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**Guide 2. APT Project Development**

**Capstone Subject**

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| **1. APT Project progress summary** |
| Below you will find different fields that you must complete with the requested information. |

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| APT project progress summary | *In the Project, we have made progress in the following key activities:*   * ***Base system design:****We have now completed the design of the core system using Figma and Draw.io. The design also includes flowcharts and the overall system architecture.* * ***Technology research:****We research and select the most appropriate technologies for developing the solution, including Ionic Framework, Angular, Visual Studio Code, Firebase, and Node.js.* * ***Initial prototype development:****A functional prototype was completed that implements the basic features, allowing the design decisions to be validated.* * ***Development****: We have started the development of APP, and you are on time with the Gantt chart.* |
| Goals | ***General Objectives:***   * *Let it be a real APP, 100% functional and solid so that it can be successful in the market in the future.* * *In the long term, we hope to be able to generalize the APP even more and provide more services nationwide.* * *To reduce the number of frauds related to the construction area.* * *Being able to provide advertising space to lesser-known SMEs.*   *Specific Objectives*   * *To be able to have our application available for download on our website* * *Have a total of 10 Teachers enrolled by the end date of the project.* * *Have more than 30 downloads from our website.* * *Have more than 10 Clients enrolled in our application by the final date of the project.* |
| Methodology | *As a team, we chose the agile methodology because it helps with continuous improvement and emphasizes team collaboration. In addition to dividing the project into different phases, it is extremely important for us to have an efficient order and guarantee more solid results when completing our project.*  *Our work team consists of 3 people whose roles will be defined as follows:*   * *Marcelo Montecino: Product Owner, Development.* * *Matias Estay: Scrum Master, Development.* * *Paula Velásquez: Tester/QA, Development.*   *The stages that we will define in the project will be the following:*   1. ***Initial Planning:***  * ***Objective: Define the project vision and main requirements.*** * ***Activities:*** * ***Product Backlog Definition: Marcelo Montecino, in his role as Product Owner, will identify and prioritize the software features and functionalities that need to be developed.*** * ***Assigning Responsibilities: Establish the initial tasks and assign them according to the defined roles.***  1. ***Software development***  * ***Objective: Develop software in short work cycles (Sprints), delivering functional product increments at the end of each Sprint.*** * ***Activities:*** * ***Sprint Planning: Matias Estay, as Scrum Master, will organize planning meetings to select the backlog items to be addressed in each Sprint.*** * ***Software Development: Marcelo Montecino and Matias Estay will work on the development of the selected functionalities.*** * ***Quality Control: Paula Velásquez will be responsible for performing quality tests and ensuring that each increment meets the acceptance criteria.***  1. ***Review and Continuous Improvement***  * ***Objective: Review the work done and make adjustments to improve in each iteration.*** * ***Activities:*** * ***Sprint Review: At the end of each Sprint, the team will review the work completed, receive feedback, and adjust as needed.*** * ***Sprint Retrospective: The team will analyze what worked well and what can be improved to optimize performance in future Sprints.***  1. ***Final Delivery and Deployment***  * ***Objective: Prepare and carry out the final delivery of the software to clients or stakeholders.*** * ***Activities:*** * ***Environment Preparation: Matias Estay, in collaboration with the team, will ensure that the production environment is ready for deployment.*** * ***Product Delivery: A final presentation of the software will be made, ensuring that it meets the established requirements and expectations.***  1. ***Maintenance and Support***  * ***Objective: Ensure the correct functioning of the post-delivery software and make continuous improvements.*** * ***Activities:*** * ***Technical Support: The team will provide support to resolve any issues.*** * ***Updates and Improvements: Future updates will be planned and implemented based on user feedback.***   ***Working Methods***   * ***Daily Scrum Meetings: Matias Estay will organize daily meetings to review progress, identify impediments, and adjust the work plan.*** * ***Quality Assurance (QA): Paula Velásquez will conduct rigorous testing to ensure that the software meets defined quality standards.***   ***Continuous Communication:****The team will maintain constant and open communication to ensure the alignment of all members with the project objectives.* |
| Evidence of progress | *The main evidence that we will present in this report are:*   * ***Technical documentation of the system:****includes flowcharts and architecture.* * ***Functional prototype:****A video of the prototype operating under test conditions is attached.* * ***Application****: Application (not in its final phase)* |
| **2. Monitoring the Work Plan** |
| Carefully examine your work plan, focusing especially on the progress and adjustments column. |

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| Work Plan | | | | | | | |
| Competency or units of competencies | Activities | Observations | Resources | Duration of the activity[[1]](#footnote-1) | Responsible | State of progress | Settings |
| Development of technological solutions. | Searching for the problem to provide a computer solution. | The availability of the Internet can make the search easier, but the lack of initial clarity of the problem can be a difficulty. | Human resources, internet, hardware to search for information and Word to complete the case documentation will be needed. | 1 week. | Marcelo Montecino. | Filled | N?A |
| IT project management. | Planning and documenting the start of the project. | Clear planning facilitates development | Human resources, internet, hardware, and Word will be needed to store the information. | 2 weeks. | Paula Velasquez. | Filled | N?A |
| IT project management | Meeting to analyze problems and clarify doubts about project planning. | Unavailability of some members may delay decisions. | We use resources such as the Internet, Word, Hardware and human resources. | 1 day. | Marcelo Montecino. | Filled | N?A |
| IT project management | Presentation of the project planning | Prior organization makes presentation easier | We use resources such as the Internet, PowerPoint, Canvas, Hardware and human resources. | 1 day. | Development Team. | Filled | N?A |
| Requirements gathering and analysis, development, adaptation and/or integration of computer systems | Data Model Design | Lack of consensus within the team could lead to delays*.* | Human resources, data modeling software. | 2 weeks | Matias Estay | Filled | Screens and a profile were removed from the original design |
| Adaptation and/or integration of computer systems | Setting up the Development Environment | A well-configured environment makes development easier; software version incompatibility can present difficulties. | Hardware, development software, version control tools. | 2 weeks | Marcelo Montecino, Matias Estay, Paula Velasquez | Filled | As a team we decided to change the programming language for our application due to various problems mentioned by the teacher, and that is why we decided to use Angular with a Firebase database. |
| Development | Frontend Development | Intuitive UI tools make the process easy | Human resources, development software, UI design tools. | 2 weeks | Matias Estay | In progress. | N?A |
| Development | Backend Development | Good command of the programming language facilitates development; integration problems with other parts of the system may arise. | Human resources, development software. | 2 weeks | Marcelo Montecino | In progress. | N?A |
| Software quality assurance, support services | Integration and Testing | Test automation makes it easier to detect errors; lack of time for thorough testing could be a difficulty. | Human resources, testing and integration software. | 2 weeks | Paula Velasquez | N?A | N?A |
| Database administration and information management and support services | Optimization and Adjustments | Well-configured optimization tools make tuning easier; identifying bottlenecks can be complex. | Human resources, optimization and testing software. | 2 weeks | Paula Velasquez | N?A | N?A |
| IT project management, database administration and information management and support services | Preparing for Deployment | Clear documentation makes deployment easier; compatibility issues in production can be a challenge. | Human resources, documentation software, production environment. | 1 week | Marcelo Montecino, Matias Estay, Paula Velasquez | N?A | N?A |
| IT project management | Deployment and Final Presentation | A well-prepared deployment environment makes final presentation easier; connectivity issues or unexpected errors can hinder delivery. | Human resources, deployment platforms, presentation tools. | 1 week | Marcelo Montecino, Matias Estay, Paula Velasquez | N?A | N?A |

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| **3. Adjustments from monitoring** |
| Go deeper into your observations of your work plan. Analyze the planned activities and point out what aspects facilitated or hindered the execution of the plan. Describe how you addressed and/or will address the obstacles. Finally, indicate the adjustments you made to the work plan based on this analysis. |
| Factors that have facilitated and/or hindered the development of my work plan:  ***Difficulting Factors:***  *Figma Challenges: Prototyping in Figma was a big challenge because none of the team members had experience with the tool. This resulted in a delay and dissatisfaction with the mockup.*  *Inconsistent schedules: Lack of consistent schedules among team members affects communication and collaboration, making it difficult to coordinate tasks and move projects forward together.*  *Actions Taken:*  *Simplifying the prototype and eliminating complex screens:* *To speed up progress, some aspects of the original prototype were simplified. This allowed the team to focus on the most important elements and subsequently make iterative improvements.*  *Communication: This was discussed so that the team could have more and better communication that will help the project move forward.* |

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| Adjusted or eliminated activities: Indicate the adjustments you made to your work plan or activities you eliminated and justify why you did so. If your work plan did not and does not require adjustments, justify this decision based on the facilitators who have allowed you to develop it as planned.*.*  ***Adjusted Activities:****At the beginning of our project we had discussed using Java as a programming language, but we updated it to Angular with Ionic to be able to develop our application, in addition to having adjusted the fact of downloading the application, instead of uploading it to Playstore we will use it to download it on our website, in addition to discarding the fact of creating it and uploading it for IOS.*  ***Deleted Activities:****We mainly eliminated 1 profile, which would be the Hardware Store, and its respective screens because the teacher told us that it would be a lot of work for the short time we have, so we decided to eliminate that profile, we ruled out creating the application for IOS and uploading it to a certain platform.* |

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| Activities that you have not started or are delayed: If you have not started activities or they are delayed according to your planning, indicate the reasons why you have not been able to meet these deadlines and what strategies you would use to advance these activities and not affect your APT project.  *We are currently developing the front and the back, that is in process because we are currently up to date with our Gantt Chart, with respect to the rest, it is not that we are behind, it is just that we are up to date and we decided to put more emphasis on what we have now rather than getting ahead with work with the Gantt Chart.* |

1. If the APT Project is a group project, the names of those responsible for each task or activity must be indicated in this column. This will later allow for differentiating the evaluation for each member. [↑](#footnote-ref-1)