

**SISTEMAS INFORMATICOS Y COMPUTACIÓN**

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**Componente:**

Fundamentos de Ingeniería de Software

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### DOCUMENTO VISIÓN

**<SISTEMA DE MATRICULACIÓN VEHICULAR>**

**Vision**

# INTRODUCTION

## 1.1       Purpose

El propósito de este documento es recoger, analizar y definir las necesidades y características de alto nivel del Sistema de Matriculación Vehicular. El documento se centra en las capacidades requeridas por las partes interesadas y los usuarios finales, y por qué existen estas necesidades.

Los detalles de cómo el Sistema de Matriculación Vehicular satisface estas necesidades se detallan en los casos de uso y especificaciones suplementarias.

## 

## 1.2               Scope

## El sistema a desarrollar permitirá a los usuarios poder realizar el trámite de matriculación vehicular via on-line con el fin de mejorar la atención al cliente brindar más comodidad al realizar los trámites correspondientes y la optimización del tiempo ya que lo podrá realizar desde cualquier lugar con conexión a Internet.

## El sistema podrá realizar los siguientes procesos: Requisitos para matriculación vehicular, consulta de multas, Fecha para revisión vehicular, la renovación de matricula por caducidad, duplicados de matrícula y la revisión anual del vehiculo.

## 1.3               Definitions, Acronyms, and Abbreviations

**RUP=** Proceso Unificado Racional. Es un modelo de proceso para el desarrollo de software.

## 1.4               References

-RUP

## 1.5               Overview

[This subsection describes what the rest of the **Vision** document contains and explains how the document is organized.]

# 2.                  Positioning

## 2.1               Business Opportunity

El Sistema de Matriculación vehicular permitirá automatizar el proceso de matriculación vehicular, la misma que contará con interfaz amigable y entendible para el usuario que permitirá agilizar los trámites correspondientes con eficiencia y calidad, además de que se trata de un sistema confiable ya que siempre brindará seguridad al momento de realizar una transacción por parte de los usuarios.

## 2.2               Problem Statement

|  |  |
| --- | --- |
| The problem of | Desarrollar un Sistema de Matriculación vehicular el mismo que permitirá al usuario conocer los requisitos para la matriculación vehicular, la consulta de multas, la obtención de la Fecha para revisión vehicular y principalmente realizar el proceso de matriculación. |
| Affects | -A los clientes quienes van a adquir los servicios que la Agencia de Tránsito ofrece.  -Al grupo de profesionales que laboran en la agencia de tránsito que a través de su sistema ofrecen sus servicios. |
| the impact of which is | Realizar el proceso de matriculación vehicular con una atención ineficiente e incómoda para los usuarios. |
| a successful solution would be | Desarrollar un software que cuente con una base de datos en donde se registren las transacciones de los clientes teniendo acceso a ella con una interfaz gráfica amigable y entendible para el usuario |

## 2.3               Product Position Statement

[Provide an overall statement summarizing, at the highest level, the unique position the product intends to fill in the marketplace. The following format may be used:]

|  |  |
| --- | --- |
| For | -Gerente o representante de Empresa de Agencia de Tránsito  -Personas que necesiten matricular su vehículo. |
| Who | Controlan las solicitudes de los diferentes servicios que presta la empresa con su equipo de trabajo. |
| The (product name) | Ssitema de Matriculación vehicular |
| That | Permite a los usuarios saber los requisitos para la matriculación, consulta de multas, la obtención de Fecha para la revisión vehicular y principalmente realizar la matriucula de su vehículo. |
| Unlike | Recurrir y realizar el proceso de matriculación en la Agencia de Tránsito |
| Our product | Consiste en una aplicación que cuenta con una interfaz accesible para los usuarios en donde tendrá disponible servicios cuyo objetivo principal es que el cliente pueda realizar el trámite de matriculación vehicular. |

[A product position statement communicates the intent of the application and the importance of the project to all concerned personnel.]

# 3.                  Stakeholder and User Descriptions

Para proveer de una forma efectiva productos y servicios que se ajusten a las necesidades de los usuarios, es necesario identificar e involucrar a todos los participantes en el proyecto como parte del proceso de modelado de requerimientos. También es necesario identificar a los usuarios del sistema y asegurarse de que el conjunto de participantes en el proyecto los representa adecuadamente. Esta sección muestra un perfil de los participantes y de los usuarios involucrados en el proyecto, así como los problemas más importantes que éstos perciben para enfocar la solución propuesta hacia ellos. No describe sus requisitos específicos ya que éstos se capturan mediante otro artefacto. En lugar de esto proporciona la justificación de por qué estos requisitos son necesarios.

## 3.1               Market Demographics

En la ciudad de Loja cada año se matriculan alrededor de 24.000 vehículos, debido a la gran demanda Nuestro producto esta apto para poder solventar con eficiencia y calidad dicha demanda, mediante el desarrollo de este software los usuarios tendrán mas comodidad para realizar dichos trámites, disminuirá los reclamos por parte de los clientes, mejorará notablemente la atención ya que nuestro sistema es confiable y seguro.

## 3.2               Stakeholder Summary

[There are a number of stakeholders with an interest in the development and not all of them are end users. Present a summary list of these non-user stakeholders. (The users are summarized in section 3.3.)]

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| Luis Mena  Christian Jiménez  Diego Moreno  Lizzette Betancourt | Desarrolladores del Sistema de Matriculación Vehicular | -Eficiencia de la aplicación.  - Soporte Técnico del Sistema. |

## 3.3               User Summary

[Present a summary list of all identified users.]

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| **Gerente de la Empresa** | Persona encargada de Dirigir y Maximizar la utilidad productiva de la organización. | -Controlar la eficiencia del Sistema para su uso. |  |
| Personas en General | Usuarios que tengan vehículo | -Matricular su vehículo |  |

## 

## 3.4               User Environment

Los usuarios entrarán al sistema si están registrados a través de su usuario y contraseña, si no se han registrados tendrán la opción de hacerlo. Después tendrán disponibles toda la información acerca de Requisitos para Matricula, Consulta de multas, Fecha para matriculación vehicular y Matriculación a través de una interfaz gráfica, la misma que es fácil de entender para no crear conflictos de manipulación del sistema.

En Requisitos para matricula el usuario podrá conocer los requerimientos necesarios para llevar a cabo este proceso dependiendo de los diferentes servicios de matriculación que el sistema ofrece (Renovacion de matricula por caducidad, duplicados de matricula, revision anual).

La Consulta de multas muestra los pagos pendientes que el cliente tiene con la organización.

Fecha para revisión vehicular ofrece al usuario una fecha determinada para realizar la revisión física del vehículo.

Matriculación ofrece al usuario los servicios de renovación de matrícula por caducidad, duplicados de matrícula, y la revisión anual del vehículo.

La renovación de matrícula por caducidad se la realiza cuando la matrícula vehicular del cliente haya expirado. El proceso de duplicación de matrícula es el trámite que se realiza en el caso de pérdida, robo, deterioro total o parcial de la matrícula. Finalmente la opción de revisión anual del vehículo permite al usuario hacer el trámite para el inspeccionamiento de su vehículo que debe cumplir cada año.

## 3.5               Stakeholder Profiles

### 3.5.1          <Desarrolladores del Software>

|  |  |
| --- | --- |
| **Representative** | Luis Mena, Christian Jiménez, Diego Moreno y Lizzette Betancourt |
| **Description** | Desarrolladores del Sistema de Matriculación Vehicular |
| **Type** | Programadores. |
| **Responsibilities** | -Eficiencia de la aplicación.  - Soporte Técnico del Sistema. |
| **Success Criteria** | Definido por Clientes |
| **Involvement** | Diseño e Implementación del software. |
| **Deliverables** |  |
| **Comments / Issues** |  |

## 3.6               User Profiles

### 3.6.1          <Gerente o Representate de la Empresa>

|  |  |
| --- | --- |
| **Representative** |  |
| **Description** | Persona encargada de Dirigir y Maximizar la utilidad productiva de la organización. |
| **Type** | Experto en Gestón de proyectos |
| **Responsibilities** | -Controlar la eficiencia del Sistema para su uso |
| **Success Criteria** | Definido por cliente |
| **Involvement** | Cliente para venta de software |
| **Deliverables** |  |
| **Comments / Issues** |  |

### 3.6.2          <Personas en General>

|  |  |
| --- | --- |
| **Representative** |  |
| **Description** | Usuarios que tengan vehículo |
| **Type** | Usuarios que quieran matricular su vehiculo. |
| **Responsibilities** | -Matricular Vehículo |
| **Success Criteria** | Definido por cliente |
| **Involvement** | Usuario |
| **Deliverables** |  |
| **Comments / Issues** |  |

## 3.7               Key Stakeholder or User Needs

[List the key problems with existing solutions as perceived by the stakeholder. Clarify the following issues for each problem:

- What are the reasons for this problem?

- How is it solved now?

- What solutions does the stakeholder or user want?]

[It is important to understand the **relative** importance the stakeholder or user places on solving each problem. Ranking and cumulative voting techniques indicate problems that **must** be solved versus issues they would like addressed.

Fill in the following table-if using Rational RequisitePro to capture the Needs, this could be an extract or report from that tool.]

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
| Broadcast messages |  |  |  | |  |
|  |  |  |  |  |  |

## 3.8               Alternatives and Competition

[Identify alternatives the stakeholder perceives as available. These can include buying a competitor's product, building a homegrown solution or simply maintaining the status quo. List any known competitive choices that exist or may become available. Include the major strengths and weaknesses of each competitor as perceived by the stakeholder or end user.]

### 3.8.1          <aCompetitor>

### 3.8.2          <anotherCompetitor>

# 4.                  Product Overview

El Software a desarrollar es un sistema de Matriculación Vehicular para una Empresa de Agencia de Tránsito el mismo que brindará los siguientes servicios: Requisitos para Matricula, Consulta de multas, Fecha para matriculación vehicular y Matriculación*.* Dicho sistema evitará que el usuario tenga que dirigirse a la agencia logrando más comodidad y ofrecer un mejor servicio a los clientes.

## 4.1               Product Perspective

[This subsection of the **Vision** document puts the product in perspective to other related products and the user's environment. If the product is independent and totally self-contained, state it here. If the product is a component of a larger system, then this subsection relates how these systems interact and identifies the relevant interfaces between the systems. One easy way to display the major components of the larger system, interconnections, and external interfaces is with a block diagram.]

## 4.2               Summary of Capabilities

[Summarize the major benefits and features the product will provide. For example, a **Vision** document for a customer support system may use this part to address problem documentation, routing, and status reporting without mentioning the amount of detail each of these functions requires.

Organize the functions so the list is understandable to the customer or to anyone else reading the document for the first time. A simple table listing the key benefits and their supporting features might suffice. For example:]

**Table 4-1   Customer Support System**

|  |  |
| --- | --- |
| **Customer Benefit** | **Supporting Features** |
| New support staff can quickly get up to speed. | Knowledge base assists support personnel in quickly identifying known fixes and workarounds. |
| Customer satisfaction is improved because nothing falls through the cracks. | Problems are uniquely itemized, classified and tracked throughout the resolution process. Automatic notification occurs for any aging issues. |
| Management can identify problem areas and gauge staff workload. | Trend and distribution reports allow high level review of problem status. |
| Distributed support teams can work together to solve problems. | Replication server allows current database information to be shared across the enterprise. |
| Customers can help themselves, lowering support costs and improving response time. | Knowledge base can be made available over the Internet. Includes hypertext search capabilities and graphical query engine. |

## 4.3               Assumptions and Dependencies

[List each of the factors that affects the features stated in the **Vision** document. List assumptions that, if changed, will alter the **Vision** document. For example, an assumption may state that a specific operating system will be available for the hardware designated for the software product. If the operating system is not available, the **Vision** document will need to change.]

## 4.4               Cost and Pricing

[For products sold to external customers and for many in- house applications, cost and pricing issues can directly impact the application's definition and implementation. In this section, record any cost and pricing constraints that are relevant. For example, distribution costs (# of diskettes, # of CD-ROMs, CD mastering) or other cost of goods sold constraints (manuals, packaging) may be material to the projects success, or irrelevant, depending on the nature of the application.]

## 4.5               Licensing and Installation

[Licensing and installation issues can also directly impact the development effort. For example, the need to support serializing, password security or network licensing will create additional requirements of the system that must be considered in the development effort.

Installation requirements may also affect coding or create the need for separate installation software.]

# 5.                  Product Features

[List and briefly describe the product features. Features are the high-level capabilities of the system that are necessary to deliver benefits to the users. Each feature is an externally desired service that typically requires a series of inputs to achieve the desired result. For example, a feature of a problem tracking system might be the ability to provide trending reports. As the use-case model takes shape, update the description to refer to the use cases.

Because the **Vision** document is reviewed by a wide variety of involved personnel, the level of detail needs to be general enough for everyone to understand. However, enough detail must be available to provide the team with the information they need to create a use-case model.

To effectively manage application complexity, we recommend for any new system, or an increment to an existing system, capabilities are abstracted to a high enough level so 25-99 features result. These features provide the fundamental basis for product definition, scope management, and project management. Each feature will be expanded in greater detail in the use-case model.

Throughout this section, each feature will be externally perceivable by users, operators or other external systems. These features should include a description of functionality and any relevant usability issues that must be addressed. The following guidelines apply:

- Avoid design. Keep feature descriptions at a general level. Focus on capabilities needed and why (not how) they should be implemented.

- If you are using the Rational RequisitePro toolkit, all need to be selected as requirements of type for easy reference and tracking.]

## 5.1               <aFeature>

## 5.2               <anotherFeature>

# 6.                  Constraints

[Note any design constraints, external constraints or other dependencies.]

# 7.                  Quality Ranges

[Define the quality ranges for performance, robustness, fault tolerance, usability, and similar characteristics that are not captured in the Feature Set.]

# 8.                  Precedence and Priority

[Define the priority of the different system features.]

# 9.                  Other Product Requirements

[At a high-level, list applicable standards, hardware or platform requirements, performance requirements, and environmental requirements.]

## 9.1               Applicable Standards

[List all standards with which the product must comply. These can include legal and regulatory (FDA, UCC) communications standards (TCP/IP, ISDN), platform compliance standards (Windows, UNIX, and so on), and quality and safety standards (UL, ISO, CMM).]

## 9.2               System Requirements

[Define any system requirements necessary to support the application. These can include the supported host operating systems and network platforms, configurations, memory, peripherals, and companion software.]

## 9.3               Performance Requirements

[Use this section to detail performance requirements. Performance issues can include such items as user load factors, bandwidth or communication capacity, throughput, accuracy, and reliability or response times under a variety of loading conditions.]

## 9.4               Environmental Requirements

[Detail environmental requirements as needed. For hardware- based systems, environmental issues can include temperature, shock, humidity, radiation, and so forth. For software applications, environmental factors can include usage conditions, user environment, resource availability, maintenance issues, and error handling and recovery.]

# 10.             Documentation Requirements

[This section describes the documentation that must be developed to support successful application deployment.]

## 10.1            User Manual

[Describe the purpose and contents of the User Manual. Discuss desired length, level of detail, need for index, glossary of terms, tutorial versus reference manual strategy, and so on. Formatting and printing constraints must be identified also.]

## 10.2            Online Help

[Many applications provide an online help system to assist the user. The nature of these systems is unique to application development as they combine aspects of programming (hyperlinks, and so on) with aspects of technical writing such as organization and presentation. Many have found the development of online help system is a project within a project that benefits from up-front scope management and planning activity.]

## 10.3            Installation Guides, Configuration, and Read Me File

[A document that includes installation instructions and configuration guidelines is important to a full solution offering. Also, a Read Me file is typically included as a standard component. The Read Me file can include a "What's New With This Release" section, and a discussion of compatibility issues with earlier releases. Most users also appreciate documentation defining any known bugs and workarounds in the Read Me file.]

## 10.4            Labeling and Packaging

[Today's state-of-the-art applications provide a consistent look and feel that begins with product packaging and manifests through installation menus, splash screens, help systems, GUI dialogs, and so on. This section defines the needs and types of labeling to be incorporated into the code. Examples include copyright and patent notices, corporate logos, standardized icons and other graphic elements, and so forth.]

# A.          Feature Attributes

[Features are given attributes that can be used to evaluate, track, prioritize, and manage the product items proposed for implementation. All requirement types and attributes are outlined in the Requirements Management Plan, however you may wish to list and briefly describe the attributes for features that have been chosen. The following subsections represent a set of suggested feature attributes.]

## A.1            Status

[Set after negotiation and review by the project management team. Tracks progress during definition of the project baseline.]

|  |  |
| --- | --- |
| Proposed | [Used to describe features that are under discussion but have not yet been reviewed and accepted by the "official channel," such as a working group consisting of representatives from the project team, product management, and user or customer community.] |
| Approved | [Capabilities that are deemed useful and feasible, and have been approved for implementation by the official channel. ] |
| Incorporated | [Features incorporated into the product baseline at a specific point in time.] |

## A.2            Benefit

[Set by Marketing, the product manager or the business analyst. All requirements are not created equal. Ranking requirements by their relative benefit to the end user opens a dialogue with customers, analysts, and members of the development team. Used in managing scope and determining development priority.]

|  |  |
| --- | --- |
| Critical | [Essential features. Failure to implement means the system will not meet customer needs. All critical features must be implemented in the release or the schedule will slip.] |
| Important | [Features important to the effectiveness and efficiency of the system for most applications. The functionality cannot be easily provided in some other way. Lack of inclusion of an important feature may affect customer or user satisfaction, or even revenue, but release will not be delayed due to lack of any important feature.] |
| Useful | [Features that are useful in less typical applications will be used less frequently or for which reasonably efficient workarounds can be achieved. No significant revenue or customer satisfaction impact can be expected if such an item is not included in a release.] |

## A.3            Effort

[Set by the development team. Because some features require more time and resources than others, estimating the number of team or person-weeks, lines of code required or function points, for example, is the best way to gauge complexity and set expectations of what can and cannot be accomplished in a given time frame. Used in managing scope and determining development priority.]

## A.4            Risk

[Set by development team based on the probability the project will experience undesirable events, such as cost overruns, schedule delays or even cancellation. Most project managers find categorizing risks as high, medium, and low is sufficient, although finer gradations are possible. Risk can often be indirectly assessed by measuring the uncertainty (range) of the projects team's schedule estimate.]

## A.5            Stability

[Set by analyst and development team based on the probability the feature will change or the team's understanding of the feature will change. Used to help establish development priorities and determine those items for which additional elicitation is the appropriate next action.]

## A.6            Target Release

[Records the intended product version in which the feature will first appear. This field can be used to allocate features from a **Vision** document into a particular baseline release. When combined with the status field, your team can propose, record, and discuss various features of the release without committing them to development. Only features whose Status is set to Incorporated and whose Target Release is defined will be implemented. When scope management occurs, the Target Release Version Number can be increased so the item will remain in the **Vision** document but will be scheduled for a later release.]

## A.7            Assigned To

[In many projects, features will be assigned to "feature teams" responsible for further elicitation, writing the software requirements, and implementation. This simple pull-down list will help everyone on the project team to understand responsibilities better.]

## A.8            Reason

[This text field is used to track the source of the requested feature. Requirements exist for specific reasons. This field records an explanation or a reference to an explanation. For example, the reference might be to a page and line number of a product requirement specification or to a minute marker on a video of an important customer review.]

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