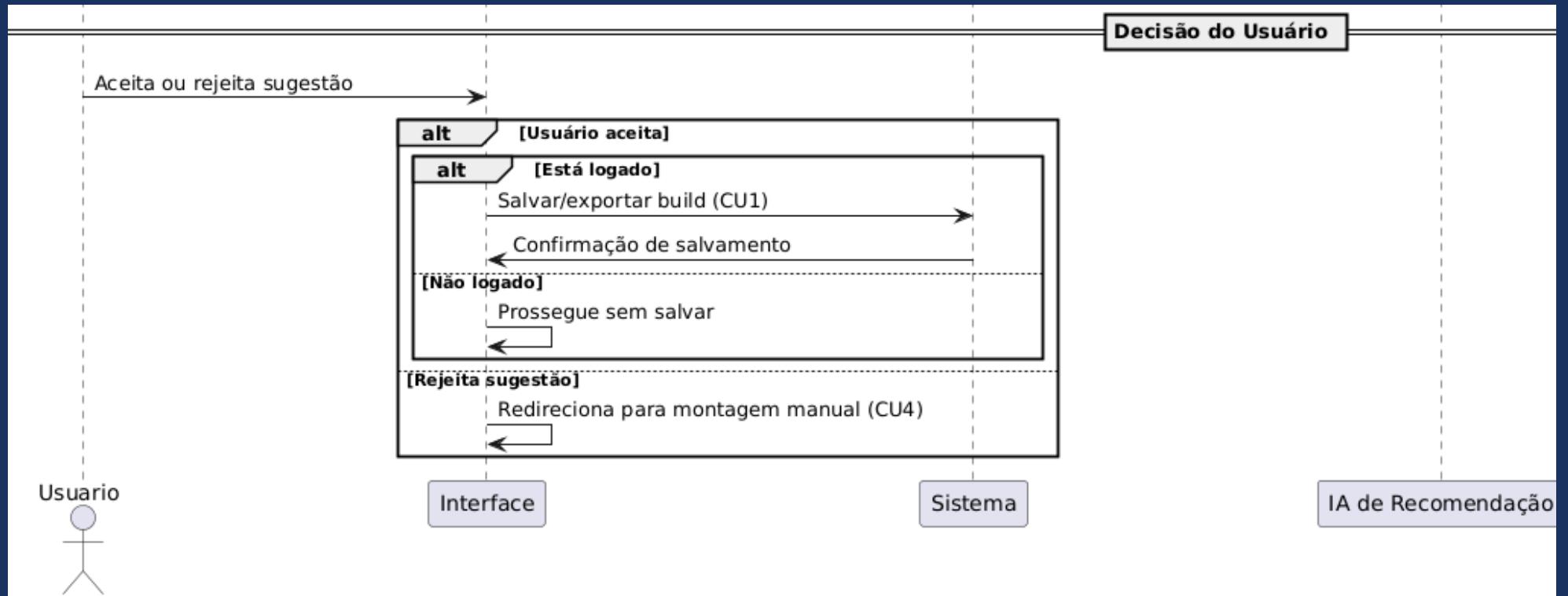
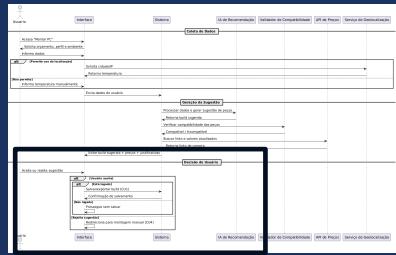
# Configuração Automatizada de PC



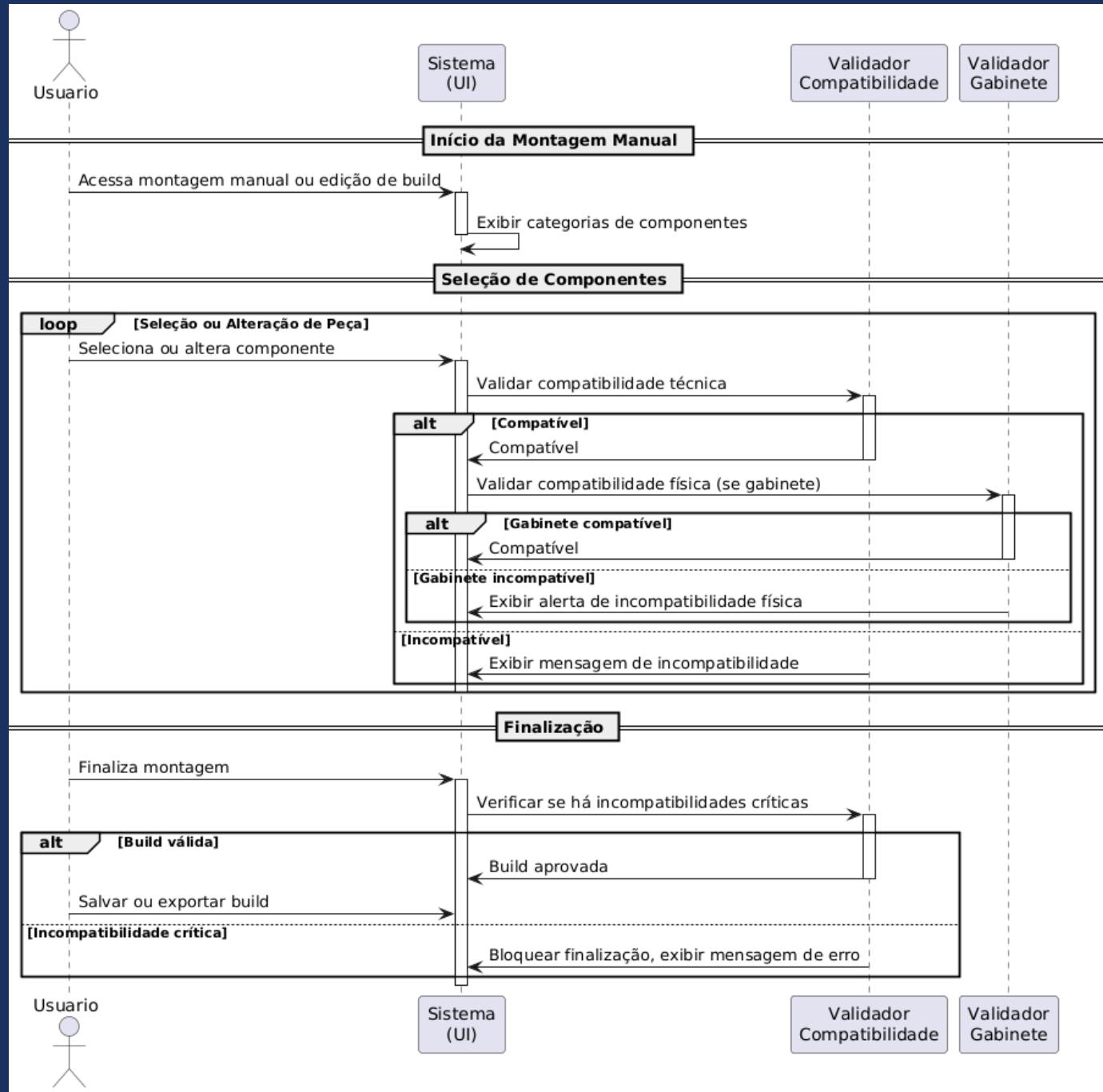
# Configuração Automatizada de PC



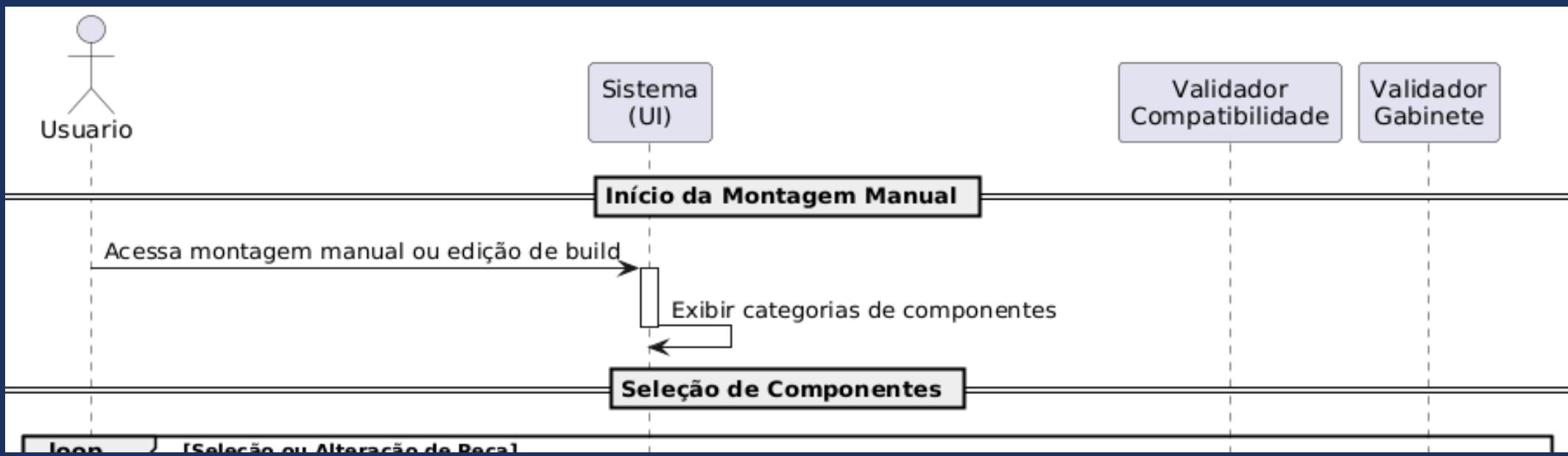
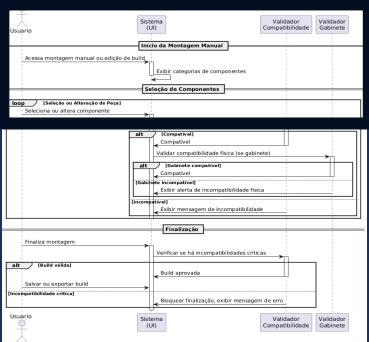
# Configuração Automatizada de PC



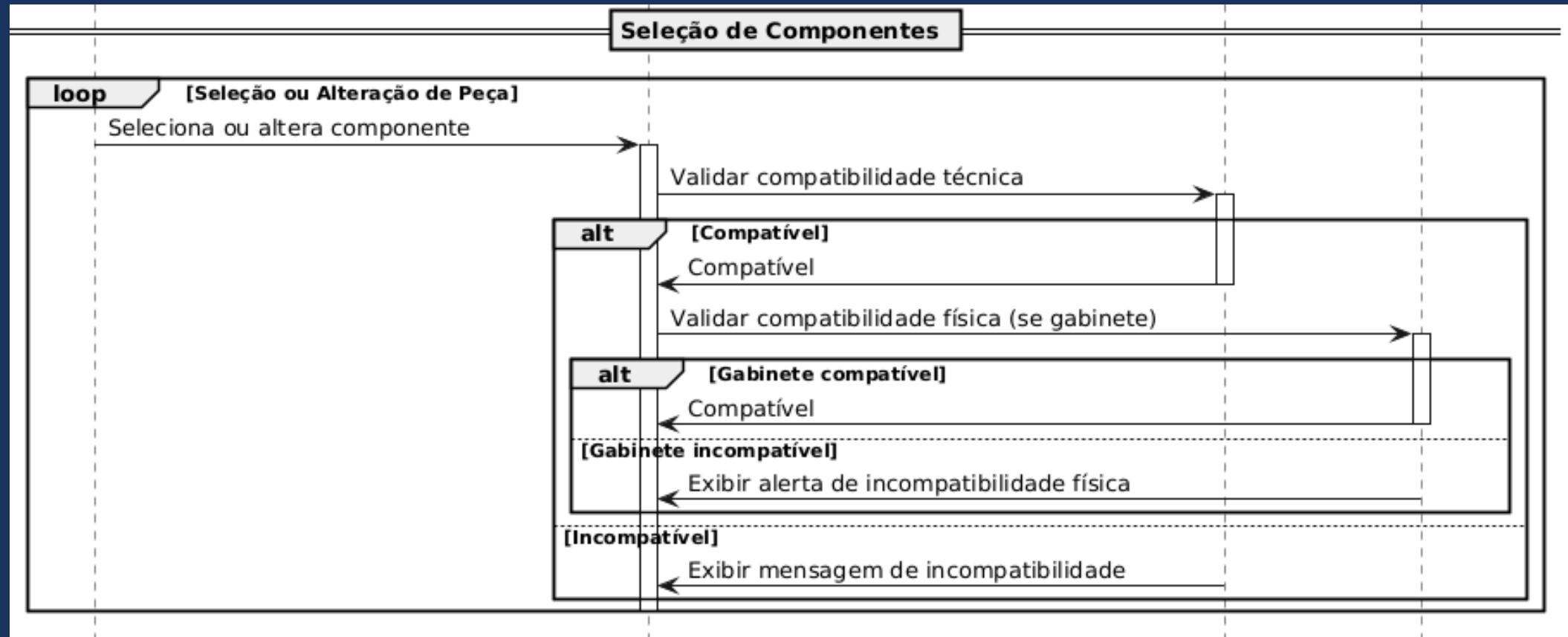
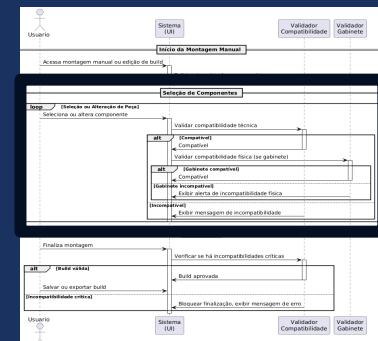
# Montagem manual e Validação da Build



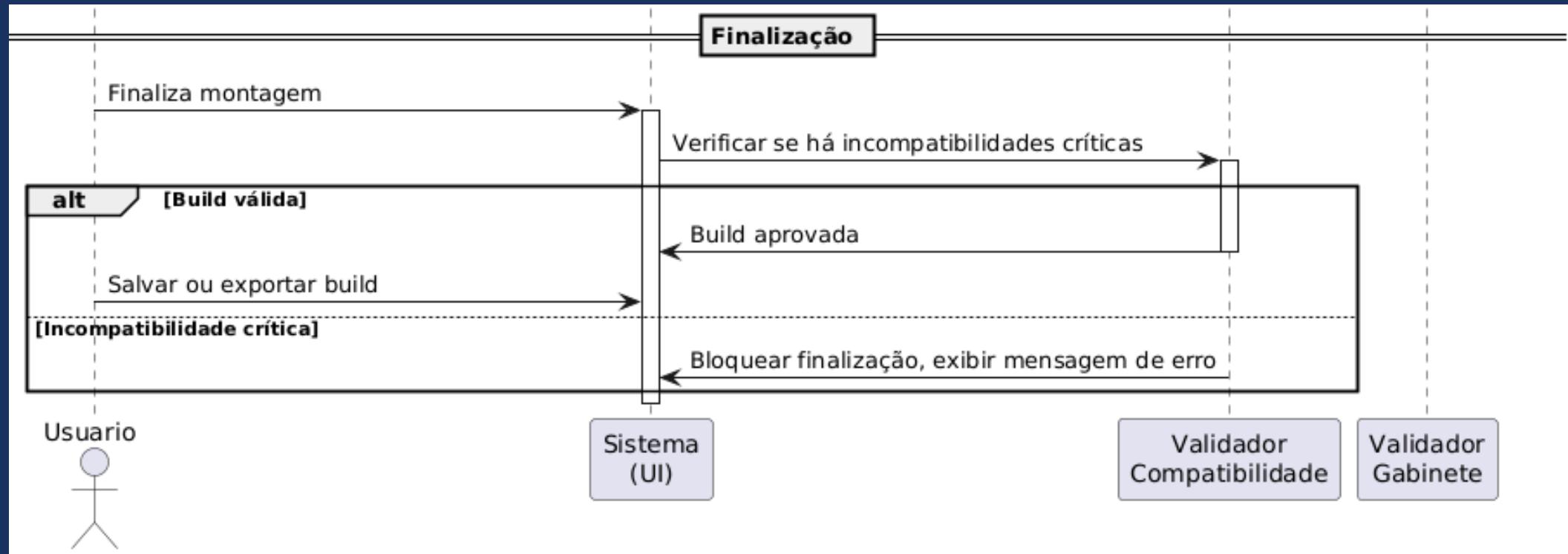
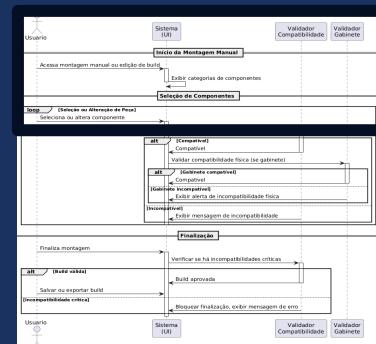
# Montagem manual e Validação da Build



# Montagem manual e Validação da Build

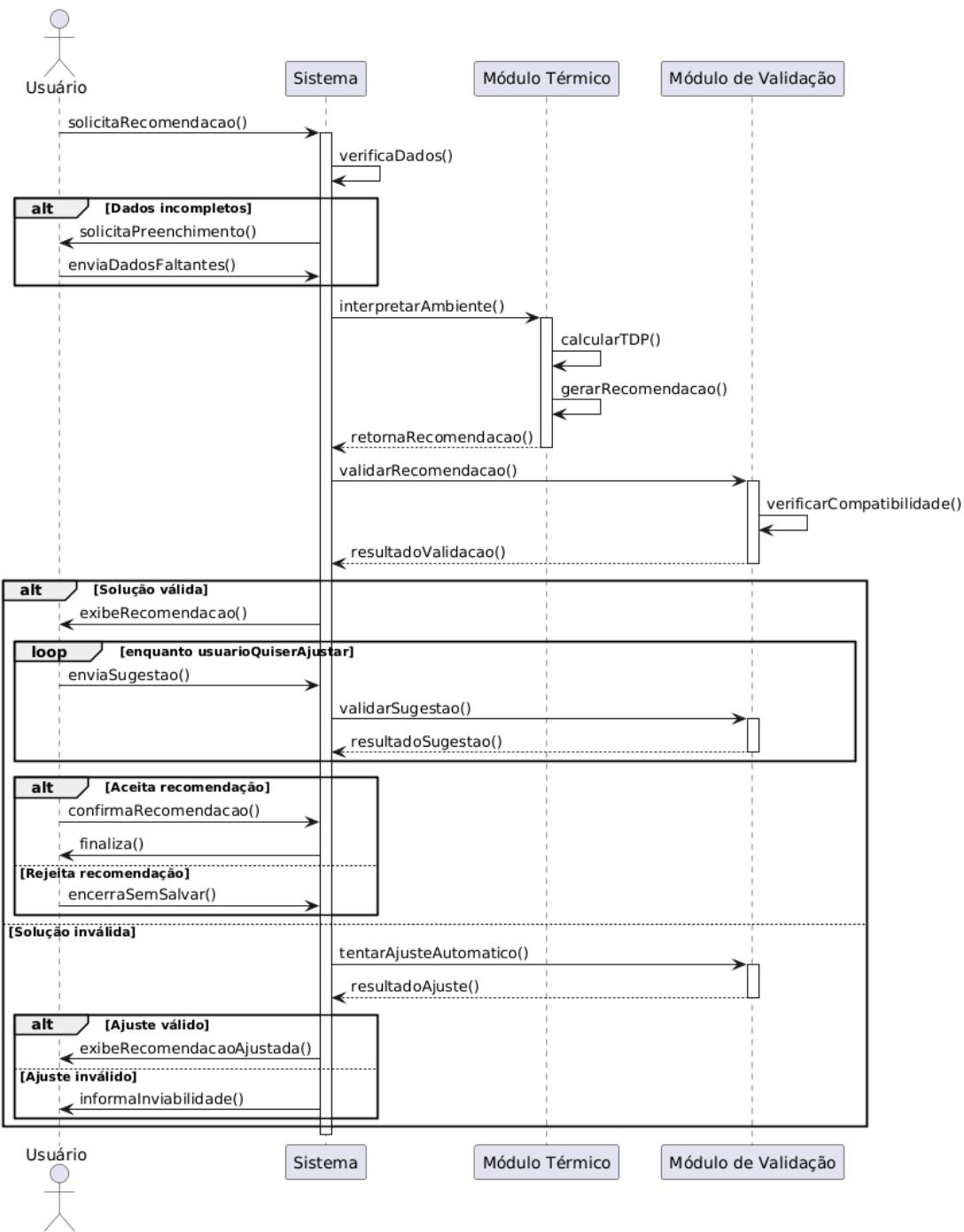


# Montagem manual e Validação da Build



# Sistema de Refrigeração

Diagrama de Sequência - Sistema de Refrigeração Inteligente



# Sistema de Refrigeração

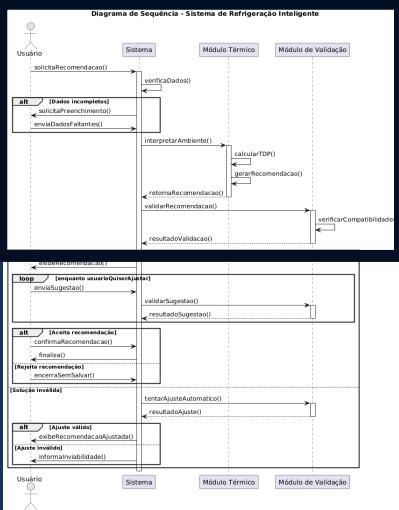
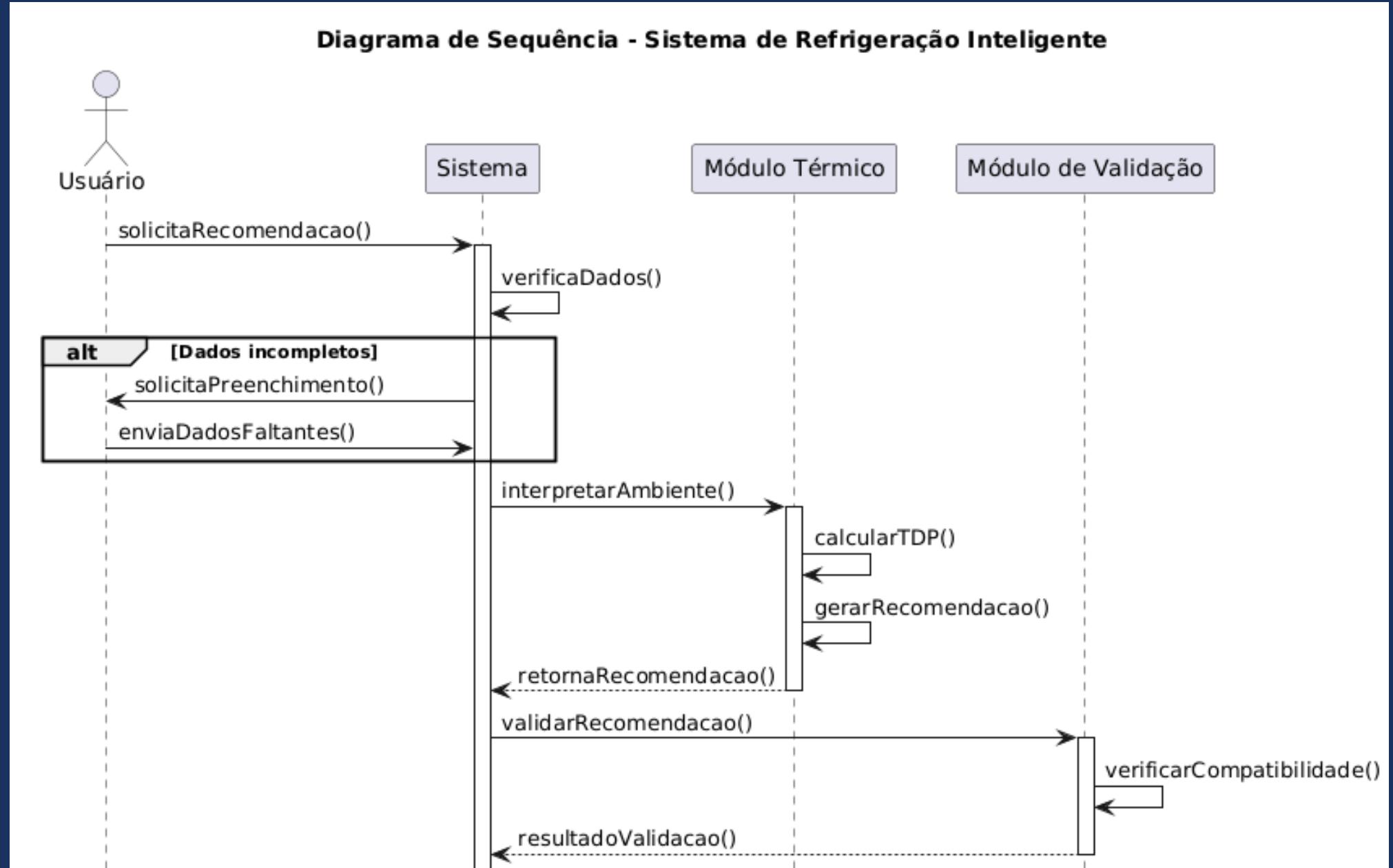
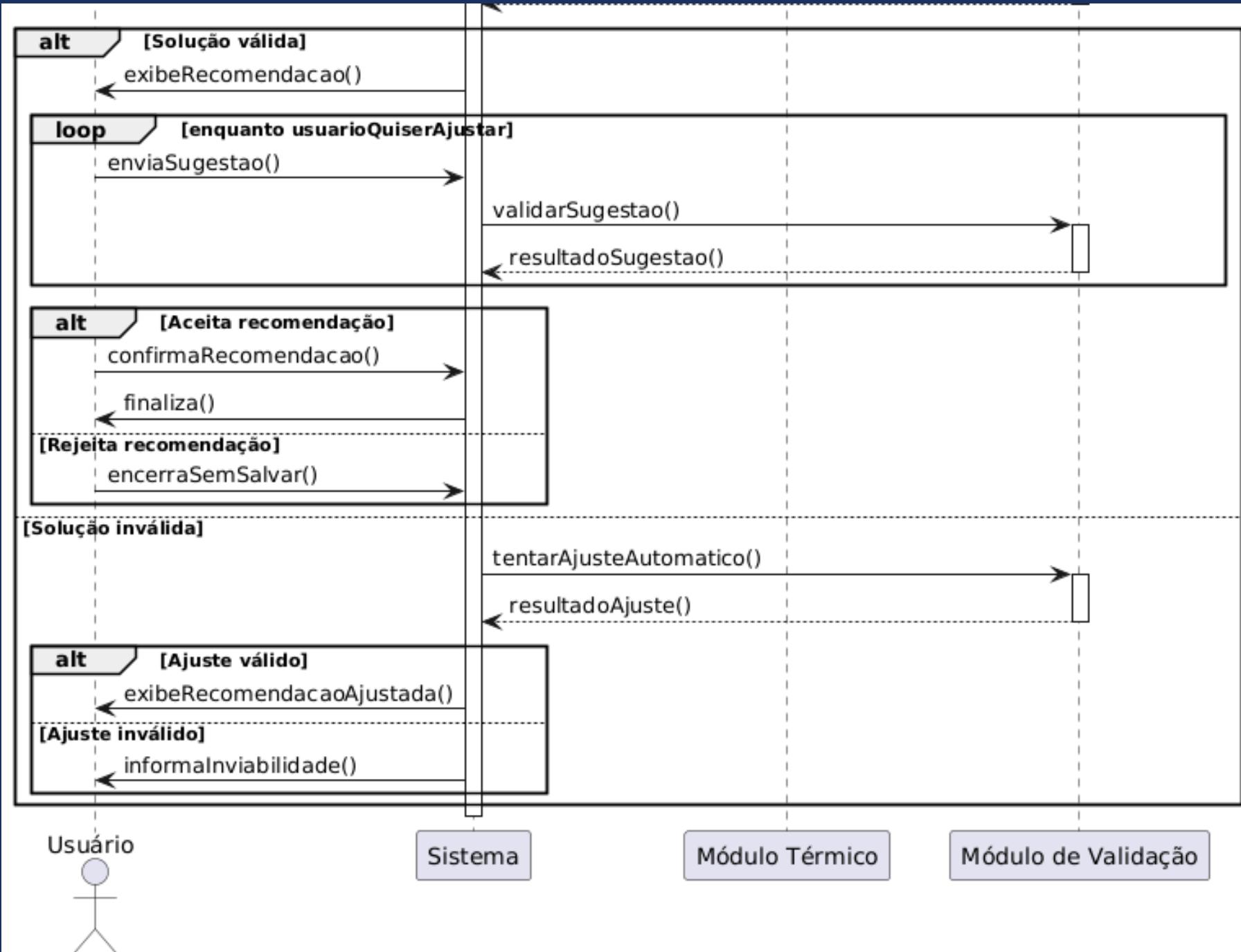
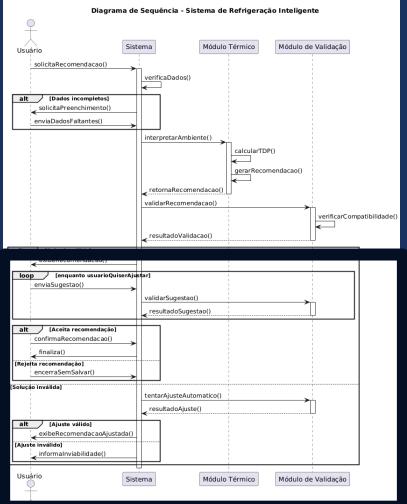


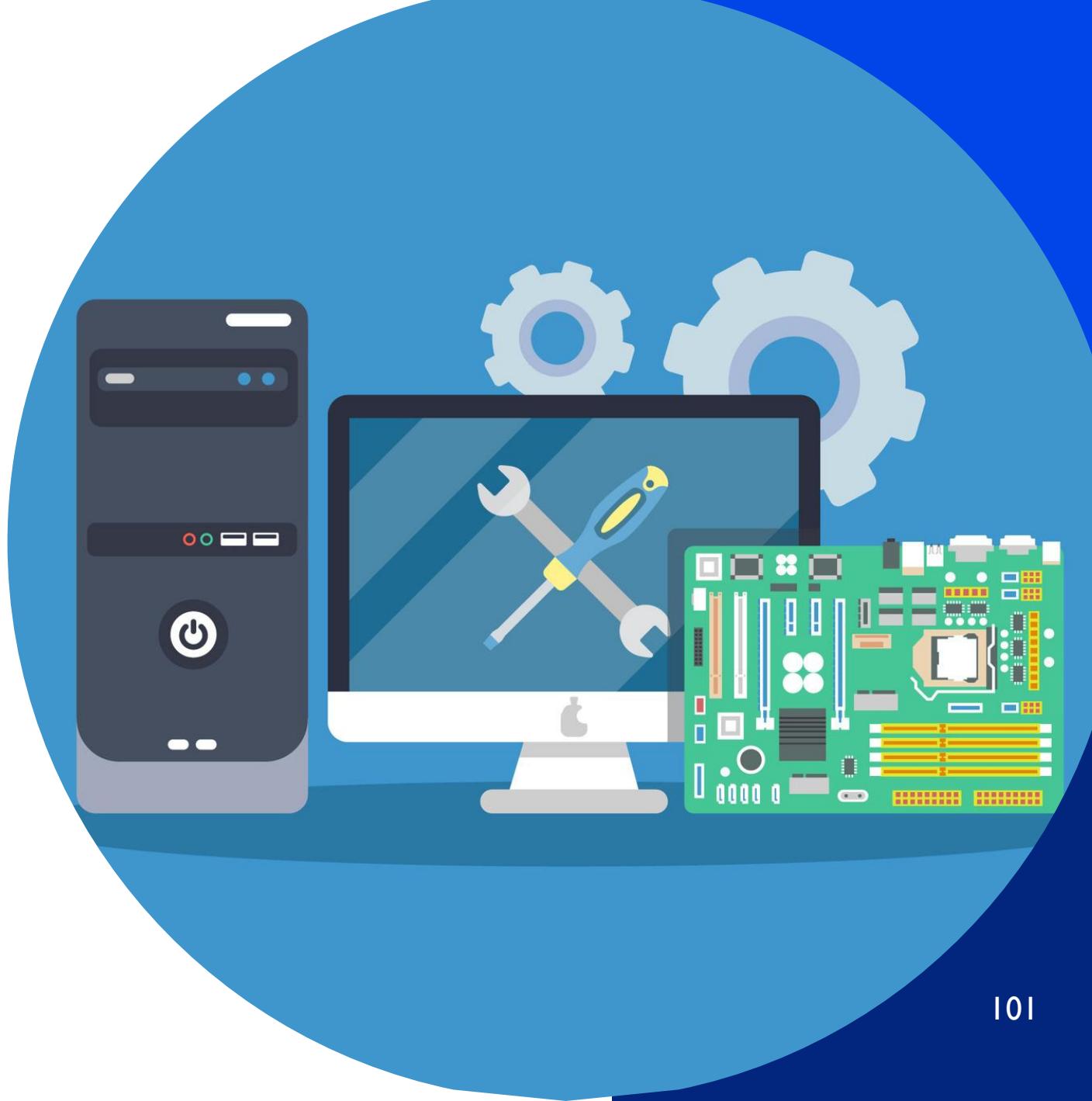
Diagrama de Sequência - Sistema de Refrigeração Inteligente



# Sistema de Refrigeração



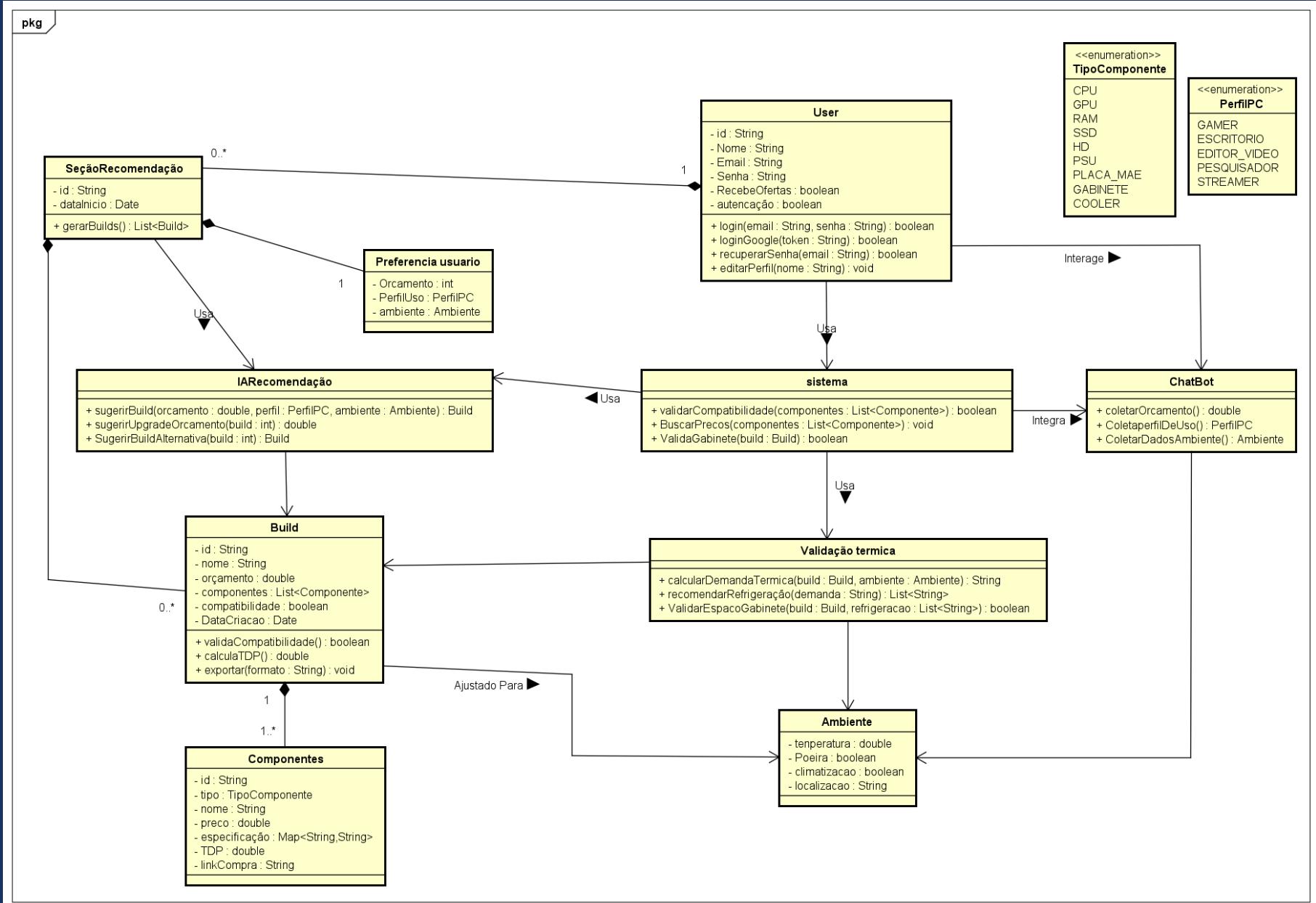
# Diagrama de Classes



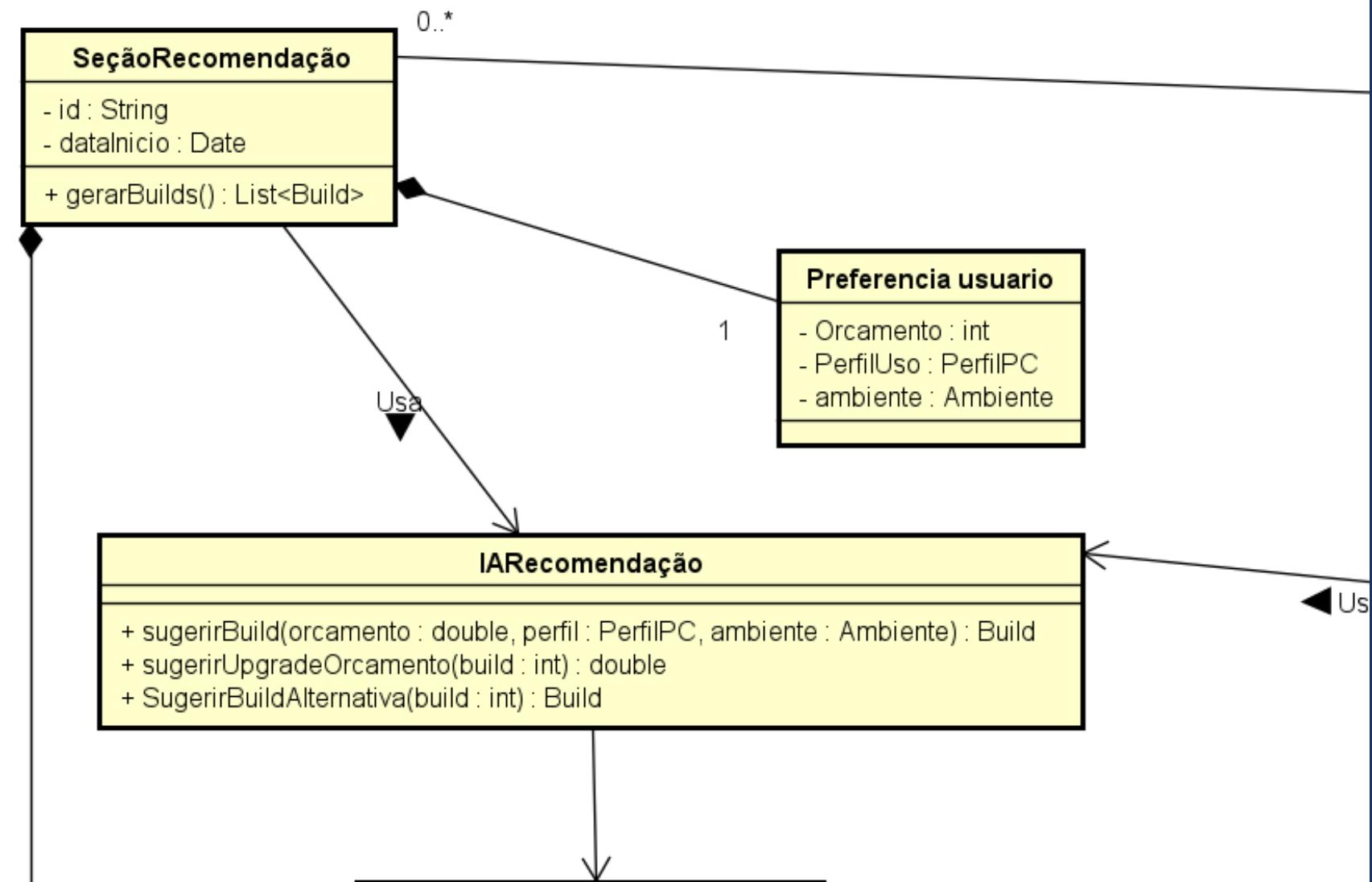
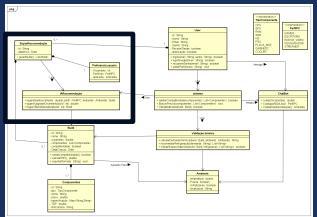
# EXPLICAÇÃO DO DIAGRAMA

- Representa a **estrutura estática do sistema**
- Mostra classes, atributos, métodos e relacionamentos
- Elementos: classes, associações, herança

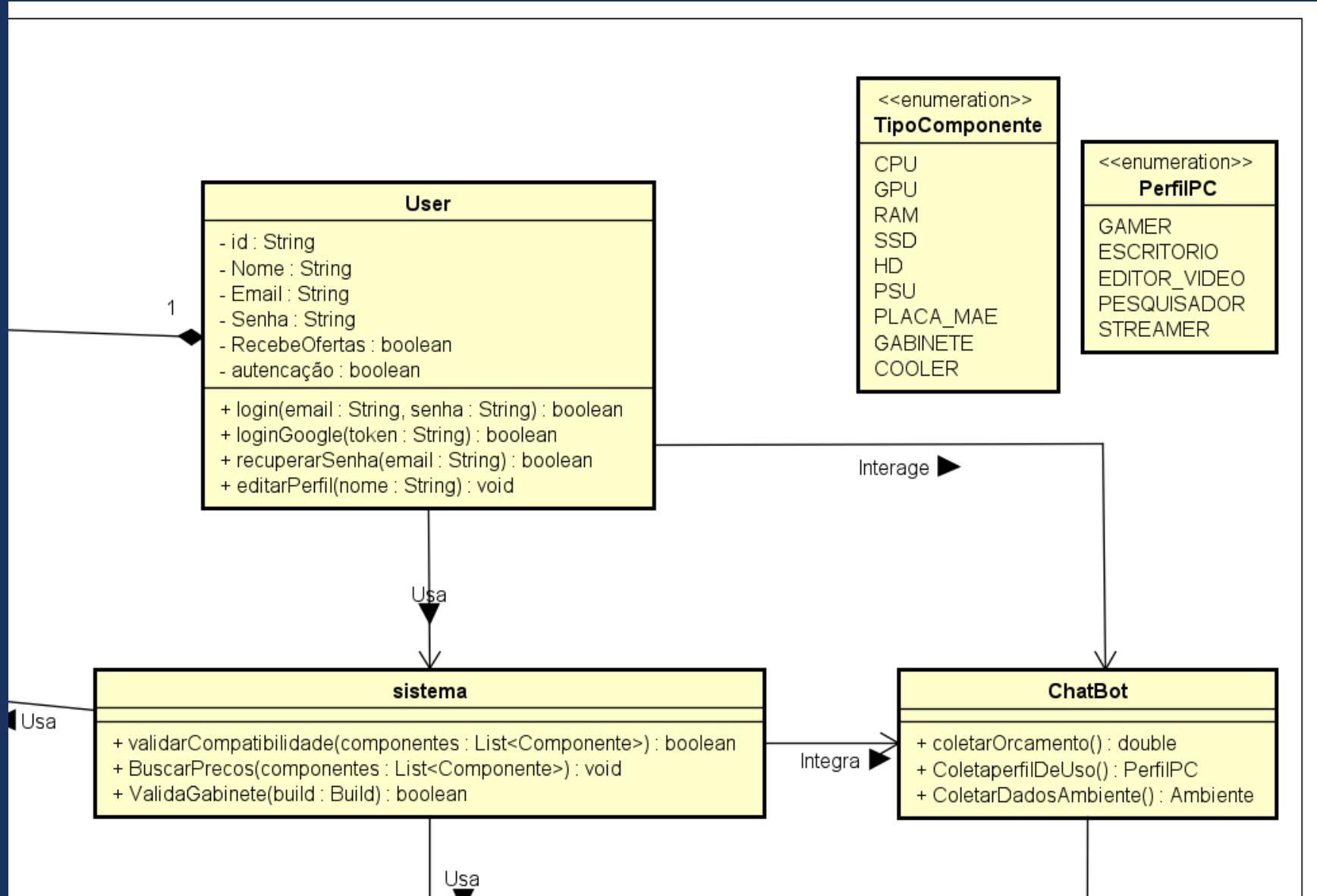
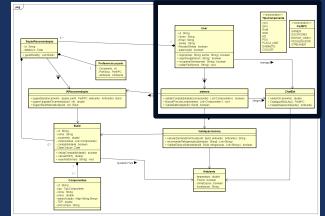
# Classes



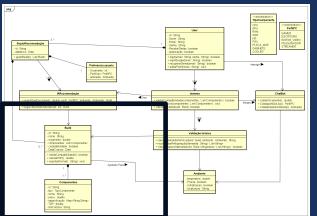
# Classes



# Classes



# Classes



+ SugerirBuildAlternativa(build : int) : Build

+ Vali

Build

- id : String  
- nome : String  
- orçamento : double  
- componentes : List<Componente>  
- compatibilidade : boolean  
- DataCriacao : Date

+ validaCompatibilidade() : boolean  
+ calculaTDP() : double  
+ exportar(formato : String) : void

0..\*

+ ca  
+ re  
+ Va

Ajustado Para ►

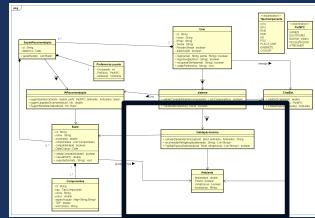
Componentes

- id : String  
- tipo : TipoComponente  
- nome : String  
- preco : double  
- especificação : Map<String, String>  
- TDP : double  
- linkCompra : String

1

1..\*

# Classes



+ BuscarPrecos(componentes : List<Componente>) : void  
+ ValidaGabinete(build : Build) : boolean

Integra

+ ColetaperfilDeUso() : PerfilP  
+ ColetarDadosAmbiente() : A

Usa

## Validação termica

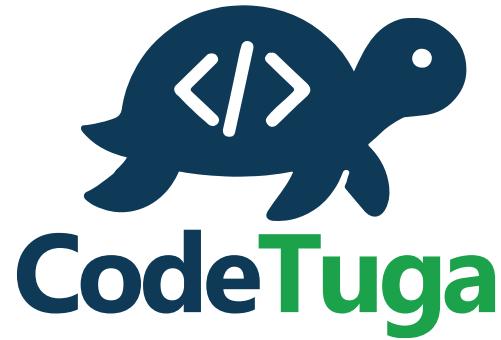
+ calcularDemandadeTermica(build : Build, ambiente : Ambiente) : String  
+ recomendarRefrigeração(demanda : String) : List<String>  
+ ValidarEspaçoGabinete(build : Build, refrigeracao : List<String>) : boolean

## Ambiente

- temperatura : double  
- Poeira : boolean  
- climatizacao : boolean  
- localizacao : String

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Obrigado pela atenção!