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**Guía1. Definición Proyecto APT**

**Asignatura Capstone**

1. **PART I**

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

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| **Student Name** | **Génesis Correa - David Álvarez** |
| RUT | **19.664.601-9 ; 20.561.541-5** |
| **Degree Program** | **Computer Engineering** |
| **Campus** | **Viña del Mar** |

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| **2. APT Project Description** |
| In the description, you must briefly state the name of your APT project and the graduate profile competencies that you will put into practice. If your program has defined areas of professional practice, also mention which areas the project is linked to. |

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| Project Name | *ViveActivo* |
| Area(s) of Practice | The APT Project will primarily address the areas of programming and software development, interface and user experience design, as well as technology project management. |
| Competencies | The APT Project will address competencies from the Study Plan such as the development of technological applications applying programming principles, the design of accessible and functional interfaces focused on usability, the management of technology projects through the organization of resources and timelines, problem-solving through innovative solutions, and teamwork accompanied by effective communication adapted to the target audience. |
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| **3. APT Project Justification** |
| Below are different fields that you must complete with the requested information. This section seeks to have you describe your project in detail and justify its relevance and pertinence. |

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| **Project Relevance** | The project aims to address sedentary lifestyles in older adults, a problem that increases chronic diseases and reduces quality of life. The solution consists of a mobile application that, through an initial dependency test, personalized routines, and a motivation system with streaks, promotes safe and adapted physical activity. Its relevance to the computer science field lies in the integration of AI, software development, and accessible design, applied in a real context like sports and community centers in Chile. The main impact will be on adults over 60 years old, providing an innovative technological tool that promotes their health, autonomy, and well-being. |
| **Project Description** | The project aims to promote safe and adapted physical activity in older adults through the development of an interactive mobile application. The app will assess the person's level of autonomy through an initial functional test (independent, partially dependent, or bedridden) and, based on the results and recorded medical conditions, will recommend personalized exercise routines. To encourage adherence, it will incorporate a system of streaks and virtual rewards, which will motivate users to stay consistently active. The problem of sedentary lifestyles in older adults will be addressed by combining accessible technology, artificial intelligence, and simplified design, ensuring a user experience suited to the needs of older adults. Thus, the project seeks to directly impact the quality of life and autonomy of older adults. |
| **Project Pertinence with Graduate Profile** | The APT Project is directly related to the graduate profile of my degree program, as it integrates competencies linked to the design, development, and management of technological solutions aimed at innovation and improving people's quality of life. In this case, the creation of a mobile application for older adults with personalized exercise routines and a streak-based motivational system requires competencies in programming, database management, and artificial intelligence, all fundamental to solving the problem of sedentary lifestyles in this age group. |
| **Relationship with Professional Interests** | The APT Project relates to the degree's graduate profile by applying competencies such as application development, accessible interface design, technology project management, and the implementation of innovative solutions. These competencies are essential for solving the problem of sedentary lifestyles in older adults, as they allow the creation of a functional, usable app supported by artificial intelligence to offer personalized routines. |
| **Project Development Feasibility** | Strengths  • Use of accessible technologies (Flutter, Supabase, OpenAI) that allow for rapid and efficient development.  • Application with a social and health focus, which increases its relevance and motivation for the team.  • Design focused on usability and accessibility, aligned with the needs of the target audience.  Opportunities  • Growing interest in digital health apps and active aging.  • Support from senior sports centers that can serve as testing grounds.  • Possibility of scaling the application through agreements with municipalities and health programs.  Weaknesses  • Limited time resources.  • Dependence on initial data provided by older adults and health professionals.  • Possible lack of prior experience in AI integration and medical data security.  Threats  • Digital divide among older adults: some do not have smartphones or stable internet connection.  • Competition with existing health or exercise applications.   * • Resistance from some older adults to adopt new technologies. |

1. **PARTE II**

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| **4. Objectives** |
| 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 to draft them using an infinitive verb, as this forces the specification of concrete actions. |

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| **General Objective** | To develop an interactive mobile application that promotes safe and adapted physical activity in older adults, through the implementation of a functional test, personalized routines according to their health conditions, and a streak-based motivation system, in order to improve their autonomy, well-being, and quality of life. |
| **Specific Objectives** | • Design and develop a multiplatform mobile application in Flutter, with an accessible interface adapted to the needs of older adults. • Implement a functional test that allows classifying users according to their level of autonomy (independent, partially dependent, or bedridden). • Integrate an artificial intelligence module that recommends personalized exercise routines based on the user's functional status and medical conditions. • Incorporate a motivation system based on streaks and rewards to encourage adherence and continuity in exercise practice. • Evaluate the usability and effectiveness of the application in a group of older adults from community sports centers, collecting feedback to improve the solution. |

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

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| **Description of the Methodology** |
| To address the problem, an agile development methodology will be followed, allowing for iterative progress and early user feedback. The project will be organized into the following stages:   * Information Gathering: collection of data from older adults at the sports center about their needs, interests, and technological limitations. * Prototype Design: creation of a simple interface with large icons, contrasting colors, and intuitive navigation. * Initial Development: construction of the application using multiplatform tools like Flutter and Supabase for the database. * Streak System Implementation: design of a motivational counter that rewards consistency with positive messages and achieved milestones. * Pilot Test: application with a small group of older adults from the sports center, evaluating usability and motivation. * Adjustments and Improvements: incorporation of changes based on user feedback. |

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| **6. Evidence** |
| Below, describe what evidence will be evaluated in the progress report and the final report of your APT project. This evidence must be agreed upon with your teacher. Evidence will be understood as the products developed during the project whose purpose is to visualize or document how the work has been implemented. |

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| **Evidence Type**  **(Progress or Final)** | **Evidence Name** | **Description** | **Justificación** |
| Progress | Stakeholder Management Plan | Document identifying internal and external users and involved areas, along with their expectations. | Aligns all actors and establishes effective communication strategies. |
| Progress | Project Management Plan | Document detailing how the *ViveActivo* project will be executed, controlled, and closed. | Provides a clear execution framework, reducing risks and ensuring compliance with deadlines and quality. |
| Progress | Requirements Management Plan | Document with functional requirements (user registration, activity scheduling, reports) and non-functional requirements (security, availability). | Ensures the *ViveActivo* system meets the needs of users and the client. |
| Progress | Schedule Management Plan | Detailed schedule with key activities and milestone dates. | Allows organizing and prioritizing tasks within the defined time, optimizing resources. |
| Progress | Figma Prototype | Design of the system's user interface, with navigable screens to validate the user experience. | Allows visualizing the system before development, validating flows, and improving usability |
| Progress | Progress Report | Periodic record of milestones achieved and tasks in development. | Ensures clear communication with the client and progress tracking. |
| Final | Cloud Backend System | Development of the system's logic implemented in a cloud environment. | Reduces physical infrastructure costs and ensures scalability and availability. |
| Final | Cloud Database | Centralized database where information about clients, trainers, and activities is stored. | Improves security, availability, and consistency of information. |
| Final | Mobile Application | Application for clients and trainers that facilitates activity booking and routine management. | Most users use smartphones, ensuring more direct and frequent access. |

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| **7. Work Plan** |
| In the following table, define the planning of your APT Project as required. |

***Anexo excel completo Plan de Trabajo*** [**Plan de trabajo ViveActivo**](https://docs.google.com/spreadsheets/d/1NiylYQExY5ZAQE36b4xDD8K5eeiYKwU-kw6B0FxiCMc/edit?usp=sharing)

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| **8. Gantt Chart** |
| Find 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 for the development of the three phases contemplated in the Thesis Portfolio Course. |

**Anexo Carta Gantt:** [**Carta Gantt ViveActivo**](https://drive.google.com/file/d/116UpnGHjNnf0JFhhD8gnF9bottYdjOCJ/view?usp=sharing)