

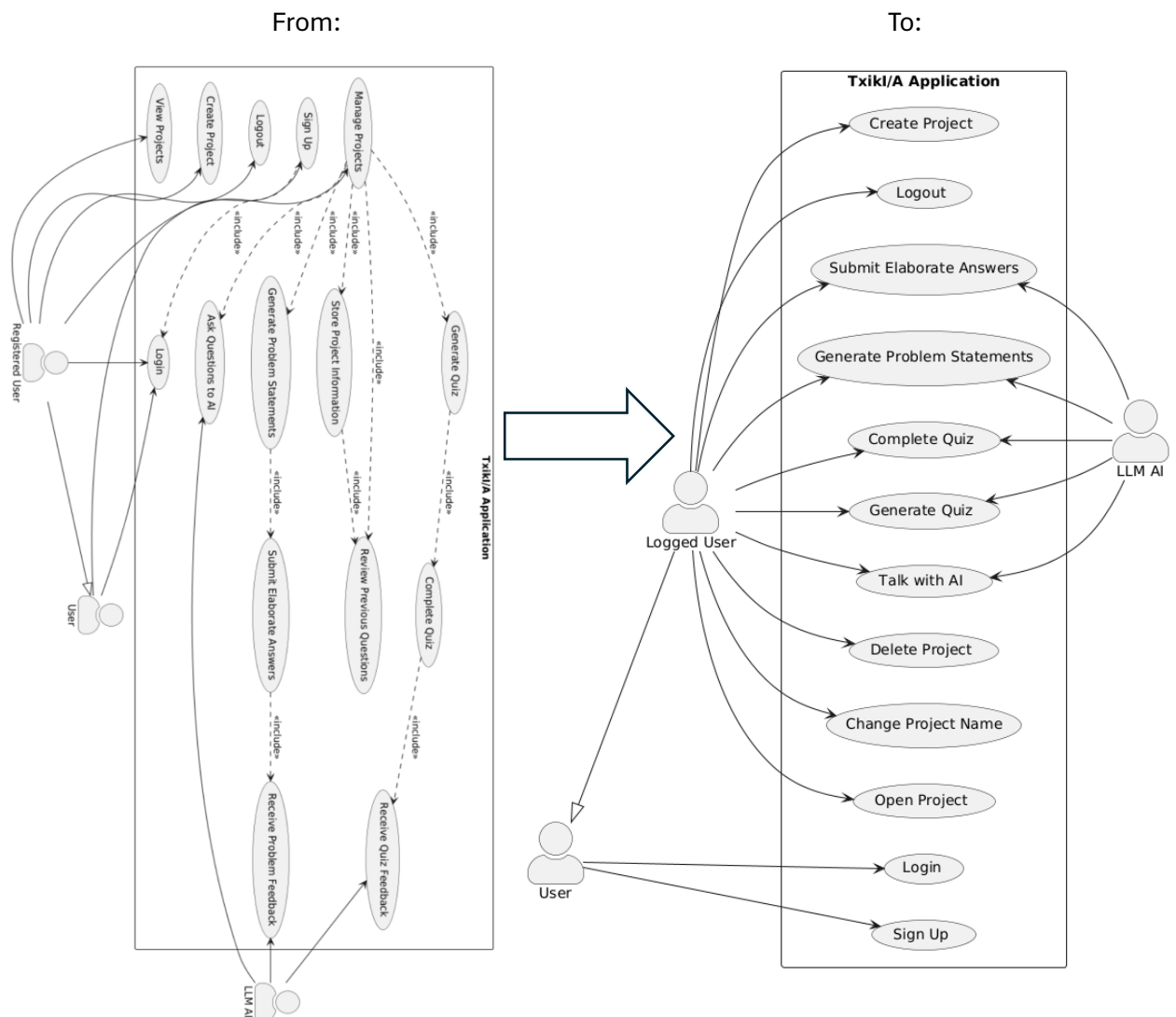
AI tools used to help in documentation

1-LLM used for making the Use Case Diagram: Claude

-The link of the conversation with Claude:

<https://claude.ai/share/ff3bf861-73b6-4244-a8f8-c5d40f0118ee>

-Apart from all the actualization asked to Claude (we have asked it many things as we were making changes also in the planning of the project), we finished the final version by hand.



2-LLM used for making the Domain Model: Claude

-Important parts of the conversation:

MB Create a domain model of an application called Txik/IA with the following requirements:

1. A user that enters the application needs to login on application in order to use it. If they don't have an account to login yet, they should sign up. Each user has a combination of an username and password. Once the user has logged in, they can log out and identify again with the same account or create another one whenever they want.
2. A registered user wants to work in its math projects, which are saved with several information in a projects database.
3. For each project, the user can ask questions related to this project to the LLM AI of our application, so a chat with it is open. The user can review the previous questions they have asked the IA before.
4. Another functionality of the projects is a generator of quizzes, where the application makes a quiz with questions related to the project. Once the user has finished the quiz, it will be evaluated and they will receive some feedback.
5. The last functionality for projects is a question generator, where problem statements related to the project that is being worked on are generated. The user should write an elaborate answer, preferably with clear and concise explanations. The application should evaluate user's answer and give feedback to them, explaining what they did right in their response and what they did wrong, or if they gave a wrong answer (in this case, the application corrects the user's answer and explains what should be the correct solution).
6. The user has the chance of creating a new project, deleting an existing one, modify the name of a project and open one of their previous projects. For this last functionality, the user might want to access any of the project they has worked on whenever they want, so all the information about the projects should be stored. This information includes the questions previously asked to the IA chat, the quizzes done by the user and the problems user has previously been asked by the application. The solutions and feedback given for these quizzes and elaborated questions should also be stored.

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I'll create a domain model for the Txik/IA application based on the requirements you've provided. This will outline the key entities, their attributes, and relationships.

[Txik/IA Domain Model](#)
Haga clic para abrir diagrama

MB Do that domain model in plantuml language

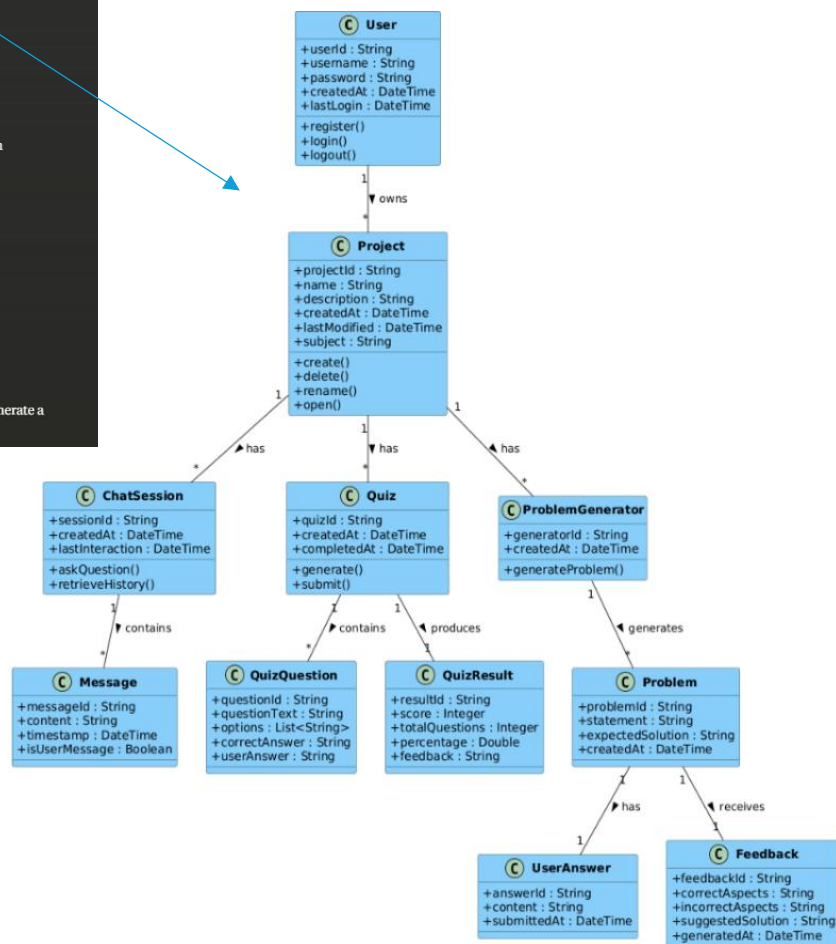
I'll recreate the domain model for Txik/IA using PlantUML notation.

[Txik/IA Domain Model in PlantUML](#)
Haga clic para abrir código

This PlantUML diagram represents the complete domain model for the Txik/IA application. It includes:

1. All the key entities with their attributes and methods:
 - User (authentication and account management)
 - Project (core entity for math projects)
 - ChatSession and Message (for AI interaction)
 - Quiz, QuizQuestion, and QuizResult (for the quiz functionality)
 - ProblemGenerator, Problem, UserAnswer, and Feedback (for the problem generation functionality)
2. All relationships between entities with proper cardinality:
 - One-to-many relationships (1 to *)
 - One-to-one relationships (1 to 1)
3. Direction indicators (>) to show relationship ownership
4. Styling for better readability:
 - Bold class names
 - Light blue background for classes
 - Dark slate gray borders

This PlantUML code can be rendered using any PlantUML-compatible tool to generate a visual class diagram of the Txik/IA application's domain model.



MB Remove all the methods in the classes

I'll revise the PlantUML domain model for Txik/IA, removing all methods from the classes to focus solely on the attributes and relationships.

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Txik/IA Domain Model in PlantUML (Attributes O...

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I've updated the PlantUML domain model to remove all methods from each class. The diagram now focuses exclusively on:

1. Each entity's attributes with their data types
2. The relationships between entities with proper cardinality
3. The direction of those relationships

All the structural elements of the domain model remain intact, providing a clear view of the data structure without the behavioral aspects. This representation is more focused on the data model aspect of the application, which can be useful for database design or when considering the persistence layer.

Reintentar

MB Rename the class "FeedBack" to "ProblemFeedback" and remove the class "ProblemGenerator", making one Project having many problems

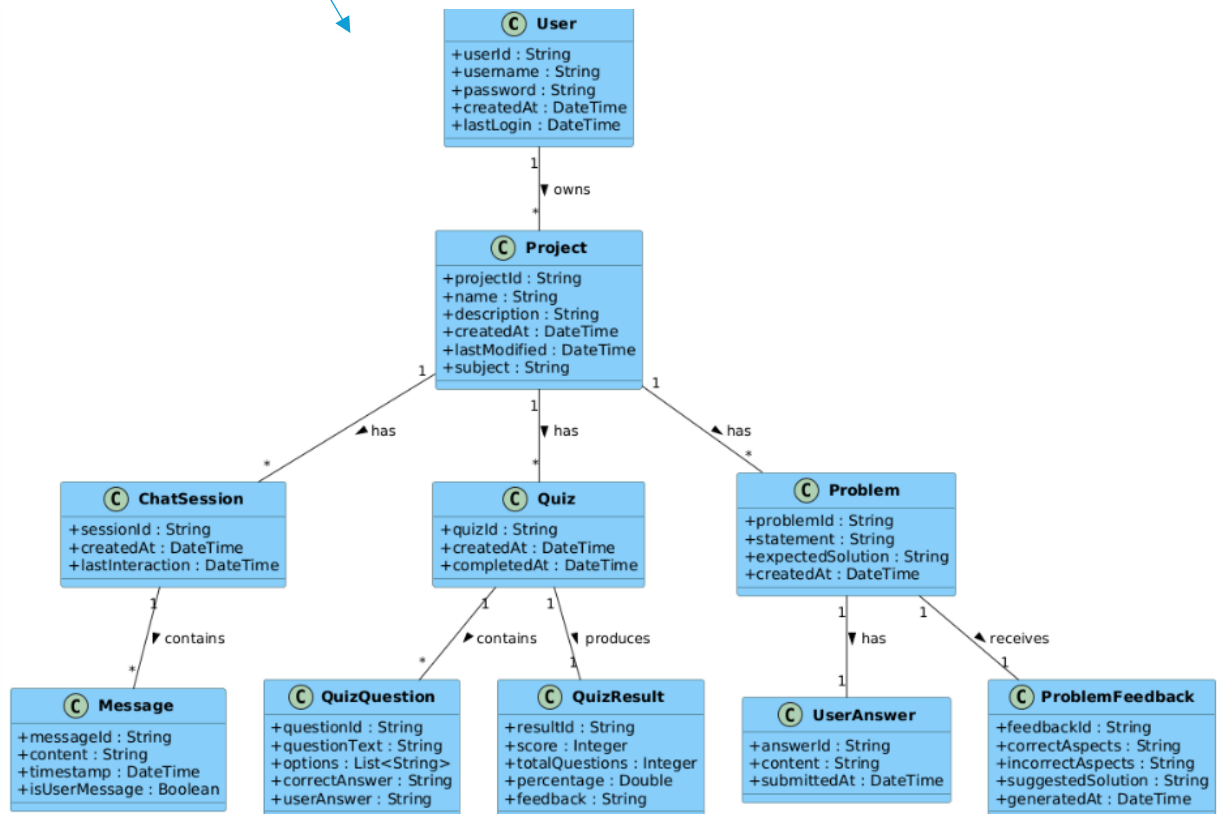
I'll update the PlantUML domain model with the changes you requested: renaming "FeedBack" to "ProblemFeedback" and removing the "ProblemGenerator" class, making Project directly related to Problem.

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Updated Txik/IA Domain Model in PlantUML

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I've made the following changes to the domain model:



-After making some more changes with the help of Claude, we decided that the best model by then was the one above. Following the model from that point, we made some changes by hand. Doing so, we finally got our final solution for the Domain Model of our application:

