

Comparison of AI generated models and Manual design Part 2

Sequence diagrams

I decided to use a tool called Diagramming AI for generating sequence diagrams for our system.

Justification

Diagramming AI has a Free 10 credits for diagram generation, which makes it a very great choice for quick and easy diagram generation. It has multiple templates for diagrams, especially the sequence diagram which will be used. This tool has a relatively easy to understand interface and ability to update diagrams which makes it highly customizable.

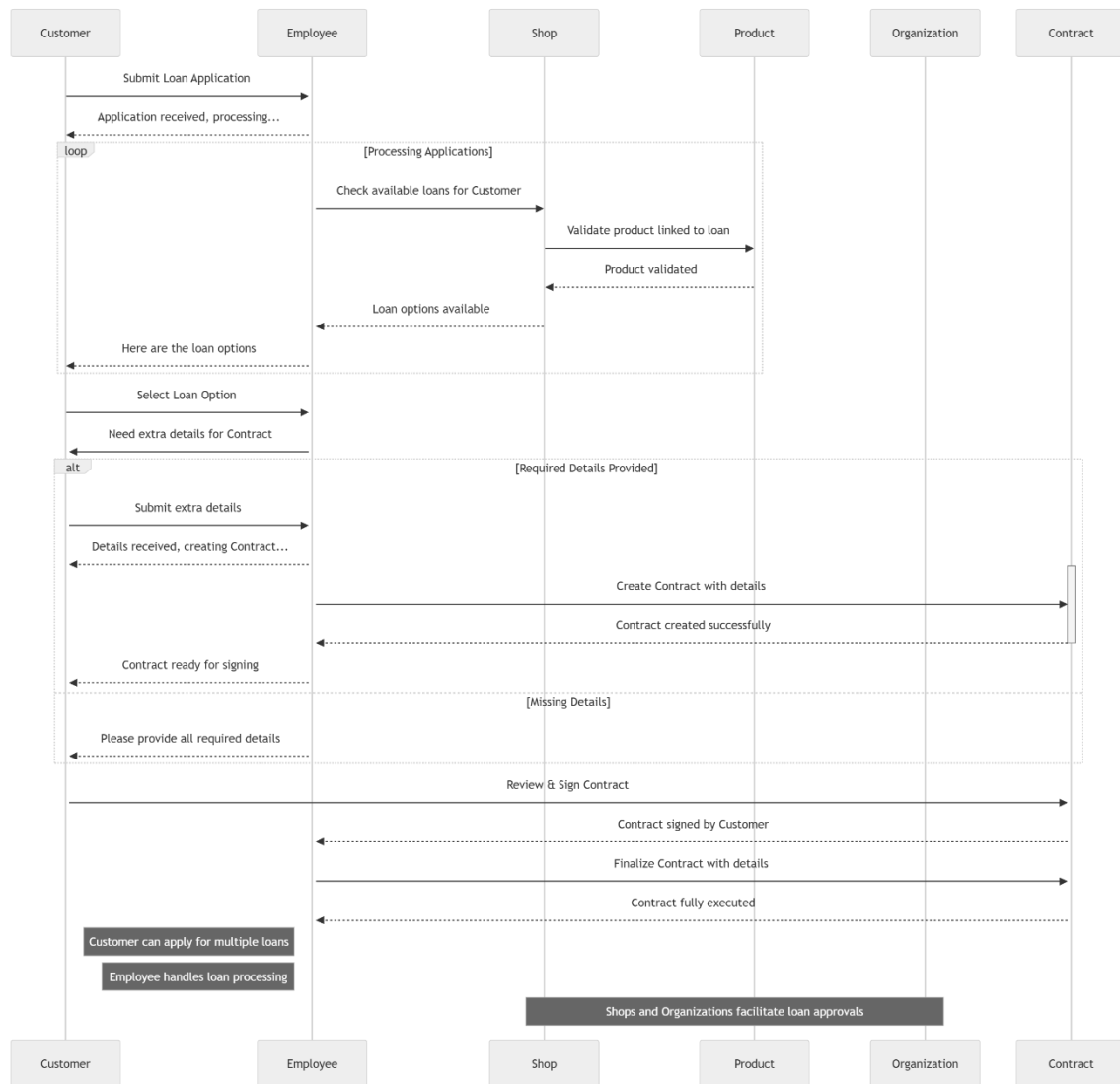
Results and Comparison

Create Loan Application diagram:



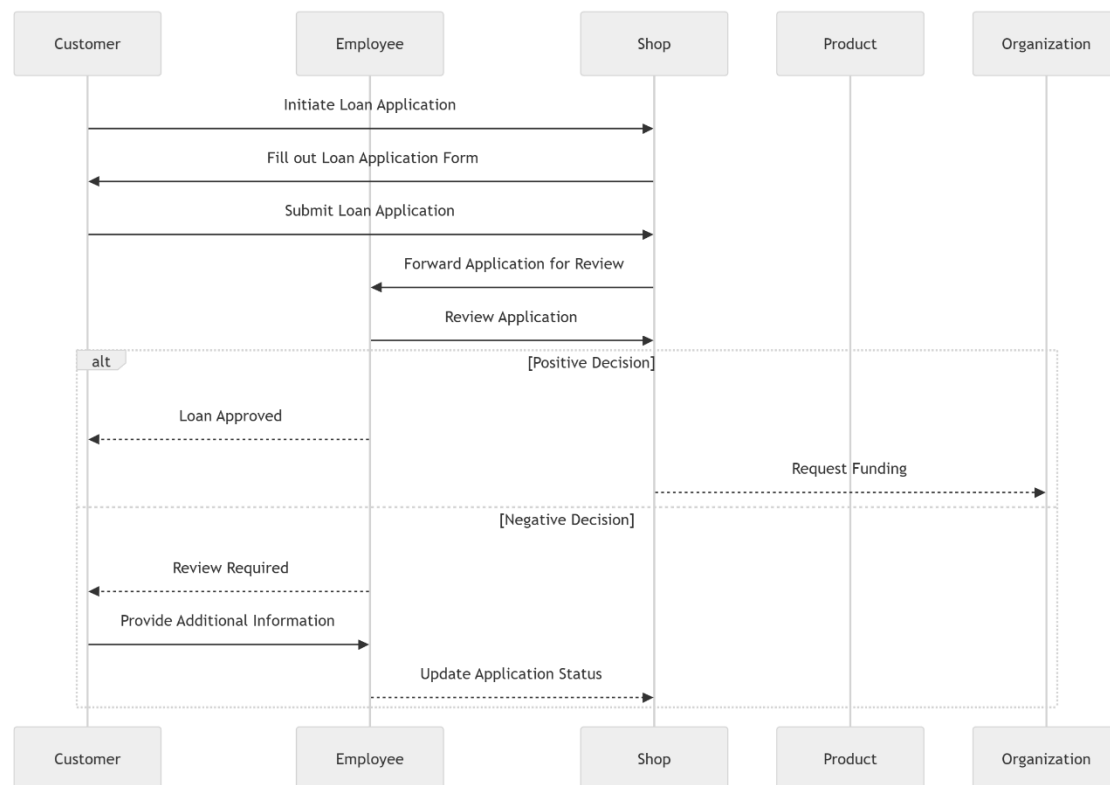
With the given prompt from the description of our system, the tool did manage to generate pretty accurate sequence diagram. The biggest difference from the same sequence diagram made by our team is the presence of more participants in a process. However the checkbox of remove unused participants was checked, it did leave the “Product” in a diagram. Otherwise, the tool did a very good job.

Create Contract diagram:



As for the Create Contract diagram, the tool in my opinion did overcomplicate the design of the diagram, including many details which should be present in other sequence diagrams. The part of checking loan options and validating product for customer should not take place in contract creation. The rest of the diagram is detailed and is very similar to the one made by our team.

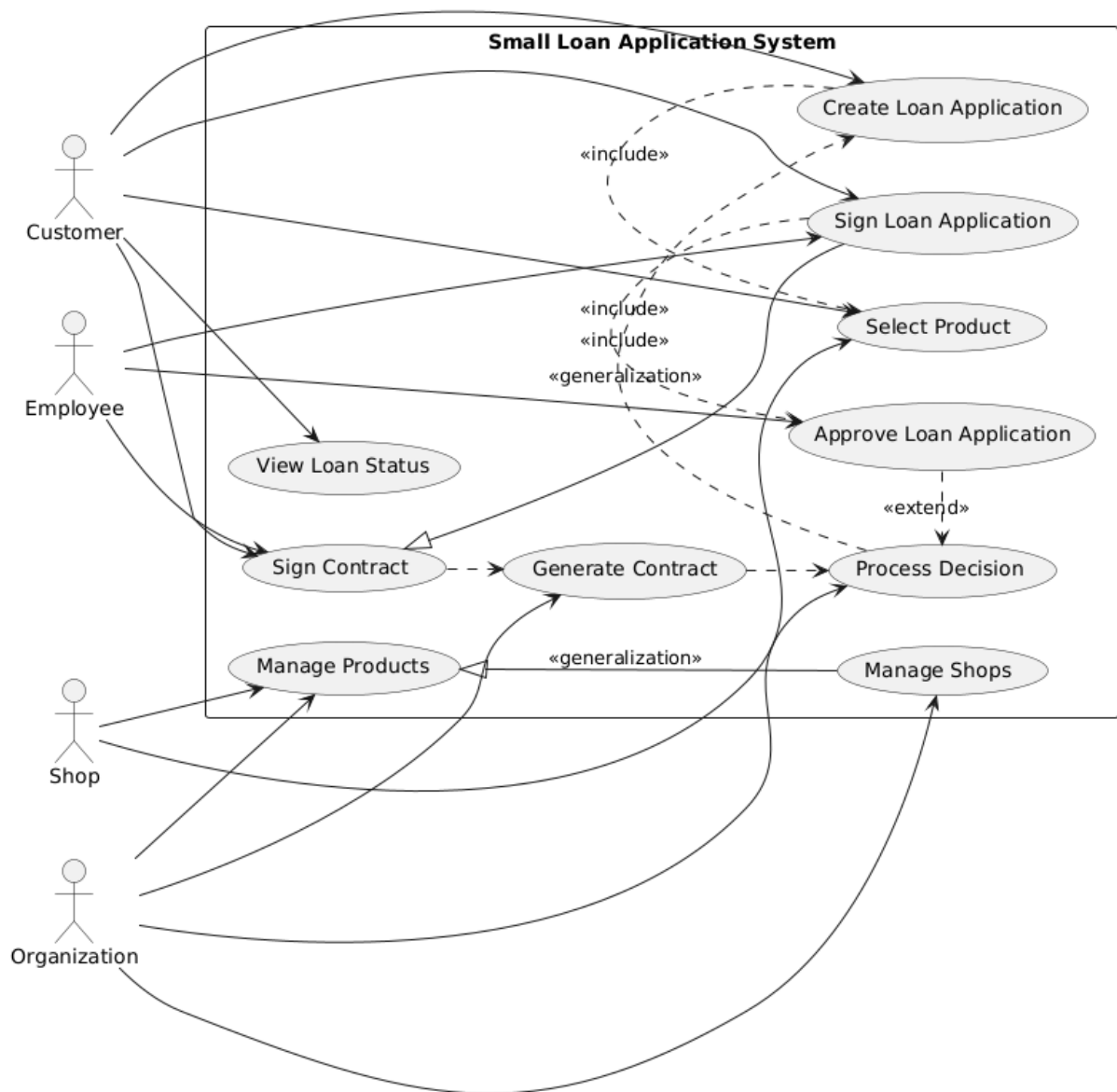
Buy Product Through Loan diagram:



Considering the last sequence diagram of Buy Product Through Loan, Diagramming AI created very accurate diagram. However, the part of automatic loan decision making is missing. Instead of it the review is forwarded to the employee. In case of rejection, the part of manual review by Employee is also missing. The rest of the diagram appears to be accurate.

Use-case diagram

Unfortunately, Diagramming AI is not capable of generating Use-case diagrams. Overall there are almost no free specialized tools on market for AI generating this kind of diagrams. So I decided to use the combination of ChatGPT with plantuml.com for creating this kind of diagram for our system. The result is following:



As it can be seen, the AI generated diagram appear to be cluttered due to overlapping arrows, making it harder to follow specific workflows or understand the roles of individual entities. Overall, it is less readable then the manually created one, which may cause some confusion.

Summary

Overall, Diagramming AI and ChatGPT + Plantuml.com did a very decent job in generating sequence and use-case diagrams. With newly generated sequence diagrams, we were able to upgrade our sequence diagrams and modify a couple of processes there.