CmpE321 - Project 3

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1 Project Description

In this project, you are supposed to implement a shelter management platform with a web-based user interface. There is only one user type in the platform:

- **Shelter Managers:** These users can log in to the platform. They are responsible for management of caretakers, animals in the shelter and sponsors of these animals.

There will be shelter managers, caretakers, animals and sponsors in the system. The properties of these entities are as follows:

- **Shelter Managers:** Username and password.
- **Caretakers:** Name, surname and animals that he/she is responsible for.
- **Animals:** Name, age, species, caretaker and sponsor. An animal must have only one caretaker while an animal might have a sponsor or not.
- **Sponsors:** Name, surname, phone, animals that he/she sponsors.

2 Requirements

- Shelter managers shall be able to log in to the system with their credentials.
- Shelter managers shall be able to add/update/delete new shelter managers, caretakers, animals and sponsors.
- Shelter managers shall be able to view all shelter managers, caretakers, animals and sponsors in the system separately.
- Shelter managers shall be able to view animals that a caretaker is responsible for.
- Shelter managers shall be able to view animals of a sponsor.
- Shelter managers shall be able to view animals of a specific species in the shelter.
- Shelter managers shall be able to view all animals which do not have a sponsor.
- Shelter managers shall be able to rank caretakers by the number of animals they have.

- Shelter managers shall be able to view animals of a specific species. This must be implemented as a **stored procedure**. Parameter of this procedure is species.
- The system shall have two **triggers**:
  1. When an animal is added, it must be assigned to the caretaker with the least animals.
  2. When an animal having a sponsor is deleted, its sponsor must be assigned to the oldest animal with no sponsor.

3 Notes

- The quality of web interface does not matter. So, you don't need to style it. The functionality of the system will be evaluated.
- The allowed languages are PHP, Java, JavaScript and Python. You can use a framework, however you must write the SQL queries and boot the database server yourself. You are not allowed to use any tool that helps for these parts.
- There is no restriction for database choice, you can use any relational databases.

4 Report & Grading

Submissions will be through Moodle. The submission must include your code and ER diagram(s) describing your system. Your diagram(s) should follow the conventions described in course material. Otherwise, you should explain clearly what shape corresponds to which concept. The system will be evaluated during a demo session that will be arranged. Demo day(s) will be announced.