Pizza UML:

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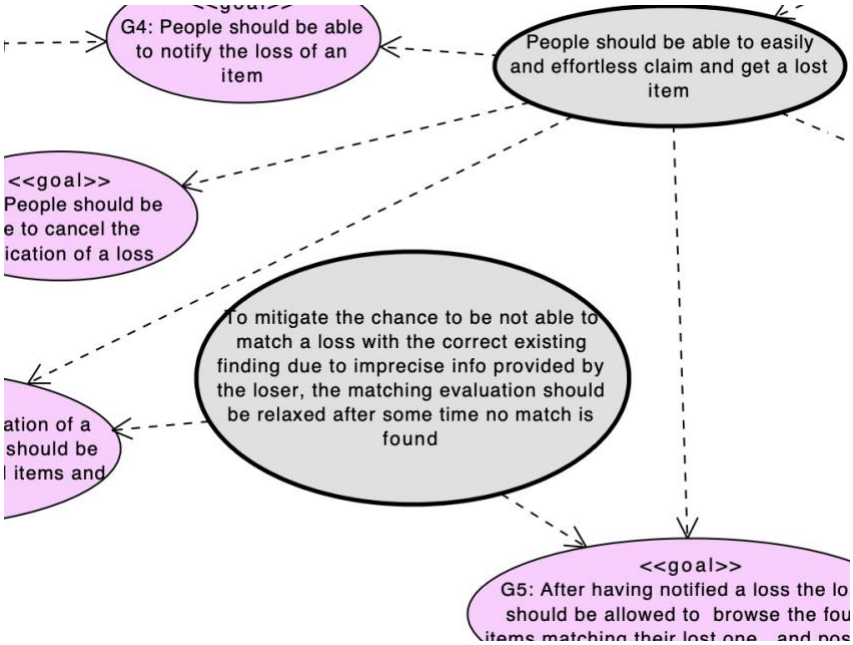
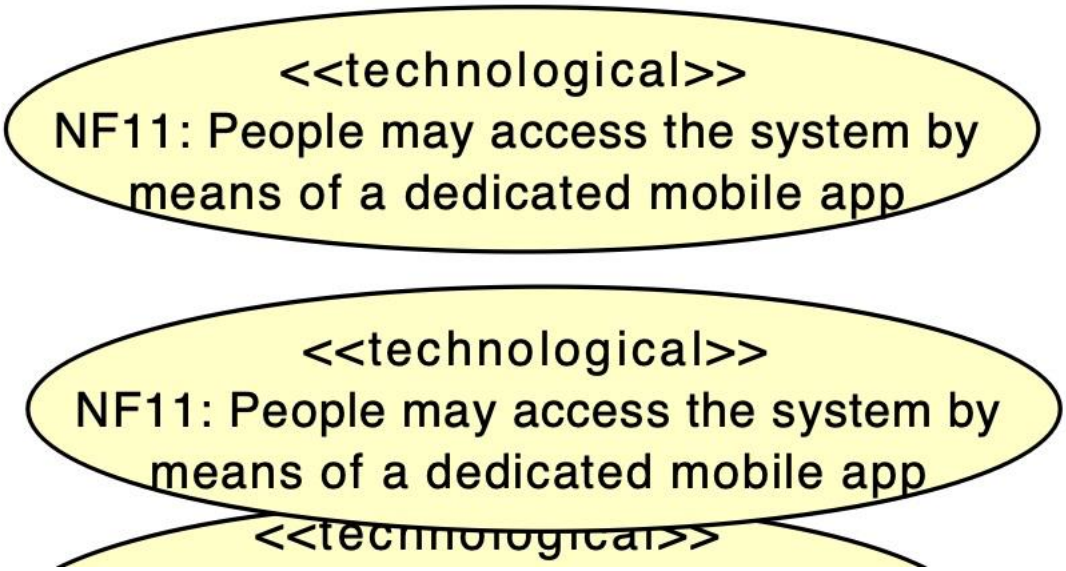
Errors

- It is mandatory for all strategic goals to have dependency on each other because these are the main goals for designing the system and should connect with each others.



- G1 shouldn't be like a sequence diagram because it is too short/easy to find out and instead of diagram, we can just add a note to make it clear foe developers or others who want to collaborate on the project as the same time;
- The G30 requirement should be called G15 instead, there is no reason to be the 30th;
- The G9 requirement has a typo: "…shops may be receive…" instead of "…shops may receive"; NF2 has a typo: "as possible effortless" instead of "as effortless as possible";
- The G10 requirement should be written with a "should" instead of a "may" because it's a MUST;

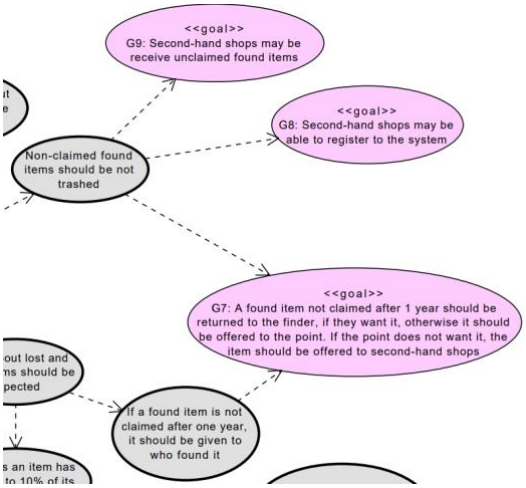
- A copy of NF11 it's actually the NF4 requirement;



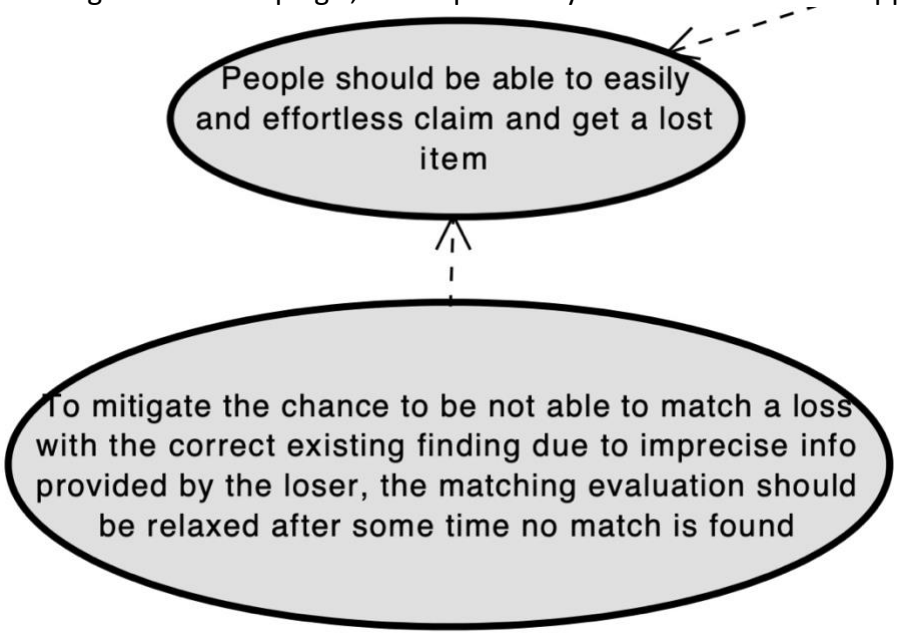
- The G14 should be a MUST, not a COULD, because it's system functionality;

- The G12 requirement should be written without the "may" because it's specified as a MUST, "should" should be written instead;

- The strategic goal ("none claimed found items should be not trashed") should be removed since the item can be trashed if secondhand shop doesn't want it, and the goal "if a found item is not claimed ..." can depend on the G9, G8, G7 operative goals.



- According to the GoReq logic, this dependency arrow should be the opposite hierarchy;

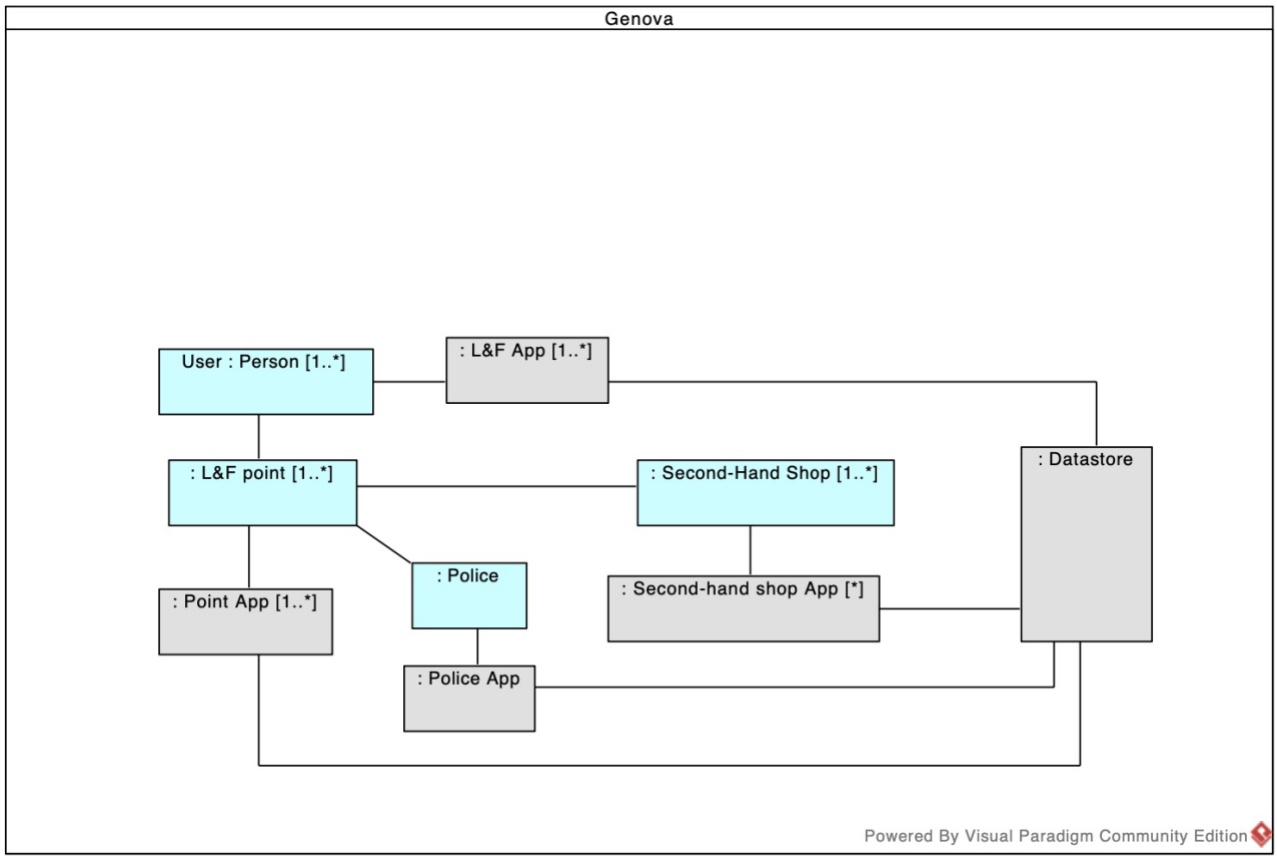


About State Machine Diagram

- A possible improvement could to add a note for developers or others technicians to help show more clearly how this state machine diagram works;
- The names of the states should be in ***camelCase***, without any blank spaces;

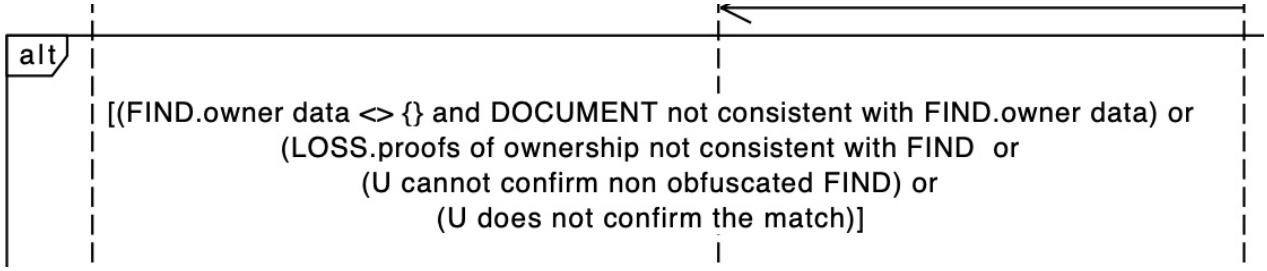
Composite structure diagram

- We could add another part called “Item” in order to better explain our composite structure at first glance;

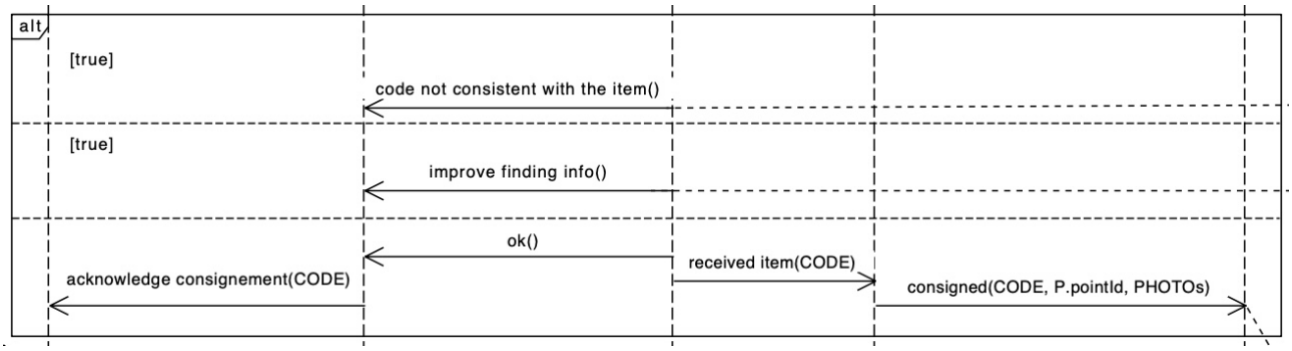


Unclear points

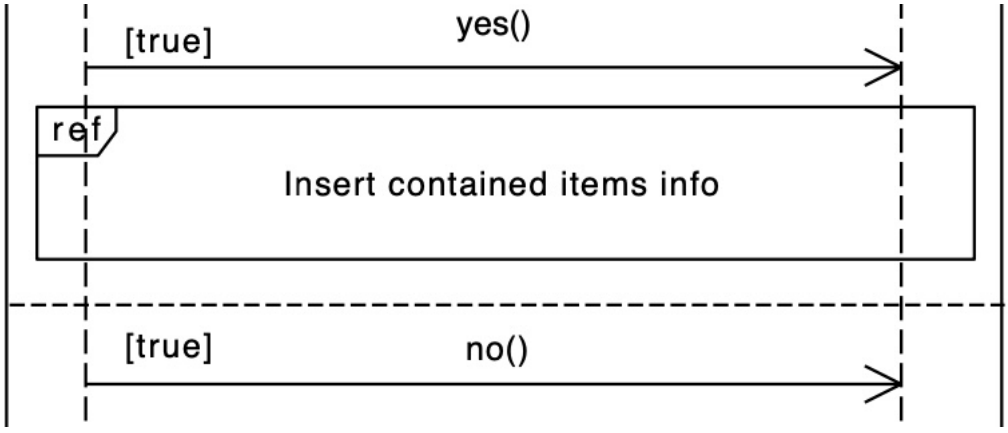
- The sequence diagram about the G30 requirement has a really big “if” condition, it’s too complicated to understand at first glance, so it should be removed or at least split in multiple and smaller conditions



- The sequence diagram about the G2 requirement has an “alt” window with 3 branches instead of 2



- The sequence diagram about the G1, G2, G30, G4, G5 and G7 requirements have two “true” branches, the diagram intensions are doubtful, althought in the G4 case it’s probable that the “false” branch should be the one with the “no()” operation



Suggested Improvements

- Lost&Found should be both in Italian and in English, in order to better accommodate tourists, exchange students, international students and workers, etc.

- Lost&Found could use Machine Learning tools to automatically understand the attributes of an object and making the form filling easier for a user (either loser or founder), in general could be a smart feature for the system accessibility.

- Lost&Found could use Artificial Intelligence in order to fill the form about the object's info quicker, (like IntelliSense or the good old T9, but faster), generally a smart feature to make easier system accessibility.

- We could add a new requirement specifying that a person (either a founder or a loser) should be able to visit a physical L&F point, in order to bring a lost object or to redeem a lost one;

- In reality, second-hand shops are interested in low value items. In this case, we could encourage them by selling items in lower price than usual. This can improve chance of getting items.

- Incorporate NLP to enable the system to understand and respond to natural language queries, enhancing user interactions and communication.

- Use predictive analytics to anticipate user needs, trends, or system performance, providing proactive suggestions or insights.

- Integrate automation features that allow the system to perform tasks autonomously, reducing manual efforts and improving efficiency.

- Implement real-time analytics to process and analyze data as it is generated, providing timely insights and responses.

- Integrate with external APIs and services that offer advanced functionalities, such as language translation, sentiment analysis, or geospatial data.

- If applicable, implement computer vision to enable the system to interpret and analyze visual information, authority digital identity card, opening up possibilities for image recognition, object detection, etc.

- Upgrade networking equipment to support faster data transfer rates, reducing latency and improving overall system responsiveness.

- Integrate physical security measures, such as biometric access controls, surveillance systems, or secure server room configurations, to protect the physical integrity of the system.

- Design the system architecture to be scalable, allowing it to handle increased loads by adding more hardware resources seamlessly.

- Utilize behavioral analysis to understand user patterns, preferences, and habits, enabling the system to offer more tailored and personalized experiences. It could help up make our system better and better over the time.

Extensions/Completions

- Lost&Found should have an web app, in order to notify a lost or found object or to redeem an object without necessarily install a local mobile application;