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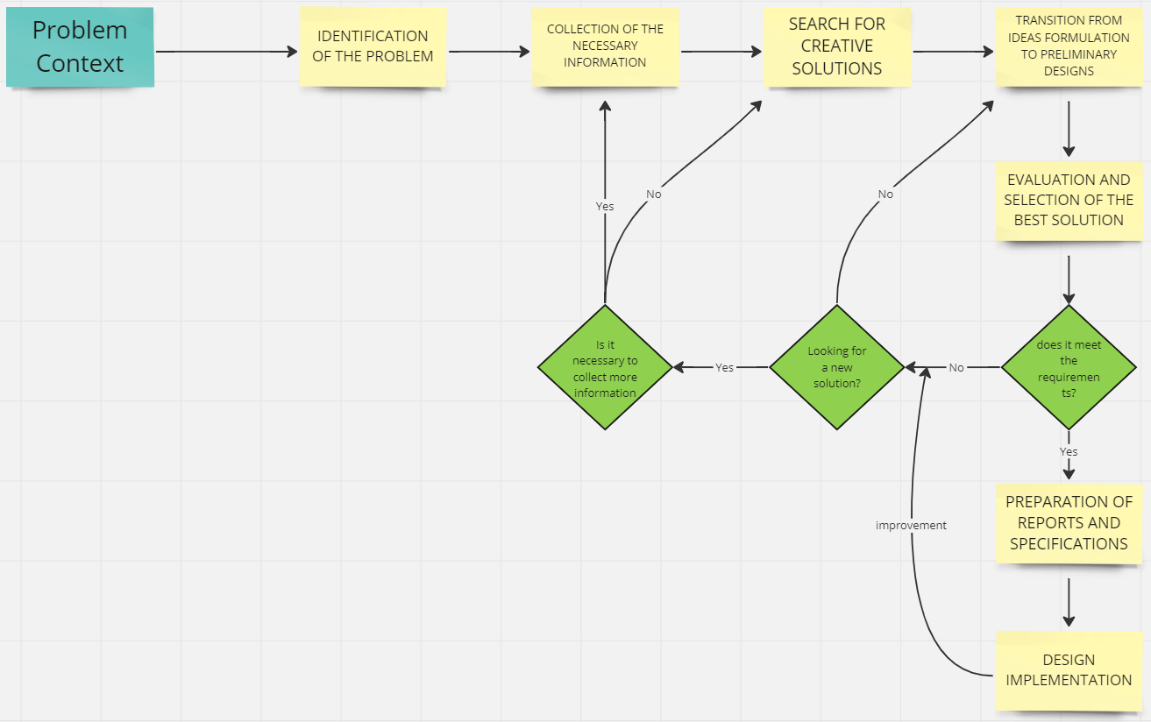
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**ENGINEERING METHOD**

Problem context

A recognized airline wants to create a first version of a system whose main objective is to improve the order in the airplane boarding and exiting process, display passenger information, and register their arrival.

Solution Development



PART 1: IDENTIFICATION OF THE PROBLEM

**Functional requirements:**

**R1**. Passenger upload to the system:

**R1.1** The system must allow the upload of passenger information corresponding to a flight through a user-generated plain text file.

**R1.2** The database must be simulated in this first version of the system.

**R2.** Passenger check-in at the boarding lounge:

**R2.1** The system should allow an efficient search of passenger information once they arrive at the boarding lounge.

**R2.2** The system must allow the registration of passengers' arrival at the boarding lounge to keep track of the order of arrival.

**R3.** Order of entry to the aircraft:

**R3.1** The system must show the crew member in charge in which order passengers should enter the aircraft.

**R3.2** The system must take into account the order of arrival of the passengers, taking into account the sections of the aircraft and starting from the furthest from the entrance door to the one closest to it.

**R3.3** For the first class, the system must take into account other data such as accumulated miles, special attention required, and third age, among others, to establish the order of entry.

**R4.** Order of departure from the aircraft:

**R4.1** The system must show, the crew member in charge, in which order the passengers must leave the aircraft.

**R4.2** The exit order must take into account the aircraft configuration, where those who exit first are those in the first rows, and for each row, the order is established by proximity to the aisle or order of arrival as the last instance.

**Identification of needs and symptoms:**

* The crew in charge needs to know the order in which passengers must enter and exit the aircraft.
* The order in which passengers enter and exit the aircraft depends on different factors.
* The solution to the problem must be efficient because the amount of data will be significantly too large in future versions.

**Problem Definition:**

The airline requires a system that shows the order in which passengers must enter and exit the aircraft and display passenger information.