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**Guía1. Definición Proyecto APT**

**Asignatura Capstone**

1. **PART I**

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| **1. Personal Background** |
| A continuación, se presenta una tabla en la que debes completar la información solicitada. |

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| Students | **Jazmin Andrea Duarte Soto & Jaime Enrique Oróstegui Castro** |
| Rut | **20.966.340-6, 21.506.442-5** |
| Career | **Computer Engineering** |
| Campus | **Maipú** |

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| **2. Project Description** |
| En la descripción debes señalar brevemente el nombre de tu proyecto APT y las competencias del perfil de egreso que vas a poner en práctica. Si en tu carrera están definidas las áreas de desempeño, también menciona a qué áreas de desempeño está vinculado el proyecto. |

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| Nombre del proyecto | **Design and Implementation of a Web Application for Managing and Evaluating Staff Performance in the Logistics Area** |
| Performance Areas | Software development, IT project management, data modeling, business intelligence. |
| Competencies | 1. Software programming. 2. Data modeling. 3. Analysis and planning of IT requirements. 4. IT project management. 5. Report generation using BI tools. |

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| **3. Project Justification APT** |
| A continuación, se presentan distintos campos que debes completar con la información solicitada. Esta sección busca que describas en detalle tu proyecto y justifiques su relevancia y pertinencia. |

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| Relevance APT | This project seeks to address the lack of digital tools in the logistics sector to measure staff productivity and performance. Many companies do not have a clear monitoring system, generating inefficiencies. The project is relevant because it enables data-driven decision-making, optimizes warehouse processes, and improves task allocation. It directly impacts supervisors and logistics staff, providing real value to the IT field applied to business processes |
| Description APT | Our project consists of a web application that will allow registering employees, assigning and monitoring tasks in real time, measuring productivity indicators, and generating daily, weekly, and monthly reports. It will also include interactive dashboards with KPIs for managers and supervisors. |
| Pertinence with Graduate Profile | The project is directly related to the competencies of the Informatics Engineering graduate profile. I will apply programming, data modeling, project management, software testing, and data visualization. These skills are necessary to solve the problem, as they allow for the development of a complete and scalable solution. |
| Relation to Professional Interests | This project reflects my interests as a full-stack web developer. I am particularly interested in working on systems that integrate backend, frontend, and databases, which this project requires. In addition, I have taught courses in these areas, which reinforces my motivation. Carrying out this project contributes to my professional development by giving me experience in applying good programming and management practices in a realistic project. |
| Feasibility | 1. Semester Duration: The project is planned to last approximately 10 weeks and can be completed within the semester. 2. Assigned Hours: The hours of the subject allow constant progress, complemented by personal work. 3. Materials: Only a computer, internet, and free web development tools (Django, React, PostgreSQL, GitHub). 4. Facilitating Factors: My previous knowledge, agile methodology (Kanban), and teamwork. 5. Challenges: Module integration, academic workload, and a full-time internship Monday through Friday, which will be mitigated using Kanban organization and weekly validations. |

1. **PART II**

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| **4. Objetives** |
| En este apartado debes definir objetivos generales y específicos del Proyecto APT. Es importante aclarar que los objetivos se deben plantear en forma clara, concisa y sin dar mayores explicaciones, es decir, deben entenderse por sí solos. Se sugiere redactarlos utilizando un verbo en infinitivo, pues ello obliga a precisar acciones concretas. |

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| General Objective | Design and implement a web application for managing and evaluating staff performance in the logistics area, allowing productivity measurement and reliable reporting for decision-making. |
| Specific Objectives | 1. Register employees and assign tasks in the system. 2. Implement dashboards with key productivity indicators. 3. Generate automatic weekly and monthly reports. 4. Evaluate the impact of the system on operational efficiency. |

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| **5. Methodology** |
| En el siguiente apartado deberás describir la metodología, propia de tu disciplina, que utilizarás para resolver el proyecto APT antes descrito, incluyendo las etapas y métodos de trabajo. |

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| Descripción de la Metodología |
| The project will be developed using the agile methodology Kanban.  Work will be organized through a visual board showing tasks in columns (to-do, in progress, in review, completed).  Tasks will be managed continuously, according to team capacity and defined priority.  **The tasks are divided as follows:**   * Jaime Oróstegui: backend development, database design, and technical testing. * Jazmín Duarte: frontend development, interface design, and report validation. * Both: attend weekly coordination meetings and integrate all modules together. |

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| **6. Evidence** |
| A continuación, describe qué evidencias serán evaluadas en el informe de avance y en el informe final de tu proyecto APT. Estas evidencias deben ser acordadas con tu docente. Se entenderá por evidencia los productos que se desarrollen durante el proyecto y cuyo propósito sea visibilizar o documentar cómo se ha implementado el trabajo. |

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| **Type** | **Name** | **Description** | **Justification** |
| **Progress** | **User Stories** | Document detailing the main system functions from the user perspective. | Validates requirements and ensures the system meets real needs. |
| **Progress** | **Relational data model, class diagram, architecture diagram (C4)** | Set of diagrams representing requirements, DB structure, classes logic, and client-server architecture. | Provides a clear and organized vision of the system’s technical design. |
| **Progress** | **Interface Prototypes (mockups)** | Initial login, dashboard, and task management screens. | Allows validation of usability and design before implementation. |
| **Progress** | **Source Code** | Web development in backend and frontend frameworks integrated with DB. | Concrete technical evidence of programming progress. |
| **Progress** | **Functional Tests** | Validation of main functions (login, task assignment, reports). | Ensures software quality and that defined goals are met. |
| **Final** | **Dashboards and Exportable Reports** | Control panel with KPIs and PDF/Excel reports. | Final evidence of the system’s practical value for decision-making. |
| **Final** | **Schedule (Gantt + Kanban)** | Project planning in weeks, divided into phases. | Shows project management and compliance with agile methodology. |

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| **7. Plan de Trabajo** |
| En la siguiente tabla define la planificación de tu Proyecto APT de acuerdo a lo requerido. |

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| **Work Plan** | | | | | | |
| |  | | --- | | **Competency** |  |  | | --- | |  | | |  | | --- | | **Activity** |  |  | | --- | |  | | |  | | --- | | **Description** |  |  | | --- | |  | | |  | | --- | | **Resources** |  |  | | --- | |  | | |  | | --- | | **Duration** |  |  | | --- | |  | | Responsible | Observations |
| Requirements Analysis | User Stories | Gather and document requirements as user stories. | PC, Internet, Google Docs | 2 weeks | Jazmin Duarte y Jaime Oróstegui | **Facilitator: prior knowledge. Challenge: time coordination due to workload.** |
| Systems Design | Diagrams (C4, classes, DB) | Create C4 diagrams and relational DB model. | Draw.io, Lucidchart, PostgreSQL | 2 weeks | Ambos | **Facilitator: free online tools. Challenge: consistency across diagrams.** |
| Software Programming | Backend Development | Implement business logic and DB connection. | Django/Node.js, PostgreSQL | 2 weeks | Jaime Oróstegui | **Facilitator: prior backend experience. Challenge: integration with frontend.** |
| Software Programming | Frontend Development | Implement screens and views with backend integration. | React | 2 weeks | Jazmin Duarte | **Facilitator: prior React experience. Challenge: library compatibility.** |
| Software Quality | Functional Tests | Run tests for login, tasks, and reports. | Manual & automated testing (Selenium, Cucumber) | 1 week | Both | **Facilitator: access to test datasets. Challenge: limited time for scenarios.** |
| Business Intelligence | Dashboards and Reports | Implement KPI dashboards and export reports to PDF/Excel. | React + Chart.js, PostgreSQL | 1 week | Both | **Facilitator: available libraries. Challenge: performance with large datasets.** |
| IT Project Management | Final Presentation | Integrate results and present the project. | PowerPoint, Gamma.app, PC, Video | 1 week | Both | Facilitator: presentation experience. Challenge: coordinating schedules. |

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| **8. Gantt Chart** |
| Busca un formato de Carta Gantt que te acomode y organiza en este las actividades planificadas en el punto anterior considerando el periodo asignado para el desarrollo de tu Proyecto APT. Debes mantener la temporalidad del periodo académico en el desarrollo de las tres fases que contempla la Asignatura de Portafolio de Título. |

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| **Actividad** | **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 analysis and initial design. | **X** | **X** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Database design and prototype. |  |  | **X** | **X** |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Backend and frontend development. |  |  |  |  | **X** | **X** |  |  |  |  |  |  |  |  |  |  | |  |  |
| Dashboards and reports. |  |  |  |  |  |  | **X** | **X** |  |  |  |  |  |  |  |  | |  |  |
| Functional tests. |  |  |  |  |  |  |  |  | **X** |  |  |  |  |  |  |  | |  |  |
| Final presentation. |  |  |  |  |  |  |  |  |  | **X** |  |  |  |  |  |  | |  |  |