}

**Guía1. Definición Proyecto APT**

**Asignatura Capstone**

1. **PARTE I**

|  |
| --- |
| **1. Antecedentes Personales** |
| A continuación, se presenta una tabla en la que debes completar la información solicitada. |

|  |  |
| --- | --- |
| Student Name | **Néstor Avilés** |
| Rut | **20.941.855-K** |
| Degree Program | **Software Engineering** |
| Headquarters | **San bernardo** |

|  |  |
| --- | --- |
| Student Name | **Felipe Sanchez** |
| Rut | **21.185.719-6** |
| Degree Program | **Software Engineering** |
| Headquarters | **San bernardo** |

|  |  |
| --- | --- |
| Student Name | **Ignacio Jiménez** |
| Rut | **21.213.154-7** |
| Degree Program | **Software Engineering** |
| Headquarters | **San bernardo** |

|  |  |
| --- | --- |
| Student Name | **Diego Barrera** |
| Rut | **21.190.814-9** |
| Degree Program | **Software Engineering** |
| Headquarters | **San bernardo** |

|  |
| --- |
| **2. APT Project Description** |
| In the description, you should briefly mention the name of your APT project and the graduate profile competencies that you will put into practice. If your degree program has defined areas of performance, also indicate which performance areas are linked to the project. |

|  |  |
| --- | --- |
| Name Project | *Garden store* |
| Performance Area(s) | **The area in which the project is conducted is data science and process automation.** |
| Competencies | *List the competencies from your Study Plan that you will address in your APT Project.*  *The competencies that will be addressed in this project are:*   * *Database programming* * *Communication skills* * *Entrepreneurial mindset* * *Desktop software development* * *Algorithm programming* * *Data mining* * *Architecture* * *Database querying* * *Project management* |

|  |
| --- |
| **3. APT Project Rationale** |
| Below are various fields that you need to complete with the requested information. This section aims for you to describe your project in detail and justify its relevance and appropriateness. |

|  |  |
| --- | --- |
| Relevance of the APT Project | The company Garden Store is facing some management and logistics limitations regarding its products, and it is not reaching all the users it wishes to reach. Therefore, it needs to update its architecture to handle a greater load and management of its products and expand its current user base.  The solution is to develop and implement a platform for buying and selling gardening products, integrating payment methods from Transbank and Mercado Pago, along with a dashboard integrated with a virtual assistant providing important data on the current state of sales, products, users, and transactions occurring on the site. Additionally, two machine learning models will be implemented: one focused on identifying fraudulent transactions and another focused on creating unique custom designs for synthetic plants.  We chose this topic because it is not widely utilized or mentioned in many companies, and there is not much of a market addressing this issue.  The location where the problem will be addressed is in the central-southern region of Chile, where the main characteristics of this environment or location include a zone with high humidity, vegetation, and a more rural area. It is also an agricultural region with many companies of various types. |
| Description of the APT Project | This project aims to address and satisfy the needs of Garden Store and expand its business due to the limitation of only making sales in its sector or to its closest neighbors, as well as the lack of software to manage and control users, products, sales, and purchases in the system. The goal is to integrate the business into the virtual realm to achieve greater reach and influence over customers.  The purpose of these general functionalities is to resolve the problems or needs of the company Garden Store, primarily in the management and control of users, products, and sales, as well as to expand the company's user base and increase its sales. |
| Relevance of the project to the graduate profile | Relation to the area of work:   * The relationship of the Garden Store project to us is highly relevant, as the areas mentioned earlier are intrinsically linked to the field of Computer Engineering. Moreover, these areas are increasingly present today; what is often overlooked is the field experience. * The areas chosen for the project are essential to carry out the project, as it requires extensive knowledge in these fields along with a level of proficiency that is acceptable. For example, expertise in the 'Desktop Software' area is a fundamental part of the work carried out, along with 'Data Mining.' Consequently, the section that is worked on most relevantly is 'Project Management.' |
| Relation to professional interests | Our professional interests are project management, business process automation, and data science.  Some of the aspects reflected in the APT project include the way we will address the problem using a work methodology to develop the project in a more structured and efficient manner. The implementation of a predictive model will help automate some repetitive tasks.  This will positively contribute to our professional development, as the development of this project presents a challenge that is much more complex than other projects we have undertaken during our studies, where we will assess our competencies, the strengths of each team member, and weaknesses to strengthen them. |
| Feasibility of the APT Project Development | It is possible if the organization of the project is carried out successfully and is reviewed frequently, in addition to holding specialized meetings focused on specific needs.  1) Duration: 5 months = 153 Days  2) 50 hours  3) Computer or laptop, internet connection, development tools, and Office tools installed  4) Some workers do not have issues with transportation or internet instability, and our families understand that we are taking a course of great importance and availability, which they have been able to comprehend.  5) The challenges encountered include communication issues and potential environmental problems, such as winds that can cause power outages, as well as rain that can also lead to power outages." |

1. **PARTE II**

|  |
| --- |
| **4. Objectives** |
| In this section, you should 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, meaning they should be understandable on their own. It is recommended to write them using an infinitive verb, as this requires specifying concrete actions. |

|  |  |
| --- | --- |
| General objective | The development and implementation of a user-friendly and secure platform for buying and selling gardening products that can connect sellers and buyers of gardening products. |
| Specific objectives | * Develop a user and product management system * Implement a product catalog with advanced search options * Create a purchase and sales management system, including a shopping cart and payment gateway * Design an intuitive and attractive user interface * Include a section for educational resources * Implement an intelligent dashboard with a virtual assistant * Integrate two machine learning models, one focused on identifying fraudulent transactions and the other on creating unique custom designs for synthetic plants.*.* |

|  |
| --- |
| **5. Methodology** |
| In the following section, you should describe the methodology specific to your discipline that you will use to solve the previously described APT project, including the stages and work methods. |

|  |
| --- |
| Descripción de la Metodología |
| During the project, we will use the Incremental Methodology. We chose it because its goal is progressive growth, meaning that with each increment, each delivery of the project is adjusted.  This software development methodology builds the final product progressively. In each incremental stage, a new functionality is added, allowing for faster results compared to the waterfall model. The software can be used even before it is fully completed, and in general, it is much more flexible than other methodologies.  We decided to use the following phases during each increment until the product delivery:  - Planning Phase  - Design Phase  - Development Phase  - Testing Phase  - Deployment Phase\*  Members:  - Felipe Sanchez -> Project Manager  - Nestor Áviles -> Software Architect  - Diego Barrera -> QA  - Ignacio Jimenez -> Mobile Application Developer  - Javier Guzman -> Database Developer  - Matias Arteaga -> Computer Engineer  - Jose Donoso -> Frontend Developer  - Tomas Campos -> Designer  - Nicolas Zuñiga -> Network Engineer  - Matias Carvajal -> Backend Developer |

|  |
| --- |
| **6. Evidence** |
| Next, describe what evidence will be evaluated in the progress report and the final report of your APT project. This evidence should be agreed upon with your instructor. Evidence will refer to the products developed during the project, which aim to visualize or document how the work has been implemented.. |

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of evidence (progress or final)** | **Name of the evidence** | **Description** | **Justification** |
| **Progress** | **Kick Off** | Detail a summary of the first meeting with the work team, including the brainstorming session and contributions made by each member during the meeting | This document is important because it outlines how the first meeting was conducted and what was achieved from it. |
| **Progress** | **Project Charter** | Specify the development and business objectives of the project, the problem or need, the proposed solution, and the justification for the project | This document serves to clarify the project's objectives and the identified problem |
| **Progress** | **Requirements Specification Report (ERS)** | This document describes in detail the purpose, description, functions of the product, and the non-functional requirements | This document is important because it specifies the requirements in a much more detailed and clear manner |
| **Progress** | **Requirements Spreadsheet** | Briefly describe the requirements that the solution or software will have. | This document is important as it is used for the development of the functionalities that the project will have |
| **Progress** | **Gantt Chart** | Describe the activities that each team member will have, the time, and the costs that the project will incur | This document is important because it specifies the activities and their duration |
| **Progress** | **Risk Management Plan** | Describe the risks, threats, and vulnerabilities identified in the project, and how we will manage these risks | This document is important because it outlines the various risks and how we will manage them |
| **Progress** | **Diagram EDT** | This document is the work breakdown structure, specifying the activities that will be carried out throughout the project | This document is important because it specifies the activities that will be carried out throughout the project |
| **Progress** | **Mockups** | It shows the preview of what the product interface will look like. | This deliverable is important because it shows what the visual interface of the software will be like |
| **Progress** | **Project Scope Statement** | This document describes the specific objectives and the general objective of the project, as well as the constraints, assumptions, and deliverables | This report is important because it shows and describes the specific objectives |
| **Progress** | **Software Architecture Document (SAD)** | It specifies how the software architecture will be designed and how the system will be deployed | This report is important because it shows and describes how the architecture of the project will be implemented |

|  |
| --- |
| **7. Work Plan** |
| In the following table, define the planning of your APT Project according to the requirements.. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Plan de Trabajo Proyecto APT** | | | | | | |
| **Competence or Units of Competence** | **Name of Activities/Tasks** | **Description of Activities/Tasks** | **Resources** | **Duration of the Activity** | **Responsible** | **Observations** |
| *Database Programming / Database Querying* | Database Programming. Entity-Relationship Model. | - The entire database that will be used in the web application will be programmed.  - The entity-relationship model will be created to define the relationships of all entities within the system. | - Licenses  - Computer  - Desk  - Chair  - Internet  -Database Programmer | - 3 days  - 1 day | Javier Guzman | The challenges that could arise in this area include limited database manipulation due to the programmer's availability. The positive aspect is that good communication can be maintained with the person in charge, though they may become overwhelmed by the workload. |
| *Communication Skills* | - Feedback and Evaluation | - Feedback and evaluation of all progress made will be conducted. *Resources.* | - Meeting room  - Computer  - Desk  - Chair  - Internet  - Project Manager  - Software Architect  - IT Engineer | - 1 day x fase | Felipe Sanchez  Nestor Áviles  Matias Arteaga | This section will be maximized, as it will aim to address the client's questions and continue improving the quality of the work. |
| *Desktop Software Development /*  *Algorithm Programming* | -Development Environment Setup  - Integration of Features  - Development of Security Features  - Development of Network Features  - Permissions and Roles Management  - Cross-Platform Feature Integration  - Development of Advanced Features  - Development of User Views  - Integration of External Services  - Development of Connectivity Features  - Development of Automation Features  - Optimization and Refactoring  -Code Documentation | - The development environment will be set up to start without any delays.  - Features will be integrated as they are developed.  - The fundamental security features of the app will be developed.  - The network functionality used in the app will be developed.  - Permissions and roles of the employees will be managed.  - The function that allows the app to run on different platforms will be integrated.  - Various functions that add additional value to the app will be integrated.  - Sections that only the user can view will be developed.  - Various external services, such as Transbank, will be integrated.  - The connectivity function that helps with the connection between systems will be developed.  - The automation function, which helps reduce human intervention, will be developed.  - The code will be optimized and maintained.  - All the code for the web app will be documented. | - Computers  - Desks  - Chairs  - Internet  - IT Engineer  - Backend Developer  - Network and Telecommunications Engineer  - Mobile Applications Developer | - 2 days  - 2 days  - 1 day  - 1 day  - 2 days  - 2 days  - 2 days  - 1 day  - 2 days  - 3 days  - 2 days  - 2 days  - 1 day  - 1 day | Matias Carvajal  Ignacio Jimenez  Nicolas Zuñiga  Matias Arteaga | Most of the personnel are allocated in this section to optimize production times for developments. However, a potential challenge could be coordinating the team to ensure that everyone collaborates effectively |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Software Quality* | **-Test Environment Setup**  **- Execution of Functional Tests**  **- Execution of Non-Functional Tests**  **- Delivery of Test Results**  **- Product Demonstration**  **- Compatibility Testing** | - A test environment will be prepared for conducting the tests.  - Functional tests that were previously planned will be executed.  - Non-functional tests that were previously planned will be executed.  - Results of the successfully completed tests will be delivered.  - The product with the implemented changes will be demonstrated.  - Various tests will be conducted to check the app's compatibility with different systems. | - Computers  - Desks  - Chairs  - Internet  - Licenses  - QA  - Software Architect  - Frontend Developer | - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day | Diego Barrera  Nestor Áviles  Jose Donoso | What is available in this section is the hardware usage time, as it will be used for a clear and high-priority objective, similar to the previous point concerning software quality. |
| *Project Management / Architecture* | - Kick-Off  - Charter  - Requirements Spreadsheet  - Identify Stakeholders  - EDT Diagram, Matrix, and Dictionary  - ERS Report  - Responsibility Matrix  - Project Management Plan  - Communication Plan  - Quality Plan  - Resource Management Plan  - Traceability Matrix  - Identify Business Processes  - Budget Spreadsheet  - Use Case Diagram and Extended Use Case  - Mockups  - Activity Diagrams  - Sequence Diagrams  - State Diagram  - Class Diagram  - Component Diagram  - Package Diagram  - Communication Diagram  - Deployment Diagram  - Process Map  - AS IS Model  - Validation of Functional and Non-Functional Requirements  - Risk Assessment  - Security Policy Design  - Identify KPIs and KRIs  - Identify Quality Model  - TO BE Model  - Test Plan Report  - Identify Test Cases  - Change Control Report | - Report detailing the first team meeting.  - The charter is created, specifying the problem, the solution, the general objective, and the specific objectives.  - The requirements that the system will have are specified.  - The stakeholders in the project are identified.  - The activities that will be carried out in the project are specified.  - The project's requirements are detailed.  - The activity performed by each team member is specified.  - How the project will be managed, including perspective, purpose, objectives, strengths, and weaknesses, is specified.  - How communication with team members will be conducted is specified.  - The quality model to be used for optimizing business processes is specified.  - How project resources will be managed will be specified.  - How the status of each requirement will be monitored will be specified.  - The business processes involved in the project are identified.  - The total costs of the project and their distribution will be specified.  - How the functionality of each requirement will be implemented will be specified.  - A visual representation of the interfaces that the system will have will be shown.  - The activities will be carried out sequentially, aiming to estimate the time.  - The activities will be performed with a focus on their work status, which can be "not started," "in development," or "completed."  - It is the graphical representation of the classes that the software will have, including their relationships.  - It shows how the physical structure of the software will be.  - It represents the dependencies between the packages that compose a model.  - It is the structure of how the team will work together with the software to achieve the objectives.  - It shows the system architecture as well as the deployment.  - It is the versioning of market processes regarding the product, performed to see the order of sales.  - The business processes will be specified, represented in a model.  - A validation will be carried out through the tracking performed by the traceability matrix.  - Risks will be assessed based on their level of impact and the likelihood of occurrence.  - A specialized report focusing strictly on the security policies for the project will be created; these should be among the most important points to review and manage.  - An analysis of the processes that the product has will be performed, and from this analysis, KPIs (Key Performance Indicators) and KRIs (Key Risk Indicators) will be created.  - The quality model to be used for improving the system's business processes will be identified.  - The As Is model will be modified by implementing the selected quality model.  - The purpose of the test plan is to provide a reminder of the tests conducted and to highlight key processes.  - Test cases will be identified, focusing only on cases of utmost importance, as maximum priority will always be given to the project.  - A specialized report will be maintained for change control in the project, permanently tracking changes made throughout the project. | - Computers  - Tables  - Chairs  - Internet  - Licenses (Office)  - Software Architect  - Project Manager  - Computer Engineer  - Designer | - 1 day  - 1 day  - 1 day  - 1 day  - 3 days  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 2 day  - 1 day  - 2 days  - 2 days  - 2 days  - 2 days  - 2 days  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day  - 1 day | Nestor Áviles  Felipe Sanchez  Matias Arteaga  Tomas Campos | One of the difficulties that may arise in this area is management capacity, as there were only three people to lead and manage everything related to this topic. A possible solution would be to hire more staff dedicated to the IT area, provided that the budget is not exceeded. |

|  |
| --- |
| **8. Carta Gantt** |
| Find a Gantt chart format that works for you and organize the planned activities from the previous point, considering the assigned period for the development of your APT Project. You must maintain the timeline of the academic period in the development of the three phases outlined in the Portfolio Title Course. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Actividad** | **Fase 1** | | | | **Fase 2** | | | | | | | | | | | | **Fase 3** | | | |
| **S 1** | **S 2** | **S 3** | **S 4** | **S 5** | **S 6** | **S 7** | **S 8** | **S 9** | **S 10** | **S 11** | **S 12** | **S 13** | **S 14** | **S 15** | **S 16** | | **S 17** | **S 18** |
| **Initiation and Planning Phase** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Kick off |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Constitution Act |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Requirements Sheet |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Identify Stakeholders |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| EDT Diagram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| EDT Matrix |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| EDT Dictionary |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| ERS Report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Responsibility Matrix |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Project Direction Plan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Communications Plan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Quality Plan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Resource Management Plan |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Traceability Matrix |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Identify Business Processes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Budget Sheet |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Feedback and Evaluation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Analysis and Design Phase |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Development Tools Evaluation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Entity-Relationship Model |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Use Case Diagram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Extended Use Cases |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Mockups |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Activity Diagrams |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Sequence Diagram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| State Diagrams |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Class Diagram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Component Diagram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Package Diagram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Communication Diagram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Deployment Diagram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Process Map |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| As Is Model |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Validation of Functional and Non-Functional Requirements |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Risk Assessment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Security Policy Design |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Identify KPI and KRI |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Identify Quality Model |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| To Be Model |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Feedback and Evaluation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Development Phase |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Preparation of Development Environment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Database Programming |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Integration of Functionalities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Development of Security Functionality |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Development of Network Functionality |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Development of Rest API |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Management of Permissions and Roles |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Integration of Multiplatform Functionalities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Development of Advanced Functionalities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Development of User Views |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Integration of External Services |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Development of Connectivity Functionalities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Development of Automation Functionalities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Optimization and Refactoring |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Compatibility Testing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Code Documentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Feedback and Evaluation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Testing Phase |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Testing Plan Report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Identify Test Cases |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Change Control Report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Preparation of Testing Environment |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Execution of Functional Tests |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Execution of Non-Functional Tests |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Establish Criteria for Start, Acceptance, Rejection, and Suspension |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Delivery of Test Results |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Product Display (Changes Made) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |
| Feedback and Evaluation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |  |