**Guide 2. APT Project Development**

**Capstone Course**

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| **1. APT Project Progress Summary** |
| Below, you'll find various fields that you'll need to complete with the requested information. |

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| **Resumen de avance proyecto APT** | During phase two, the development team has progressed the designs, architecture, model, and backend of the Rep-Drill management software.  Subsequently, the activities carried out are specified; | | | | | |
| **Activities** | | **Description** | | **Compliance Objectives** | |
| Mockup Design | | Visualize software views to validate aesthetic design and user experience. | | Partially all the objectives defined. | |
| Software Architecture | | Represent at a technical level the fullness of the software, dependencies, connections and its processes. | | Partially all the objectives defined. | |
| Relational Database Model | | Structure the database relationally in order to store and manage data. | | Partially all the objectives defined. | |
| Backend Development | | Building the abstraction of data and process management;   * Product Management. * Report Management. * User Management. * Notification Management. * Audit Management. | | Partially certain specified objectives;   * Implement and facilitate product inventory management. * Report product inventory management. * Manage user access control. * Implement an automated notification system to report low quantities of a certain product. | |
| **Objectives** | One of the specific objectives has been removed due to the limited time and the client's preference for other functional requirements;   * **SPC-OBJ-PROJ-01\_07:** Quote pricing information for products from various suppliers. | | | | | |
| **Methodology** | No changes have been made to the methodology. | | | | | |
| **Evidence of progress** | During the development of the IT project, significant milestones were identified, and the execution and construction processes were confirmed through evidence.  Subsequently, the details of said evidence of progress are outlined. | | | | | |
| **Name** | **Description** | | **Justification** | | **Format** |
| Mockups | Visual representations of the software. | | Capture the user interface and experience. | | PNG |
| Software Architecture | Abstraction of the computer structure. | | Structuring the construction of the software. | | PNG |
| Relational Database Model | Database design. | | Model, create, and manage data used in the software. | | JPG |
| Project Repository | Contain the coding of the computer project. | | Store, organize, maintain and disseminate computer files. | | HTML / JS / CSS |
| Sprints Reviews | Images from the Sprint Reviews. | | Progress and feedback meeting with the client. | | JPG |

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| **Mockups** |
| * **Sign In** |
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| * **Dashboard** |
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| * **Inventary** |
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| * **Inventory (Add Product)** |
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| * **Inventory (Product View)** |
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| * **Audit** |
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| * **Users** |
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| * **Suppliers** |
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| * **Suppliers (New Supplier)** |
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| **Software Architecture** |
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| **Relational Database Model** |
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| **Project Repository** |
| * [**GitHub: Rep-Drill**](https://github.com/JorgeFreire95/Rep-Drill) |

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| **Sprints Reviews** |
| **Presentation, Review, Feedback and Retrospective with the Client** |
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| **Commemoration with the Client** |
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| **2.**  **Monitoring the Work Plan** |
| Carefully examine your work plan, focusing especially on the progress and adjustments column. |

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| **Work Plan** | | | | | | | |
| **Competence or units of competences** | **Activities** | **Resources** | **Duration of the activity** | **Responsible [[1]](#footnote-1)** | **Observations** | **State of progress** | **Adjustment** |
| **Phase 2: APT Project Development: Execution and Control** | | | | | | | |
| **Iteration / Sprint 0.5: Design and Gestation** | | | | | | | |
| * Computer Engineering. * Analysis and Development of Database Models. * Software Architecture. | Execution and Control of Modelling, Design and Architecture Management. | * Humans. * Time. * Technology. * Machinery and equipment. * Information and data. | 5 days. | * Elián Farias * Jorge Freire * David Lever | **Facilitator:** Wit, knowledge, skills, and conceptualization of architectures, prototypes, and technological models. | Completed. | There are no adjustments. |
| * Computer Engineering. * Software Programming. * Analysis and Development of Database Models. | Execution and Control of Implementation Development Environment Management. | * Humans. * Time. * Technology. * Machinery and equipment. * Information and data. | 1 day. | * Elián Farias * Jorge Freire | **Facilitator:** Knowledge of applied technologies. | Completed. | There are no adjustments. |
| **Iteration / Sprint 1: Building and Incrementing Product and Report Management** | | | | | | | |
| * Computer Engineering. * Software Programming. * Analysis and Development of Database Models. | Execution and Control of Product Management. | * Humans. * Time. * Technology. * Machinery and equipment. * Information and data. | 2 weeks. | * Elián Farias * Jorge Freire | **Facilitator:** Understanding applied technologies. | In progress. | There are no adjustments. |
| * Computer Engineering. * Software Programming. | Execution and Control of Report Management. | * Humans. * Time. * Technology. * Machinery and equipment. * Information and data. | 2 weeks. | * Elián Farias * Jorge Freire | **Facilitator:** Intelligence of applied technologies. | In progress. | There are no adjustments. |
| **Iteration / Sprint 2: Build and Increment of Self-Registration, Authenticate, and User Management** | | | | | | | |
| * Computer Engineering. * Software Programming. * Analysis and Development of Database Models. | Execution and Control of Self-Registration, Authenticate and User Management. | * Humans. * Time. * Technology. * Machinery and equipment. * Information and data. | 2 weeks. | * Elián Farias | **Facilitator:** Understanding and skills in the use of applied technologies. | Adjusted. | The JSON Web Token (JWT) standard has been used. |
| **Iteration / Sprint 3: Build and Increment of Notify Stock Management** | | | | | | | |
| * Computer Engineering. * Software Programming. | Execution and Control of Notify Stock Management. | * Humans. * Time. * Technology. * Machinery and equipment. * Information and data. | 1 week. | * Elián Farias | **Facilitator:** Intelligence and wit in the use of the service. | Completed. | There are no adjustments. |

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| **3. Adjustments from monitoring** |
| Dig deeper into your work plan observations. Analyze the planned activities and identify what aspects facilitated or hindered the plan's execution. Discuss how you addressed and/or will address the obstacles. Finally, highlight any adjustments you made to the work plan based on this analysis. |

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| **Factors that have facilitated and/or hindered the development of my work plan:** | |
| **Facilitators** | |
| * **Project Management:** Planning and management of the IT project in advance. * **Design Competencies:** Wit, knowledge, skills and conceptualization of architectures, prototypes and technological models. * **Execution and Construction:** Knowledge, understanding and skills in the use of technologies applied in the development of software. | |
| **Difficulties** | **Response** |
| **Project Coordination and Collaboration:** Disadvantages of teamwork. | Establish and streamline communication sessions between team members. |
| **Artificial Intelligence:** Lack of experience in integrating AI technology. | Investigate and train the incorporation of AI tools. |
| **User Authentication:** Complexity in certain areas during the development of the functionality. | Implementation of the open standard JSON Web Token (JWT). |

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| **Activities adjusted or eliminated:** |
| * **Advanced increments:** Certain increments in the data and process management layer have been advanced early.   + **Stock Notification Management.**   + **Audit Management.** * **Execution and Control of Price Quotes Management:** The supplier price quote management functionality has been removed from the IT project planning due to limited time and the prioritization of other key client requirements. |

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| **Activities that you have not started or are delayed:** |
| * **Construction of the Final Frontend:** Delay in the creation of the UI/UX design, due to the delay in the development of the mockups and validation of said designs with the client. * **Real Data Ingestion:** Postponing the ingestion of real data into the database, due to the vast magnitude of products on the sales floor. |

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