**Executive Report: Cattle Automation System**

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This project aims to develop a web-based system for livestock management at "Menesiano Culipran" school. The system encompasses the management of bovine, ovine, porcine animals, and poultry flocks, report generation, and user role differentiation. Agile methodologies have been followed through sprints, with a clear focus on the system's adaptability, scalability, and usability.

Development by SprintsSprint 1:

● Requirements Gathering: The school's needs regarding animal management, report handling, and user role differentiation were identified. Meetings were held with the client to define the system's objectives and scope.

● Case Analysis: A detailed analysis was conducted, including a study of the operational environment, the nature of the school, and its specific needs. The best technologies and methodologies were evaluated to ensure system efficiency and functionality.

● Epics and User Stories: Epics and user stories helped to define the required functionalities in detail. User stories were created for each type of user:

o Administrator: Global system management, reporting, and user administration.

o Student: Access to specific information and educational resources.

o Teacher: Creation and management of exams and educational modules.

● Kick-off: The project officially started after defining the work roadmap, with the participation of all stakeholders. Key dates were set, and responsibilities were assigned to each team member.

● Mockup: Visual prototypes were created to represent the system's user interface, with a focus on usability and experience on mobile and desktop devices.

● Flowchart: The flowchart details the system's internal processes, from user authentication to report generation. This allowed the team to visualize and optimize each process step.

● Mind Map: A visual scheme of the system's key functionalities and modules was created, providing a clear view of the connections between different components.

● 4+1 Model: The 4+1 model was used to represent the system architecture, covering logical, development, process, and physical views, along with use cases.

Sprint 2:  
● Database Creation: Design and creation of a structured database to manage animal and user information.  
● User Authentication: A user authentication system was developed with differentiated roles (administrator, teacher, student).  
● Integration of Composer and APIs: Modern tools were used for dependency management and integration with external APIs.  
● Bovine, Ovine, and Porcine Management Module: Modules were implemented to register, edit, and view information related to these animals.  
● Animal Lot Management Module: Management of poultry and other animals by lots, allowing efficient production control.

Sprint 3:

● Various Animals Module: Expansion of the system to cover the management of other types of animals.

● Report Generation: Functionality to generate reports in CSV and Excel formats, with customizable options based on the type of animal.

● User Differentiation: Separation of roles was implemented to ensure appropriate access to functionalities according to each user's profile.

● Production Management Module: Control and monitoring of production associated with each lot or animal.

● Data Visualization: Charts and tables were added to display real-time statistical data.

● Project Delivery and Closure: Preparation for the final delivery of the system with all modules implemented.

● Trial Run: A testing phase was conducted to evaluate the system's performance in a controlled production environment.

● Closure Document: A final report was written, including results and recommendations for future system maintenance and evolution.

The system for the "Menesiano Culipran" school covers all the needs identified during the requirements gathering phase and is expected to significantly streamline livestock management and report generation in the educational environment. Special emphasis has been placed on scalability, allowing for future expansions and updates according to the school's needs.