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**Guide 1: APT Project Definition — Capstone Course**

1. **PART I**

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| **1. Personal Background** |
| Below is a table in which you must complete the requested information. |

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| Student name | **Jonathan Morales- Nicolas Vergara-Diego Santis** |
| Rut | **21.375.866-7—------20.872.101-1—----16.290.931-2** |
| Career | **Ingeniería en Informática** |
| Headquarters | **Melipilla** |

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| **2. APT Project Description** |
| In the description, you should briefly describe the name of your APT project and the graduate profile competencies you will implement. If your program defines performance areas, also mention which performance areas the project is linked to. |

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| Project name | *Web Inventory Management System for ServiGenman* |
| Area(s) of performance(s) | *Software development, technology project management, organizational process optimization.* |
| Competencies | *Ability to design, develop, and maintain web applications.*  *Apply agile project management methodologies.*  *Manage databases and reports for decision-making.*  *Implement security and usability measures in technological applications.* |

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| **3. APT Project Foundation** |
| Below are various fields that you must complete with the requested information. This section aims to help you describe your project in detail and justify its relevance and suitability. |

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| Relevance of the APT project | *ServiGenman faces difficulties in controlling materials and tools, which generates cost overruns, inventory losses, and low management efficiency. The project seeks to solve this problem by implementing a web-based inventory system that centralizes information, generates automatic alerts, and reduces costs. This is relevant in the professional field because it responds to the growing demand for materials and tools.* |
| APT Project Description | *The project involves developing a web-based inventory management solution that will allow for CRUD operations, automatic email alerts when a resource is running low, export reports to Excel/CSV, and display total budgets spent.* |
| Relevance of the project to the graduate profile | *The project is aligned with the graduate profile in software development, project management, and use of agile methodologies. These are essential for transforming business requirements into a functional and scalable technological solution.* |
| Relationship with professional interests | *This project strengthens expertise in web development and information systems management, areas of professional interest related to computer engineering and the development of business solutions.* |
| Feasibility of developing the APT Project | *The project is feasible because it includes:*  *● Time: 6 weeks (deadline defined in the project plan).*  *● Human resources: 3 members (Scrum Master, developer, and documentation manager).*  *● Technology: Use of open source tools and affordable hosting.*  *● Facilitators: Client support, agile methodology, and available basic resources.*  *● Challenges: Budget constraints and limited time; resolved through agile management and feature prioritization.* |

1. **PART II**

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| **4.** **Goals** |
| In this section, you must define the general and specific objectives of the APT Project. It is important to clarify that the objectives should be stated clearly, concisely, and without further explanation; that is, they should be self-explanatory. It is suggested that they be written using an infinitive verb, as this requires specifying specific actions. |

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| General objective | *Implement a web-based inventory management system that allows ServiGenman to record, monitor, and optimize the use of material resources and tools.* |
| Specific objectives | *Develop a CRUD module for materials and tools.*  *Implement automatic email notifications when stock is low.*  *Incorporate data exports in Excel and CSV formats.*  *Generate resource budget reports.*  *Provide technical documentation for the system and provide client training.* |

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| **5. Methodology** |
| In the following section, you must describe the methodology, specific to your discipline, that you will use to complete the APT project described above, including the stages and working methods. |

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| Description of the Methodology |
| *Scrum will be applied as an agile methodology:*  *● Roles:*  *1. Jonathan Morales: Project Manager / Scrum Master.*  *2. Nicolás Vergara: 2nd Developer.*  *3. Diego Santis: Documentation.*  *● Stages:*  *1. Requirements gathering and initial design.*  *2. Environment and database configuration.*  *3. Development of core modules.*  *4. Implementation of notifications and export.*  *5. Internal testing and bug fixes.*  *6. Delivery of the final version and documentation.* |

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| **6. Evidence** |
| Next, describe what evidence will be assessed in the progress report and the final report for your APT project. This evidence should be agreed upon with your instructor. Evidence refers to the products developed during the project and whose purpose is to visualize or document how the work was implemented. |

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| Type of evidence  (advance or final) | Name of the evidence | **Description** | Justification |
| Advance | Requirements and design document | Document with requirements, diagrams and architecture | Validate planning before development |
| Advance | CRUD functional prototype | Initial version of the system with inventory record | Ensuring that development is on the right track |
| Final | Web system version 1.0 | Operating system with notifications and reports | Main Deliverable of the Project |
| Final | Technical documentation and user manual | User guide and technical documentation | Facilitate adoption and maintenance of the system |

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| **7. Work Plan** |
| In the following table, define your APT Project planning according to the requirements. |

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| **APT Project Work Plan** | | | | | | |
| Competence or units of competences | Name of Activities/Tasks | Description Activities/Tasks | Resources | Duration of the activity | Responsible | Observations |
| *Software development* | System design | Requirements gathering and architecture | *Documents, meetings* | *1 week* | Jonathan | May be delayed if requirements are missing |
| *Management in DB* | *Environment Setup* | *Server and database configuration* | *MySQL, hosting* | *1 week* | *Nicolas* | *It depends on the technical resources* |
| *Programming* | *CRUD Development* | *Create, read, update, and delete inventory* | *IDE, frameworks web* | *1 week* | *Jonathan* | *Critical functionality* |
| *Programming* | *Notifications and export* | *Schedule alerts and data downloads* | *Mail and export libraries* | *1 week* | *Nicolás* | *Requires additional testing* |
| *QA and documentation* | *Tests and corrections* | *Usability, loading and error testing* | *Users, checklist* | *1 week* | *Diego* | *May require iterations* |
| *Documentation* | *Delivery of final version* | *Manuals and system delivery* | *Final documents* | *1 week* | *Diego* | *Customer validation* |
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| **8. Gantt chart** |
| Find a Gantt chart format that suits you and organize the activities planned in the previous point, taking into account the period assigned for the development of your APT Project. You must maintain the academic period in the development of the three phases of the Degree Portfolio Course. |

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| **Activity** | **Phase 1** | | | | **Phase 2** | | | | | | | | | | | | **Phase 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** |
| *Describe activities from the previous point* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
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