**Guide3. APT Project Final Report**

**Capstone Subject**

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| **1. APT Project Final Report** |
| The objective of this report is for you to describe the most relevant aspects of your APT Project. It is important that they substantiate the decisions you had to make throughout the process.  Below, you will find different fields that you must fill in with the requested information, which account for the summary of your APT project and its main results. |

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| Project Name | **Bytemart** |
| Performance Area(s) | Web Development, Database Management, Platform Integration, Desktop Application Development, Automation & Web Scraping, Data Analysis & Publishing, IT Project Management, Risk Management |
| Competences | Solution Analysis and Proposal, Software Development, Data Modeling, Data Query and Manipulation, Solution Architecture, IT Project Management and Data Transformation. |

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| **Contents of the final report** | |
| 1. Relevance of the APT project | * The proposed project seeks to solve the need to automate and optimize business processes by integrating a solution that includes a website, a desktop application and data analysis, since, to the growing increase in demand for these digital tools that are very efficient in dealing with important information for companies. * This theme is chosen for the ability to generate a technological solution for multiple platforms and services. This project addresses different skills related to application development, RPA, database management and projects. * The context takes place in a business environment, where an organization needs to improve its current processes, it can be located anywhere where there is a need for a digitized tool. * Companies can see increased value in the integration of new technologies that allow them to free up repetitive tasks, reduce errors, allow decision-making with greater precision based on automatic data collection and raise market positioning. |
| 2. Objectives | **General objective**   * Automate and optimize business processes by integrating a solution that includes a web page, desktop application, API integration, and data analytics. This allows you to improve operability, reduce errors and raise your position in the market.   **Specific objectives**   * Develop a fully functional and secure e-commerce platform. * Be able to integrate external API systems. * Implement data analytics to monitor sales behavior and other key business metrics. * Implement innovative technologies, which allow the platform to be striking and innovative. * Ensure that the system complies with the automation and optimization of processes relevant to the management of business information. |
| 3. Methodology | In this project we will use the traditional methodology, as it is the most suitable for this type of project. The phases and procedures are:   * **Planning:** In this phase we defined the scope of the project, the resources that are needed for the project and established the objectives. * **Analysis:** In this phase we draw up a detailed plan with the tasks and estimated times. * **Design:** In this phase we design the project model (web system, desktop system). * **Development:** In this phase we start the planned activities and tasks and use the resources as planned. * **Tests:** In this phase, the corresponding tests are carried out on the system, to check the correct functioning of the website and the desktop application. * **Implementation:** In this phase we verify and ensure that the objectives have been met in full.   *Why was this methodology relevant to meet the objectives set?*  The traditional methodology is pertinent because it is focused on linear processes, documentation, planning, and prioritization of tasks. It helps us to have clearer objectives, controlled processes, documentation in a clearer way and have greater responsibility as a team. |
| 4. Development | We focus on 5 stages in this APT project, which are: Planning, Analysis and Design, Development, QA and Project Closure.  One of the facilitators in the development of our APT is to be able to show progress with the respective teacher assigned, since with this, we review and obtain the corresponding feedback to guide us and know if we are on the right track within our project.  Perhaps, what makes it most difficult within the development of our project, is the time you have to finish and deliver the finished APT, without a doubt, in a race against time, since it is a lot of documentation to be done, in addition to the systems that must be developed and integrated. In this case, to address the problem of time, some activities have been carried out simultaneously. |
| 5. Evidence | * *Attached is evidence that allows you to account for the development of the APT Project and its final results.*   *What evidence can be used for others to visualize and understand the different stages of your APT Project and the final result?* |
| 6. Professional interests and projections | * *Reflection on the contribution of the APT Project in the development of professional interests.*   The APT project allowed us to put into practice technologies and methodologies that are key in the world of automation and process optimization. By working with RPA, web in Python with Flask, a database in MySQL, the development of desktop applications in Java/NetBeans, and the integration of APIs, we have been able to delve into those areas that are of great interest in the market today.  *Labor projections from the APT Project.*  We envision, according to the APT project, working in roles that combine process automation with data analysis, obviously in technology companies that focus on optimizing efficiency through the digitization of processes. Also as a technology consultant, where he can design customized solutions for clients looking to improve their competitiveness through automation and the intelligent use of data. |