1. Annexes

1. APT Project Guides and Evaluation Guidelines

* 1. APT Project Definition Guide

1. **PART I**

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

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| Full name | **Javier Gutiérrez**  **Nicolas Sierra**  **José Moraga** |
| Ruth | ***20.538.777-3***  ***21.028.199-1***  ***19.216.545-8*** |
| Race | ***Computer Engineering*** |
| Headquarters | ***Padre Alonso de Ovalle, Metropolitan Region*** |

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| **2. APT Project Description** |
| In the description, you must briefly indicate the name of your APT project and the competencies of the graduate profile that you are going to put into practice. If your career defines performance areas, also mention which performance areas the project is linked to. |

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| Theme | *Development of a mobile application to display relevant information about medicines by scanning it by the device's camera.* |
| Performance Area(s) | *Mobile App Development* |
| Competences or units of competence | 1. *Create software solutions, using established standards and regulatory frameworks.* 2. *Model the system architecture.* 3. *Model and manipulate the database generated for the system.* 4. *Develop the product, using various technologies learned, ensuring the fulfillment of the goals indicated.* |

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| **3. APT Project Rationale** |
| Below are different fields that you must fill in with the requested information. This section seeks to describe your project in detail. |

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| Relevance of the APT project | *Health has always been an elemental factor in developing an optimal quality of life. Scientific and technological advances in medicine have been fundamental to achieving a longer life expectancy in the world. That is why, more and more, we need to have access to more remedies and treatments that ensure us a good life.*  *Under this scenario, patients often have no knowledge about the medications that are prescribed, which causes errors in their consumption, as in the case of taking a medication contraindicated against a pre-existing condition.*  *In this context, the Electronic First Aid Kit is framed, whose main mission is to publicize the most relevant information for patients such as precautions, contraindications and bioequivalents, you will also be able to have greater clarity about your exams made.*  *This solution will keep medication data accessible to people, which is often not, given how small the font of the leaflet that comes with the tablets is.* |
| APT Project Description | *Gathering requirements, design and development of a Mobile Application for people in general and that is available at all times.* |
| Relevance of the project with the graduate profile | *The project is related to the graduate profile in the sense that we will apply all the knowledge acquired during the course of the career:*   * *Requirements Gathering* * *System Architecture Design* * *Database Modeling*   *It is also worth highlighting the mutual collaboration of the team to develop a technological solution under a given context.* |
| Relationship to professional interests | *The project is related to the professional interests of the team with the intention of putting at the service of the community everything learned, taking into account how transcendental new programming technologies are and will be in our society. In short, helping the accessibility of information, with the new means available, is always a good option.* |
| Strengths and weaknesses to develop the APT Project  (Feasibility) | *Strengths*   * *Knowledge of programming languages for mobile app development* * *Knowledge in database modeling* * *Structured scheduling of the work to be carried out* * *There are no economic impediments to the construction of the project*   *Weaknesses*   * *Programming languages are not entirely mastered by the members* * *Insufficient time extension to fulfill all functionalities* * *Technologies are more complex than expected* * *Work commitments attached to the team* |

1. **PART II**

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| **4. Objectives** |
| In this section you must define general and specific objectives of the APT Project. It is important to clarify that the objectives must be stated in a clear, concise way and without giving further explanations, that is, they must be understood by themselves. It is suggested to write them using an infinitive verb, as this makes it necessary to specify specific actions. |

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| General objective | *To promote to the general population the knowledge related to the medicines they consume or that are prescribed to them through accessibility to information. In this case, through their cell phone.* |
| Specific objectives | * *Publicizing contraindications of a medication* * *Show warnings about taking a drug* * *Save the expiration date of a purchased medication to avoid its consumption once it has expired* * *Consult bioequivalents of a remedy* * *Know test results and understand them clearly* * *Promote a culture of information for patients* * *Promoting responsible medication on the part of the population* |

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| **5. Methodology** |
| *The methodology to be used will be agile and scrum, considering a first stage of definition, from the vision of the project with its four pillars, the product goal and the product backlog, estimated and prioritized. Later the sprints will be developed with the releases involved.* |

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| Description Methodology |
| *Based on the complexity of the development and the size of the team, we decided to use a mixed methodology. Due to the ease of coordination, we chose the agile Scrum methodology as the basis of our project. Part of this can be seen in the daily meetings that we have as an online team to define progress and request help or in the one-week sprint where we will develop various functionalities of the project. On the other hand, due to the brevity of the work, we also take tools from traditional methodologies, such as the creation of a Gantt chart, to have a general image of what we are looking for with the project. This is because, unlike a project with continuous improvement, such as a Scrum development, this project has a deadline from the beginning, which allows us to use tools from other methodologies to optimize the use of time and refine our idea from its creation.*  *To define the MVP and the most important functionalities, we prepare a spreadsheet with the functional and non-functional requirements of the project. Then, as a team, we decided which of those functionalities could be developed within the estimated time.* |
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| **6. Expected results** |
| In this section they must define the expected results of your APT project. |

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| Expected results (impact) |
| *Summarizing some aspects, the project consists of a Mobile Application that, with the help of the device's camera, scans the drug and will offer all the important information such as contraindications, warnings and bioequivalents.*  *The exams will have to be scanned or in PDF format to upload them to the portal and be able to generate a clear summary of what the document indicates.*  *Test results can be referred back to show to doctors*  *As expected results, it is expected that it will help the dissemination of the characteristics of each medicine and, in this way, generate a responsible and conscious consumption of any type of remedy.*  *Consequently, a positive impact is expected on people, especially those who are now accustomed to carrying information reminders on their mobile phones.* |

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| **7. Evidence** |
| Describe what evidence will be evaluated in the progress report and in the final report of your APT project. This evidence must be agreed with your teacher. |

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| **Type of evidence**  **(avance o final)[[1]](#footnote-1)** | **Name of evidence** | **Description** | **Justification** |
| Preliminary analysis of the case | Electronic First Aid Kit Case | Document that presents a context where a problem is presented and the solution that is proposed to face it. | To give certainty to the project for its start. |
| System Architecture | Architecture Electronic First Aid Kit | Diagram that reveals the structure of the app and how it will obtain the information. | Understand how the system is fed by the necessary data. |
| Database Diagram | Diagrama\_ER | Entity Diagram - Relationship that the proposed system will use to work. | Understand how tables and information in the application database interact. |
| Data Dictionary | Data Dictionary | Dictionary of the database to be built for the system. | Display the distribution and contents of the database in a more affordable way. |
| Risk calculation | Risk matrix | Detail of possible risks to which the team is exposed in the development. | Show ways to act in the event of any previously foreseen risk. |
| Gantt chart | Gantt Chart Thesis | Detailed planning of milestones, goals to be realized, and those in charge at each stage of the proposed solution construction process, from beginning to end. | Organize the available time in a better way, so that it is optimized and the team is aware of it. |
| Use Case Template | List of Use Cases | It details the list of use cases in which the system will be developed. | Understand how all actors involved interact in the correct use of the system. |
| General Use Case Diagram | General Use Cases | Diagram that graphs the generality of the use cases developed for the system. | It allows us to have a broader vision of the actions to be carried out by the actors. |
| General User Use Case Diagram | General User Use Cases | A diagram that charts the actions and how the general user of the application will interact. | Understand the actions that an unregistered user can perform. |
| Registered User Use Case Diagram | Registered user use cases | Diagram that graphs the actions and the way in which the registered user of the application will interact. | Understand the actions that a registered user can perform. |
| Mockups | General User, Registered User | Initial sketches of the graphical interface that the application will have. | It allows you to get a basic idea of what the application will look like once the graphics process starts. |
| Functional and non-functional requirements | Requirements | List of functional and non-functional requirements that the project to be developed will contain. | Have notions of the functions that are intended to be carried out for the correct construction of the software. |
| Deployment View | Component diagram | Diagram that allows you to represent the elements that make up the application. | Understand how the system works, considering its relationships and interactions with external systems. |
| Deployment View | Package Diagram | Diagram that allows you to visualize how the source code of the proposed solution is organized. | Understand the way in which the program code is arranged so that it is more understandable. |
| Physical View | Deployment Diagram | Diagram that allows showing the physical distribution of all the elements that make up the software. | Understand the way in which the system to be built is physically structured. |
| Logical view | Communication Diagram | Diagram showing the interaction between objects corresponding to the system. | Help those who will develop the system to understand how and in what order interactions are performed. |
| Meeting Minutes | 1, 2, 3 | Minutes of the meetings held during the initial phase of the project. | Keep track of the agreements reached by the team |

| **8. Work Plan** |
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| Define the planning of your APT Project according to what is required in the following table. |

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| **APT Project Work Plan** | | | | | | |
| Relationship with competence or units of competences | Name of Activities/Tasks | Description Activities/Tasks | Resources | Duration of the activity | Responsible[[2]](#footnote-2) | Remarks |
| *Offer IT solutions by taking requirements.* | *Pre-Development - Phase 1* | *Case analysis*  *Defining System Capabilities*  *Defining Roles and Responsibilities*  *Definition of the time and organization of the product to be delivered*  *Prioritization of the use cases to be developed* | *Documents such as: Individual Deliverables*  *Functional Requirements*  *Non-Functional Requirements*  *Use Cases*  *Mock Ups*  *Risk Matrix*  *Gantt chart*  *Meeting Minutes*  *Formative Co-Assessment*  *Definition Guide*  *Electronic Medicine Kit Case* | *1 week* | *Team of analysts* | *The realization of the deliverables was managed in an optimal and group way* |
| *.*  *· Develop a software solution by modeling and designing the system architecture.* | *System Design* | *4+1 architecture diagrams* | *Technological tools: Star UML, for the creation of diagrams of use cases and activity* | *1 week* | *Team of analysts* | *The definition of requirements and use cases from the "solution proposals" phase was used* |
| *Develop products using technologies together.* | *Mobile App Development* | *Development of the front-end and back-end of the system, which includes Programming Electronic First Aid Kit MVP*  *Programming Complete Electronic First Aid Kit*  *Electronic First Aid Kit Programming Tests* | *Database: MySQL and Firebase*  *Languages used: Dart*  *Frameworks: Flutter* | *11 weeks* | *Development Team* | *For each sprint, there will be prioritization of specific use cases* |
| *Development of presentation and phase closure* | *Preparation of presentation of title work* | *Creation and testing of graphic resources to present the solution to the evaluation committee, this includes:*  *Prepare PPT and Information*  *Test the Presentation*  *Presentation to the Commission* | *Design technologies such as Canva or presentation technologies such as ppt* | *3 weeks* | *Development Team* | *To ensure the maturity of the project, the presentation will be tested by the team to see that it is in accordance with quality standards.* |

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| **9. Work Plan** |
| Look for a Gantt Chart format that suits you and organize the activities planned in the previous point considering the period assigned for the development of your APT Project. You must maintain the temporality of the academic period in the development of the three phases contemplated by the Degree Portfolio Subject. |

1. **In the case of projects defined by schools, this evidence can be predetermined by the discipline, safeguarding the contribution of each member of the team to the evidence.** [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)