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**APT Project Definition**

1. **PART I**

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| **1. Personal Background** |
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| Student's Name | **Brandon Caroca Morales** |
| Rut | **21.314.368-9** |
| Degree | **Ingeniería informática** |
| Campus | **Melipilla** |

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| Student's Name | **Carlos Gabriel Berrios** |
| Rut | **21.235.730-8** |
| Degree | **Ingeniería informática** |
| Campus | **Melipilla** |

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| Student's Name | **Guillermo Maldonado Espinoza** |
| Rut | **21.307.963-8** |
| Degree | **Ingeniería informática** |
| Campus | **Melipilla** |

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| **2. APT Project Description** |

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| Project Name | *Livestock Automation System* |
| Areas of Performance | *Web Development, Database Management, Data Analysis.* |
| Skills | *Software Development, Data Modeling, Database Programming.*  *Principio del formulario*  *Final del formulario* |

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| **3. Justification of the APT Project** |

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| Relevance of the APT Project | *The goal is to automate the livestock management at the 'Menesiano Culipran' school from a traditional to a digital system, optimizing time and visualizing the data of the animals they have. This is important because it allows us to apply the knowledge gained throughout the course of our studies, delivering a real solution through software development and database application. This project is located at the Menesiano Culipran agricultural school, impacting the students and teachers involved.*  *The topic was chosen because it addresses the interests and strengths of the team members and meets a need faced by the school. It is situated in the Metropolitan Region, in the city of Melipilla, at the Menesiano Culipran school. It provides significant value in terms of obtaining information about the animals, saving time, and ensuring data security."* |
| Description of the APT Project | *Custom Online Agricultural Management System for the operational needs of Menesiano Culipran School* |
| Relevance of the Project to the Graduate Profile | *The project is relevant to the graduate profile as it addresses the need to design and implement an efficient IT solution for managing agricultural and livestock data. This process involves selecting and applying appropriate technologies using agile development methodologies to solve the problems faced by the school, fulfilling the main objectives of the profile.*  *The competencies are essential for addressing the issue, as designing IT solutions is key to creating a robust and efficient system. Developing a system that allows for the management of animal data helps collaborate effectively with the teachers in charge of the school's livestock area, ensuring that the IT solution meets their specific needs. Additionally, it allows for the construction of a system according to a defined and scalable design over time.* |
| Relation to Professional Interests | *My professional interest focuses on the development and management of comprehensive IT solutions, ranging from database administration to the implementation of systems that optimize business processes. In this context, the APT Project to create a website for animal management at an agricultural school aligns perfectly with my interests.*  *This project will allow me to apply my knowledge in environment management, software development, and data modeling. Developing this solution not only reflects my ability to create and manage complex systems but will also contribute to my professional growth by challenging me to integrate advanced development and security techniques in a real-world setting. Furthermore, the experience gained from this project will be valuable for managing future projects and providing effective IT solutions tailored to the specific needs of organizations* |
| Feasibility of Developing the APT Project | *Given the duration of the semester, considering the 4 hours per day dedicated to the project and the access to a domain and hosting for the project, our main challenge would be managing client interactions within the agreed timelines for the course. Considering the above, the project is entirely feasible.* |

1. **PART II**

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| **4. Objetives** |
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| General Objectives | *Creation of a livestock management system and report generation.* |
| Specific objectives | *Digitalization of the livestock registration system.*  *Creation of a web-based livestock registration system.*  *Creation of a report generation system.* |

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| **5. Description of the Methodology** |
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| Description of the Methodology |
| *The project will be developed using the Scrum methodology to benefit from its agility and flexibility, along with regular feedback. This will facilitate the creation of customized software for the client, which will adapt to their working methods rather than the other way around.*  *Roles:*  *Product Owner: Guillermo Maldonado*  *Scrum Master: Carlos Berrios*  *Team Member: Brandon Caroca* |

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| **6. Evidence** |
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| Type of Evidence | Name of Evidence | Description | Justification |
| Progress | Livestock Module | Various functions related to livestock registration, including cattle, pigs, and sheep. |  |
| Progress | Batch Module | Management functionalities for animal batches, primarily chickens. |  |
| Progress | Reporting Module | Report generation system for livestock and poultry. |  |
| Progress | Production Management Modules | Features for recording farm productivity. |  |
| Final | Final Delivery | Project closure document. |  |

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| **7. Work Plan** |
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| **Work Plan for Project APT** | | | | | | |
| Competency or Competency Units | Activity/Task Name | Activity/Task Description | Resources | Activity Duration | Responsible | Observations |
| Data Model Creation | Database Creation | Digitalization of the client’s current data management. | Hosting with MySQL support | 2 weeks | Carlos Berrios | *The client provided documentation currently used, which can be adapted to a database* |
| Web Programming, Database Queries | User Authentication | Creation of the login for the website. | - | 1 week | Guillermo Maldonado |  |
| API Usage | Composer and API Integration | Installation of Composer in the project and API integration. | Hosting where the project is hosted | 1 week | Guillermo Maldonado |  |
| Web Programming, Database Queries | Bovine Management Module | System for registering bovine animals. | Hosting where the project is hosted | 1 week | Carlos Berrios |  |
| Web Programming, Database Queries | Ovine Management Module | System for registering ovine animals. | Hosting where the project is hosted | 1 week | Brandon Caroca |  |
| Web Programming, Database Queries | Porcine Management Module | System for registering porcine animals. | Hosting where the project is hosted | 1 week | Carlos Berrios |  |
| Web Programming, Database Queries | Batch Management Module | System for registering batches of small animals (mainly chickens). | Hosting where the project is hosted | 1 week | Guillermo Maldonado |  |
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| **8. Gantt Chart** |
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| Activity | **Fase 1** | | | | **Fase 2** | | | | | | | | | | | | **Fase 3** | | | |
| **S 1** | **S 2** | **S 3** | **S 4** | **S 5** | **S 6** | **S 7** | **S 8** | **S 9** | **S 10** | **S 11** | **S 12** | **S 13** | **S 14** | **S 15** | **S 16** | | **S 17** | **S 18** |
| Requirements Gathering |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Case Analysis |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Kick-off |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| User Stories |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4+1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sprint 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Database Creation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| User Authentication |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Composer and API Integration |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bovine Management Module |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ovine Management Module |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Porcine Management Module |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Batch Management Module |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sprint 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Various Animals Module |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Report Generation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| User Differentiation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Production Management Module |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Data Visualization |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Project Delivery and Closure |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pilot Run (Marcha Blanca) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Closure Document |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |