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**Guide1. APT Project Definition**

**Capstone Subject**

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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| Student Name | **Jeremy Opazo, Cedre Morales, Maximiliano Mendoza** |
| Ruth | **21.378.423-4 , 21.325.210-0 , 21.059.913-4** |
| Race | **Computer Engineering** |
| Headquarters | **Maìpu** |

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| **2. APT Project Description** |
| SERVICLEMANT LIMITADA is a cleaning company focused on the industrial area, this company has been in the market since 2014 and has never wanted to take the next step to improve, today SERVICLEMANT LIMITADA wants to take that step to be able to enter the competition of industrial cleaning, for that we are contacted who will give you a solution focused on our computer knowledge in which we will do software development with systematic methodologies for this case and programming of queries and routines in databases. |

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| Project Name | SERVICLEMANT LIMITED |
| Performance Area(s) | *Software development.* |
| Competences | *Software development with systematic methodologies for this case and programming of queries and routines in databases.* |

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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 and justify its relevance and relevance. |

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| Relevance of the APT project | *Well we were presented with a case since one of the members has a slight closeness with the owner of SERVICLEMANT LIMITADA, this case is relevant since it is a small company that wants to take the next step, despite the fact that it has been in the market for a long time it has not wanted to leave its comfort zone.*  *This company has been in Chile since 2014 with a location in Providencia offering cleaning services at an industrial level. with archaic and inefficient systems.*  *Our contribution will be real for this company since the development of a website is sought to be all the essential for this company and thus enhance. since this website would remain functioning and active until the owner so wishes.* |
| APT Project Description | *The project is feasible because it responds to a real need of SERVICLEMANT LIMITADA, which seeks to modernize itself to compete in the area of industrial cleaning. Within the subject, computer tools and knowledge are worked on that allow the development of technological solutions such as those required by the company. In addition, there is the time, resources and access to information necessary to execute the project within the academic period, applying in a practical way what has been learned in class.* |
| Relevance of the project with the graduate profile | *Well, this APT project will make us as a group use all our knowledge about software development and the use of databases since they will be 100% necessary to be able to carry out a good project.*  *Software development will be used to develop a website and incorporate all the requirements and adjustment that the client requires, on this page you will look for efficiency and enhance the company so that it finally manages to enter the market with the other competencies.* |
| Relationship to professional interests | *The way in which this project is related to our professional interests, there are many, since we are interested in working with challenging and realistic projects, with which we can work as a team, and thus we can develop software with which a company and its employers can use due to their need to have more job opportunities. thus being able to attract the attention of more customers together with their experience in the area.* |
| Development feasibility of the APT Project | *It will be possible for us to develop this project since all the members of the group have a great handle on what this project requires. therefore we will not need more time than we have been given to develop the project, we will allocate 4 hours a day from Monday to Friday to develop and focus only on this project. on the subject of the material we have the necessary materials for the project, something that could facilitate the development is the correct use of the internet (pages of the languages we use, AI focused on development) also a good help are the teachers to have at the headquarters to be able to ask and assist us for the good development of the project.* |

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 develop a technological solution that allows digitizing and optimizing the internal processes of SERVICLEMANT LIMITADA, in order to improve its operational efficiency and position itself competitively in the field of industrial cleaning, during the current academic semester.* |
| Specific objectives | ***1. Agenda and request for services***   * *Simple interface so that the customer can* ***schedule the day and time of the service*** *according to their availability.* * ***Fast, accurate and user-friendly quote form****, which allows you to calculate the value of the service immediately.* * *Possibility of* ***choosing the person or work team*** *that will perform the service (optional).*   ***2. User Profile (Client)***   * *Each customer will have a* ***personalized profile****, either at an individual or company level, where they can see their service history, quotes and billing.*   ***3. Online communication***   * *Availability of an* ***online chat or virtual assistant (bot)*** *to answer questions at any time, even if there is no staff available at the time.*   ***4. Payment Methods***   * ***Secure payment gateway integration****, which will allow you to cancel the service quickly, reliably and without complications.*   ***5. Exclusive access for the administrator (company owner)***   * *Private dashboard to* ***customize services and assign workers****.* * *Tools to* ***evaluate the level of performance of workers****, recommend training or assign improvement courses.* * ***List of services and trained personnel*** *for each one, which guarantees greater organization and efficiency.* * *Tracking interface that allows you to visualize the* ***completed trainings and the level of cleaning performance*** *of each worker.* |

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

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| Description of the Methodology |
| *The project will be developed under an applied research and functional prototype development approach, using an agile methodology to ensure partial deliveries, constant feedback and iterative improvements during the process.*  *Techniques and tools to be used*  *Development languages: HTML, CSS and JavaScript, for the creation of a functional web interface.*  *Use cases: To define the requirements and functionalities of the system from the user's perspective.*  *Editing and development: Visual Studio Code as a development environment.*  *Communication: Periodic meetings (virtual or face-to-face) to review progress and coordinate the team.* |

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| **6. Evidence** |
| Next, 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. Evidence will be understood as the products that are developed during the project and whose purpose is to make visible or document how the work has been implemented. |

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| **Type of evidence**  **(advance o final)** | **Name of evidence** | **Description** | **Justification** |
| **Advance** | **Document for the collection of requirements** | Document that compiles the needs, functionalities and expectations of the client or end user with respect to the website. It includes interviews, surveys or meetings held. | It is essential to ensure that the development of the project is based on the client's real needs and not on assumptions. This document guides the rest of the work. |
| **Advance** | **Sketches and Interface Design (Mockups)** | Set of sketches, wireframes, and digital mockups that show the look and structure of the website. Main screens, item layout, menus, buttons, and other visual components are rendered | Visualizing the interface allows for early adjustments and validation with the client prior to development. This saves time, prevents errors, and improves the user experience from design. |
| **Advance** | **Project planning and schedule** | A document or tool (such as a Gantt chart) that defines project phases, specific tasks, due dates, and assignees. It includes the schedule of advances, deliveries and tests. | Planning the work allows you to have a clear control of progress, facilitates compliance with deadlines and properly distributes the work among the team members. |
| **Final** | **Functional prototype of the website** | Version of the website already programmed, navigable and with the main operational functionalities, according to the client's requirements. | This is tangible evidence of the work done. It allows the customer to review, interact and validate the product before its final delivery or publication. |
| **Final** | **User Manual** | Practical guide that explains step by step how to use the website. It includes screenshots, feature descriptions, instructions for performing common tasks, and basic troubleshooting. | It is essential for the customer or end user to be able to use the system autonomously, without requiring constant technical assistance. |
| **Final** | **Record of tests and customer feedback** | Document that presents the results of functional, usability and error correction tests. It also includes observations, comments and suggestions from the customer after evaluating the prototype. | It allows the website to be improved before its final delivery, ensuring that it meets the requirements, is easy to use and satisfies the customer. |
| **Final** | **Final Project Report** | Comprehensive document summarizing all the work done on the project. It contains the introduction, objectives, methodology, development, evidence, results, conclusions and recommendations. | It reflects the entire work process, learning obtained and results achieved. It is a formal closure that supports the fulfillment of the goals of the project. |

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| **7. Work Plan** |
| In the following table define the planning of your APT Project according to what is required. |

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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[[1]](#footnote-1) | Remarks |
| Beginning | Define scope and deliverables | Establish project goals and deliverables | Articles of Incorporation, Initial Meetings | 3 | PM | Start of the project |
| *Analysis* | *Company Analysis* | *Know current context and processes* | *Existing documentation, interviews* | *5* | PM | *Basis for requirements* |
| *Planning* | *Detailed project plan* | *Timeline, resources and phases* | *MS Project/Excel, Planning Meetings* | *2* | PM | *Sprint Closure 0* |
| *Requirements* | *Stakeholder interviews* | *Lifting System Needs* | *Key Users, Interview Questionnaire, Online Room/Meeting* | *3* | *PM* | *Key to design* |
|  | *Document analysis* | *Review technical and operational information* | *Technical reports, manuals, internal processes* | *4* | *PM* | *Complement interviews* |
|  | *Create initial backlog* | *List prioritized features* | *management tool (Jira, Trello)* | *2* | *PM* | *Home backlog* |
|  | *User validation* | *Confirm stories and needs* | *Initial prototypes, meetings* | *3* | *PM* | *Before Design* |
| *Design* | *BD Modeling and Processes* | *Diagrams and data logic* | *Backend, modeling tool (Lucidchart, Draw.io)* | *4* | *Dev BE* | *Prepare development* |
|  | *Design Interface (UX/UI)* | *Mockups and prototypes* | *Figma, style guide, user feedback* | *3* | *Dev FAITH* | *Visual validation* |
|  | *Design Review* | *Final Customer Approval* | *Mockups, prototypes, validation meeting* | *3* | *PM* | *Requires feedback* |
| *Infrastructure* | *Set up environment* | *Git, entornos, CI/CD* | *GitHub/GitLab* | *3* | *Dev* | *Technical basis* |
|  | *Define technical approach* | *Architecture and technical tasks* | *Technical documentation, architectural diagrams* | *2* | *Dev* | *Start of development* |
| *Development* | *Backend part 1* | *Logic, DB, APIs* | *IDE (VSCode/IntelliJ), BD (MySQL/PostgreSQL), frameworks* | *10* | *Dev BE* | *Sprint 4* |
|  | *Backend Part 2 + Connection* | *Terminate Backend and Connect Frontend* | *API Gateway, Postman* | *7* | *Dev BE* | *Partial integration* |
|  | *Frontend UI/UX* | *Functional interface* | *mockups* | *10* | *Dev FAITH* | *Requires API ready* |
| *Integration* | *Unite the whole system* | *Module integration* | *Central repository, server integration* | *2* | *Dev* | *Staging* |
| *QA* | *Internal Testing* | *Unitary and functional* | *Postman* | *5* | *Dev* | *Internal validation* |
| *Validation* | *User Testing (UAT)* | *Real test with key users* | *Test Cases* | *3* | *PM* | *UAT* |
| *Corrections* | *Final QA* | *Feedback adjustments* | *backlog de bugs* | *3* | *Dev* | *Technical closure* |
| *Documentation* | *Manuals and technical doc* | *Document System and Usage* | *Word Tech Guides* | *6* | *PM* | *For delivery* |
| *Training* | *Train users* | *Train personnel in the use of the system* | *Manuals, training sessions* | *2* | *PM* | *End of the project* |
| *Closing* | *Final delivery* | *Formal closing and delivery* | *Closing minutes, final meeting, official handover* | *1* | *PM* | *Closing minutes* |

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| **8. Gantt Chart** |
| 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. |

[**Gantt-SERVICLEMANT.xlsx**](https://docs.google.com/spreadsheets/d/1BVty-37yYE1O_dNtwBd_3_mi8AloCnfG/edit?gid=146921279#gid=146921279)

1. In the event that the APT Project is a group project, in this column they must indicate the name of those responsible for each task or activity. This will later allow differentiating the evaluation by each member. [↑](#footnote-ref-1)