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**Guía1. Student Guide – Definition of APT Projec**

1. **PARTE I**

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

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| Student Name | * Oscar Zepeda * Franco Vasquez * Fabian Montenegro * Luis Lopez |
| Rut | * 20.824.997-5 * 21.262.889-1 * 20.634.537-3 * 21.494.221-6 |
| Degree | Computer Engineering |
| Campus | Puente Alto |

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| **2. APT Project Description** |
| In this section, briefly state the name of your APT project and the graduation profile competencies you will put into practice.  If your degree has defined areas of performance, also mention which performance areas are linked to the project. |

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| Project Name: | *Professional Practice Management and Monitoring System* |
| Performance Area(s): | *Web Programming, Project Management, Software Architecture, Databases.* |
| Competencies: | *Documentation for project management.*  *Development of technological solutions in web format.*  *Database modeling and programming.*  *Integration of computer systems.*  *Software quality assurance.* |

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| **3. APT Project Foundation** |
| In the following section, complete the fields with the requested information.  This section aims to describe your project in detail and justify its relevance and significance. |

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| Project Relevance | *The proposed system aims to improve the management and monitoring of professional practices by optimizing the assignment, tracking, and evaluation of students. It will enhance communication between educational institutions and companies, providing traceability and efficiency throughout the process.* |
| Project Description | This project consists of developing a web platform to manage professional practices.  The system will include modules for student registration, practice assignment, tutor and coordinator management, internal communication, and automatic report generation, improving traceability and information optimization. |
| Relevance to the Graduation Profile | The project applies fundamental competencies such as requirements analysis, IT project management, technological solution development, quality assurance, and database modeling, all aligned with the graduation profile of Computer Engineering. |
| Relation to Professional Interests | This project is aligned with the team’s professional interests, focusing on developing complete computer systems, from analysis and design to implementation and deployment, representing a realistic and practical challenge.. |
| Project Development Feasibility | The development will take approximately 3 months using tools familiar to the team, such as Python with Django, Bootstrap 5, Oracle SQL Developer, and Visual Studio Code.  No external factors that could hinder its execution have been identified. |

1. **PART II**

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| **4. Objectives** |
| In this section, define the general and specific objectives of the APT Project.  Objectives must be clear and concise and should be understood on their own, without lengthy explanations.  It is suggested to write them using verbs in the infinitive form to specify concrete actions. |

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| General Objective | *Develop a digital system to manage and monitor professional practices, facilitating communication and performance control among students, tutors, coordinators, and administrators.* |
| Specific Objectives | 1. *Optimize the assignment and tracking of practices.* 2. *Improve communication among stakeholders in the process.* 3. *Generate automatic reports and statistics.* 4. *Ensure traceability and information security.* |

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| **5. Methodology** |
| In this section, describe the methodology from your discipline that you will use to solve the previously described APT Project, including stages and work methods. |

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| Methodology Description |
| *The methodology selected for this project is* ***hybrid****, combining elements of the traditional* ***waterfall model*** *and principles of* ***agile methodologies****, specifically inspired by* ***Scrum****.  This choice is based on the need for an organized and formal structure to ensure proper documentation and control of each project phase, without losing the flexibility needed to adapt to changes during development.*  *The Professional Practice Management and Monitoring System involves multiple actors and processes that require continuous coordination, constant feedback, and partial deliverables to evaluate progress and make adjustments when necessary.  For this reason, a hybrid methodology is ideal, as it integrates the detailed planning of a classical model with the adaptability and continuous communication of an agile approach.* *5.1 Classical Phase (Planning and Detailed Design)* *The goal of this phase is to* ***establish a solid foundation*** *for the project, ensuring all requirements are correctly gathered and understood, as well as defining the system architecture and tools to be used.*  ***Stages of this phase:***   * ***Requirements Gathering:***    + *Meetings with stakeholders, including academic coordinators, tutors, and students.*   + *Analysis of current processes to identify problems and opportunities for improvement.*   + *Creation of the* ***Software Requirements Specification (SRS)****, detailing system functionalities and restrictions.*   + *Definition and prioritization of* ***functional and non-functional requirements****.* * ***System Analysis:***    + *Documenting* ***Use Cases*** *to understand user interactions with the system.*   + *Identifying primary information flows.*   + *Designing initial diagrams such as* ***Software Architecture Diagram (SAD)****.* * ***Detailed Design:***    + *Creation of visual prototypes or* ***mockups*** *using tools like Figma.*   + *Designing the database with integrity and scalability in mind.*   + *Preparing technical documentation to guide developers during implementation.*   ***Results of the Classical Phase:***   * *Complete and validated documentation (Charter, SRS, Use Cases, SAD, Mockups).* * *Resource, time, and cost planning through an initial Gantt chart.* * *Solid base to start development with clear objectives.*  *5.2 Agile Phase (Iterations and Continuous Feedback)* *Once the classical phase is completed, the agile phase begins to develop the system in* ***short cycles****, enabling gradual delivery of functionalities and continuous improvement through user feedback.*  *This phase is* ***inspired by Scrum*** *but adapted to the project’s needs and timeline.  The work will be carried out in* ***two-week sprints****.*  ***Activities in this phase:***   * ***Sprint Planning:***    + *Selecting the most critical requirements for each cycle.*   + *Defining specific tasks and assigning responsibilities.*   + *Adjusting objectives based on team capacity and available time.* * ***Development and Implementation:***    + *Programming modules defined for each sprint.*   + *Using tools like Visual Studio Code, Python (Django), and Bootstrap 5.*   + *Performing initial unit tests to validate functionality.* * ***Review and Feedback:***    + *Presenting progress to stakeholders at the end of each sprint.*   + *Collecting feedback and integrating changes into upcoming sprints.*   + *Adjusting planning as needed to focus on priority features.* * ***Continuous Documentation:***    + *Updating documentation throughout the process to reflect changes.*   + *Ensuring the information remains accurate and ready for final delivery.*   ***Results of the Agile Phase:***   * *Functional system increments ready for testing and evaluation.* * *Flexibility to adapt to requirement changes or new priorities.* * *Ongoing communication to ensure the final system meets expectations.*  *5.3 Benefits of the Hybrid Methodology* *The combination of both methodologies provides significant advantages:*   * ***Structure and Control:***  *The classical phase ensures all critical aspects are defined before starting development, reducing confusion and risks.* * ***Flexibility and Adaptability:***  *The agile phase allows adjustments as the project evolves, incorporating feedback effectively.* * ***Risk Reduction:***  *Short cycles enable early detection of problems, preventing major issues at later stages.* * ***Early Value Delivery:***  *Stakeholders see tangible results early, building trust and engagement.*  *5.4 Management and Communication Tools* *The following tools will be used to implement the hybrid methodology:*   * ***Trello or Jira:*** *Task management and sprint planning.* * ***Google Drive:*** *Document storage and collaboration.* * ***Microsoft Teams or Zoom:*** *Communication and virtual meetings.* * ***GitHub:*** *Source code version control.* |

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| **6. Evidence** |
| Describe what evidence will be evaluated in both the progress report and final report of your APT project.  Evidence refers to the deliverables that demonstrate or document the work completed. |

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| **Type of Evidence** | **Name** | **Description** | **Justification** |
| Progress | Requirements Sheet | Document defining functional and non-functional requirements | Identify all system requirements. |
| Progress | Gantt Chart | Document detailing the project schedule. | Know the time needed for each phase. |
| Progress | Project Charter | Document defining project boundaries and system proposal. | Present the project proposal and specifications. |
| Progress | WBS Matrix | Map of tasks to organize the project into manageable parts. | Facilitate planning and task control. |
| Progress | Mockups Document | Visual representation of the final system design. | Validate design before implementation. |
| Progress | SRS Document | Defines system needs, functions, and constraints. | Communicate requirements clearly and reduce risks. |
| Progress | Student Guide 1.5 | Base document to organize and plan project stages. | Align graduation competencies with project objectives. |
| Progress | Self-evaluation 1.3 | Reflective document analyzing project relevance and feasibility. | Validate the project academically and professionally. |
| Progress | Extended Use Case Document | Details how users interact with the system. | Define functionalities from a user perspective. |
| Progress | Meeting Minutes | Records meeting topics, agreements, and tasks. | Track decisions and responsibilities clearly. |
| Final | Phase 2 Progress Report | Shows progress and completed tasks. | Evaluate project status and plan next steps. |
| Final | Phase 2 Final Report | Summarizes results and conclusions. | Validate goal achievement. |
| Final | TO-BE Business Process | Shows how processes will work after implementation. | Define improvements and future operation. |
| Final | RACI Matrix | Assigns roles and responsibilities. | Ensure clarity of responsibilities. |
| Final | Risk Matrix | Identifies project risks and impact | Plan preventive actions. |
| Final | Data Dictionary | Defines system data structures and meanings. | Manage and understand data effectively. |
| Final | Change Control Matrix | Tracks changes made during development. | Maintain order and traceability in project changes. |

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

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| **Plan de Trabajo Proyecto APT** | | | | | | |
| Competency | Activity Name | Description | Resources | Duration | Responsible | Observations |
| *Project APT* | *Project definition* | *Define the project and its phases.* | *Computer and document* | *01-09-2025 to 06-09-2025* | *Fabian Montenegro y Oscar Zepeda* | *The project was already defined in the final portfolio process.* |
| *Project Management* | *Project Charter* | *Create the project charter.* | *Computer and document* | *21-08-2025 to 23-08-2025.* | *Oscar Zepeda y Fabian Montenegro* | *Use of reference documents for guidance.* |
| *Project Management* | *Requirements Sheet* | *Define system requirements.* | *Computer and document* | *19-08-2025 to 23-08-2025.* | *Franco Vasquez* | *Previous requirement definition aids completion.* |
| *Project Management* | *SRS Document* | *Define the SRS document.* | *Computer and document* | *03-09-2025 to 05-09-2025.* | *Whole team* | *Based on templates and past semester work.* |
| *Prototyping* | *Mockups* | *Design the system’s final look.* | *Computer and internet* | *03-09-2025 to 05-09-2025* | *Franco Vasquez* | *Helps visualize the final system design.* |
| *Project Management* | *Gantt Chart* | *Create the activity schedule.* | *Computer and document* | *18-08-2025 to 19-08-2025.* | *Franco Vasquez* | *Defines activity dates.* |
| *Project Management* | *Extended Use Cases* | *Define system use cases.* | *Computer and document* | *02-09-2025 to 13-09-2025* | *Oscar Zepeda, Fabian Montenegro, y Franco Vasquez* | *Uses reference from Architecture course.* |
| *Architecture* | *SAD Document* | *Define system architecture.* | *Computer and document* | *15-09-2025 to 16-09-2025.* | *Whole team* | *Based on Architecture course templates.* |
| *Business* | *TO-BE Business Process* | *Define future business process.* | *Computer, Bizagi Modeler, documents* | *17-09-2025 to 20-09-2025.* | *Luis Lopez y Oscar Zepeda* | *Guided by BPM course models.* |
| *Project Management* | *Data Dictionary* | *Define project terminology.* | *Computer and document* | *21-09-2025 to 29-09-2025* | *Whole team* | *Helps understand past documentation.* |
| *Project APT* | *APT Project Development* | *Second phase development.* | *Computer and document* | *25-09-2025 to 29-09-2025* | *Whole team* | *Adds improvements to project proposal.* |
| *Project APT* | *Final APT Report* | *Third phase development and reporting.* | *Computer and document* | *02-10-2025 to 03-10-2025* | *Whole team* | *Summarizes previous documentation.* |
| *Database* | *Database Model Development* | *Build database structure and scripts.* | *Computer, Oracle SQL Developer, Oracle 19c* | *16-09-2025 to 18-09-2025* | *Luis Lopez* | *Create database for system operation.* |
| *Programming* | *Full System Development* | *Develop all system modules.* | *Computer, VS Code, Django, Python, Bootstrap 5, SweetAlert2* | *16-09-2025 to 17-11-2025* | *Luis Lopez* | *Complete system implementation.* |
| *Quality* | *Testing Plan* | *Define quality testing procedures.* | *Computer and document* | *20-11-2025 to 22-11-2025* | *Luis Lopez y Franco Vasquez* | *Evaluate system quality level.* |
| *Quality* | *Change Control Matrix* | *Manage changes during development.* | *Computer and document* | *22-11-2025 to 24-11-2025* | *Luis Lopez, Franco Vasquez, Oscar Zpeeda* | *Simplify change management.* |
| *Quality* | *Scope Verification* | *Verify requirement compliance.* | *Computer and document* | *27-11-2025 to 29-11-2025* | *Whole team* | *Confirm project meets requested scope.* |
| *Project Management* | *User Manuals* | *Explain system usage to end-users.* | *Computer and document* | *29-11-2025 to 05-12-2025* | *Luis Lopez* | *Ensure users can operate the system.* |
| *Project Management* | *Project Closure Act* | *Provide formal project closure.* | *Computer and document* | *29-11-2025 to 05-12-2025* | *Whole team* | *Officially end the project.* |

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| **8. Carta Gantt** |
| 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. |



