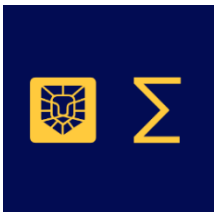
Specification of software requirements

Subjec: Mecanic System



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Date	Review	Description	Author
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Document validated by the parties on date: [Fecha]

For the client	By the supplying company
Universidad Internacional del Ecuador	SigmaProgrammers
Signed. Mr. / Mrs.[Nombre]	Signed. Mr / Mrs[Nombre]

Content

1 Introduction

Our work proposes to automate the processes of the multi-brand mechanical workshop, to obtain control and reduction of time in customer service and in the services offered. It was observed that the workshop lacked efficient administrative control, due to the absence of a software system.
The development of the work was carried out around the needs presented in a multi-brand mechanical workshop, in order to keep track of invoicing, maintenance records, sale of spare parts, future appointments, among other services, in this way the system optimizes customer time and workshop efficiency.

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1.1 Purpose

The purpose of this project is to automate the services of a mechanical workshop, through the development of a web system that will allow the management of different administrative and service processes. This will be used by the manager and administrator of the mechanics.

1.2 Scope

The scope of this project is based on implementing the mechanical system, to help the processes offered by the workshop, it will cover all the requirements of both the client and the administrator, focusing on controlling and reducing the time in each process.

1.3 Involved personnel

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1.4 Definitions, acronyms and abbreviations

Name	Description
MS:	Mecanic System
User:	Person who will use the system to manage processes

1.5 References

Reference	Title	Route	Date	Author

[Ref.]IEEE	Standard IEEE 830 - 1998			

1.4 Summary

This document consists of three parts. In the first part, an introduction to the subject of the project is made and an overview of the system and its resources is provided.

In the second section of the document a general description of the system is made, in order to know the main functions that it must perform,
data, restrictions, and dependencies that affect development, without going into excessive detail.

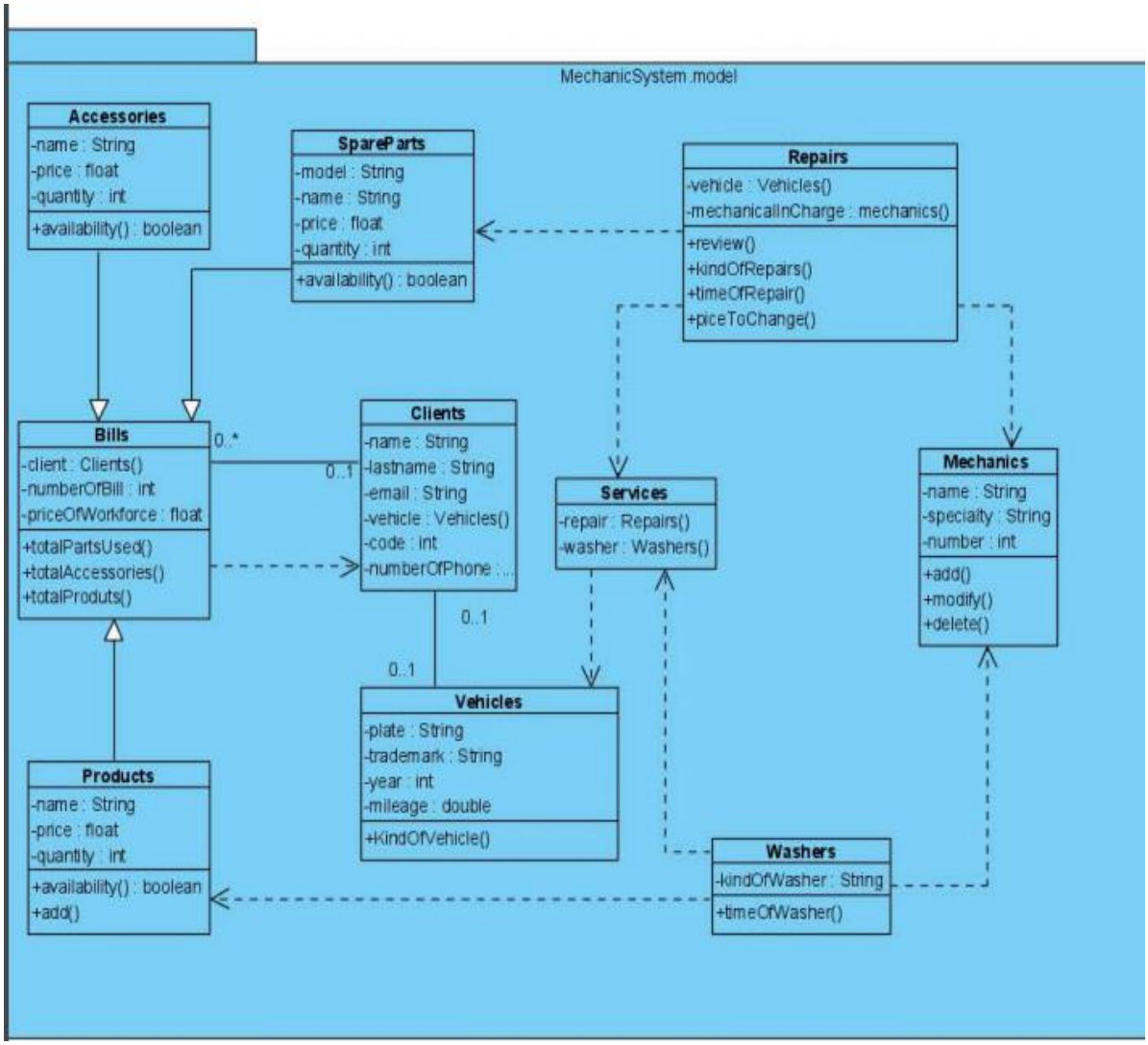
Finally, the third part of the document is the one in which the requirements that the system must have for its proper functioning will be specified in detail.

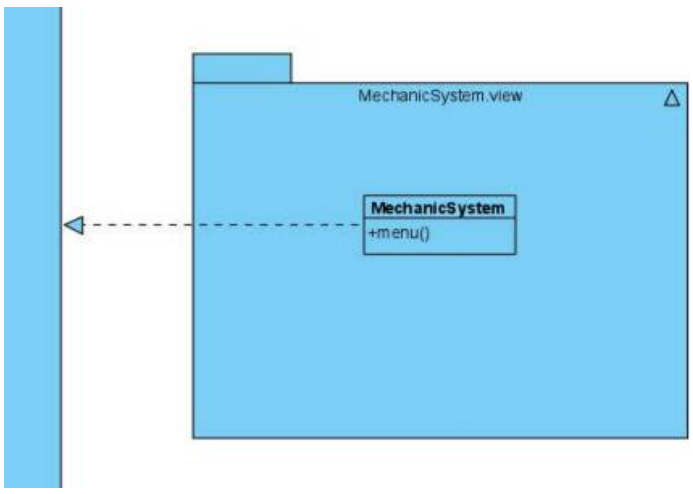
2 General description

2.1 Product perspective

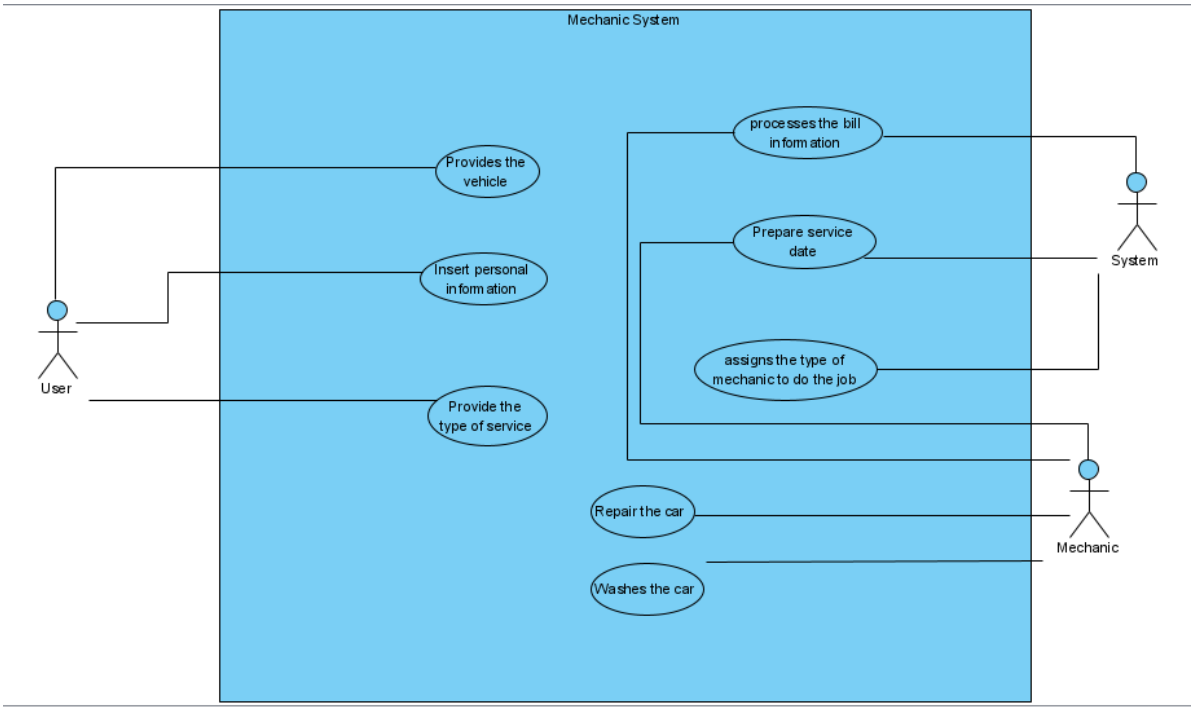
The MS system will be a product designed to work and meet the needs of the workshop, it will be implemented on the PC with access to the WEB, which will allow its use quickly and efficiently.

UML Diagram


MechanicSystem.model
Accessories
-name : String
-price : float
-quantity : int
+availability() : boolean
SpareParts
-model : String
-name : String
-price : float
-quantity : int
+availability() : boolean
Repairs
-vehicle : Vehicles()
-mechanicalInCharge : mechanics()
+review()
+kindOfRepairs()
+timeOfRepair()
+piceToChange()
Bills
-client : Clients()
-numberOfBill : int
-priceOfWorkforce : float
+totalPartsUsed()
+totalAccessories()
+totalProduts()
0..*
0..1
Clients
-name : String
-lastname : String
-email : String
-vehicle : Vehicles()
-code : int
-numberOfPhone : ...
Services
-repair : Repairs()
-washer : Washers()
Mechanics
-name : String
-specialty : String
-number : int
+add()
+modify()
+delete()
0..1
0..1
Vehicles
-plate : String
-trademark : String
-year : int
-mileage : double
+KindOfVehicle()
Products
-name : String
-price : float
-quantity : int
+availability() : boolean
+add()
Washers
-kindOfWasher : String
+timeOfWasher()


MechanicSystem.view
MechanicSystem
+menu()

2.2 Product functionality



Description.

The job of the system is to collect the information given by the user such as the name, type of vehicle and type of service which will then be shown to the mechanics so that they can carry out their work in addition to the system creating the invoice that is given to them. It will provide the user where the service that has been given with the products used and the cost of the same is detailed

2.3 User characteristics

Type of user	Administrador
Training	Basic technological knowledge

Activities	Control and management of the system

Type of user	Client
Training	NA
Activities	system user

Type of user	Mechanic
Training	mechanical technician
Activities	repair vehicles

2.4 Restrictions

-Languages and JAVA technologies
- the System will be designed as client / server
-Interface that connects to the internet
- The system will have a simple design.

2.5 Assumptions and dependencias

- The requirements described here are assumed to be stable
- The computers on which the system will be run must meet the requirements indicated above to guarantee a correct execution of the same.

3 Specific requirements

Requirement number	RF01		
Requirement name	Register Client		
Description	to register a user must approach the administration to give their personal data and be registered in the system		
Type	☐ Requirement	☐ Restriction	
Requirement source	Document, “Mechanic System”		
Requirement priority	☐ High / Essential	☐ Average / Desired	☐ Low / Optional

Requirement number	RF02		
Requirement name	Register Products		
Description	registered products will be useful for the system		
Type	☐ Requirement	☐ Restriction	
Requirement source	Document, “Mechanic System” these data important for de services		
Requirement priority	☐ High / Essential	☐ Average / Desired	☐ Low / Optional

Requirement number	RF03		
Requirement name	Register Vehicle		
Description	register the vehicle in the system		
Type	☐ Requirement	☐ Restriction	
Requirement source	Document, “Mechanic System” these data may be consulted by the user.		
Requirement priority	☐ High / Essential	☐ Average / Desired	☐ Low / Optional

Requirement number	RF04		
Requirement name	Bills		
Description	system sales and purchases record		
Type	☐ Requirement	☐ Restriction	
Requirement source	Document, “Mechanic System”		
Requirement priority	☐ High / Essential	☐ Average / Desired	☐ Low / Optional

Requirement number	RF05		
Requirement name	Repairs		
Description	stores the type of repairs that mechanics does		
Type	☐ Requirement	☐ Restriction	
Requirement source	Document, “Mechanic System”		
Requirement priority	☐ High / Essential	☐ Average / Desired	☐ Low / Optional

Requirement number	RF06

Requirement name	Discounts		
Description	Make discounts for fixed customers of the mechanics		
Type	☐ Requirement	☐ Restriction	
Requirement source	Document, “Mechanic System”		
Requirement priority	☐ High / Essential	☐ Average / Desired	☐ Low / Optional

Requirement number	RF07		
Requirement name	system management		
Description	allows you to search and modify information throughout the system		
Type	☐ Requirement	☐ Restriction	
Requirement source	Document, “Mechanic System”		
Requirement priority	☐ High / Essential	☐ Average / Desired	☐ Low / Optional

Requirement number	RF08		
Requirement name	Value plates		
Description	the system will allow to enter the license plates of the automobiles for the process		
Type	☐ Requirement	☐ Restriction	
Requirement source	Document, “Mechanic System”		
Requirement priority	☐ High / Essential	☐ Average / Desired	☐ Low / Optional

3.1 Common interface requirements

3.1.1 User interfaces

The user interface will consist of a set of windows with buttons, lists and text fields. This must be built specifically for the proposed system and will be viewed from the PC

3.1.2 Hardware interfaces

- processor
- memory
- mouse
- keyboard
- Computer

3.1.3 Software interfaces

- Operating System: Windows XP or higher
- Explorer: Mozilla or Chrome.

3.1.4 Communication interfaces

Servers, clients and will communicate with each other, using standard internet protocols, whenever possible.

3.2 Functional requirements

3.2.1 Functional requirement 1

Register Client: Users must identify themselves as customers to be recorded in the system, with data such as name, surname, email, id, registration.

3.2.2 Functional requirement 2

Register Product: registered products will be useful for the system

3.2.3 Funcional requeriment 3

Register Vehicle: register the vehicle in the system.

3.2.4 Funcional requeriment 4

Bills: system sales and purchases record

3.2.5 Funcional requeriment 5

Repairs: stores the type of repairs that mechanics does

3.2.6 Funcional requeriment 6

Discounts: Make discounts for fixed customers of the mechanics

3.2.7 Funcional requeriment 7

system management: allows you to search and modify information throughout the system

3.2.8 Funcional requeriment 8

Value plates: the system will allow to enter the license plates of the automobiles for the process

3.3 Non-functional requirements

3.3.1 Performance requirements.

Taking into account the requirements for the correct management of the software, it should be taken into account that this is a prototype, therefore this system will only be implemented only for multi-brand mechanics, the program is expected to comply with the established performance. **¡Error! Marcador no definido.**

3.3.2 Security

- Guarantee the reliability, security and performance of the computer system to the different users.
- Guarantee the security of the system with respect to the information and data that are handled such as documents, files.
- Facilities and controls to allow access to information to authorized personnel, with the intention of consulting and uploading pertinent information for each of them

3.3.3 Reliability

- The system must have an intuitive and simple user interface
- The user interface must conform to the characteristics of the institution, within which the
- The system will be incorporated.

3.4 Othe requirements

4 Appendices