TD 3 : Development in UML

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Reminder :

With UML, it is the users who guide the definition of models :

- The perimeter of the system to be modeled is defined by the needs users (users define what the system).
- The goal of the system to be modeled is to meet the needs of its users (users are the clients of the system).

User needs also serve as a common thread throughout of the development cycle (iterative and incremental) :

- At each iteration of the analysis step, we clarify, refine and validates user needs.
- At each iteration of the design and production stage, we ensure that user needs are taken into account.

The aim of this tutorial is to simulate the iterations of the needs analysis the design of an application. For this reason the questions are less detailed than usual. You will have to read between the lines !

Exercice I : Practical case : DataBird

An ornithological association entrusts you with the creation of the system software for collecting and managing observations made by its members (the DataBirds software). The objective is to centralize all observation data arriving through different channels to the within the same database, which will then make it possible to establish presence maps of the different species on the territory managed by the association. The data to be entered for each observation are the following :

- Name of the species concerned.
- Location of observation.
- Date of observation.
- Name of each observer.

There are around three hundred possible species on the territory in question. If the observation concerns several species, provide information several observations.

Regardless of how the data is collected, it are entered into the database in a state called “to be validated”. As long as the data is not validated by the employees of the association, Changes can be made to the data. Validation of data is done only by employees of the association who have the right to modify the DataBirds database. They must check that the data entered is consistent. More precisely, they must validate the names of the observers (the names must correspond to names of members) and the species (this must correspond to a species known in the territory).

After validation, an entry is either in the so-called “validated” state ", or in the so-called "unvalidated" state. Entries in the “no” state validated” are automatically purged from the database once a week. Thanks to the data entered and validated, the association wishes to be able to establish different types of presence maps for different species :

— Geographic maps by species presenting a historical accumulation populations. This treatment can be requested by a member.
— Maps of observations made by each observer. This processing can only be requested by an employee. These cards presence of birds are generated by DataBirds and accessible either via the web or by request via email or postal.

Q1 – Carry out the **Needs analysis** for this application.

Q2 – Carry out the analysis of **Need-Behavior**

Q3 – Proceed with the design of the application (just a draft)

Q4 – Repeat some use cases, this time including the different stages of validation