1. **Title**

MedicByte

1.1 Definition and justification of the problem

In our country, technology is advancing slowly and the bureaucratic systems that have passed are still part of our daily life. This is very evident in the health area, specifically in the request for medical appointments, which in addition to appearing simple and logical, no one implements an online appointment system in public sector hospitals, so to take a medical appointment Long procedures, such as calls to call centers or long lines, still need to be done, unnecessary and age-old difficulties faced by the majority of the population to obtain a busy medical appointment.

1.2 Introduction

This document describes the project development plan to be presented by the students of the Software Engineering degree in the determined MedicByte system, its technical specifications and an overview of the proposed development approach. The objective of the software is to make it easier for people to access medical appointments more efficiently, making the software a tool for the user to adapt medical appointments according to their needs. As for users, the system has a simple interface that is user-friendly.

1.3 Purpose

The development of this software is to simulate a solution to the problems presented day by day by hundreds of users who want to get a medical appointment, leaving behind the many calls, long lines and having to get up early, saving time on their day.

The developed software belongs to the same developers, and project managers in such a way that there is no express request from an entity for the development of this software.

1.4 Scope

The software that we will implement due to its focused characteristics and its relationship with medicine is called MedicByte

-Application for the administrator

- Create appointment
- Add doctor
- show doctor

-Application for the user

- To ask for a date
- Select specialty

1.5 Personnel involved

Name	Andres Jacome
Role	Project manager
Professional category	Software engineer student
Responsibilities	the majority of the project
Contact information	ksprwhite@gmail.com
Approval	Yes

Name	Junior jurado
Role	Inspector
Professional category	Software engineer student
Responsibilities	Identify errors in the code
Contact information	stalinjuniorbrayan@gmail.com
Approval	Yes

Name	Michael Cobacango
Role	Inspector
Professional category	Software engineer student
Responsibilities	Identify errors in the code and logic of the program
Contact information	michaelpm63@gmail.com
Approval	Yes

Name	Adrian Iza
Role	notary
Professional category	Software engineer student
Responsibilities	Keep a record of errors presented in the program

Contact information	Bryanadrian38@hotmail.com
Approval	Yes

|	
Name	Johnny Loachamin
Role	notary
Professional category	Software engineer student
Responsibilities	Analyze present errors
Contact information	jsloachamin1@espe.edu.ec
Aprobación	Yes

1.6. Summary

This document consists of three sections. The first section introduces it and provides an overview of the specification of functional and non-functional requirements of the software product, its objectives, as well as the scope, as well as a description of the personnel involved in the development of the system. 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, the associated data and the factors, restrictions, assumptions, main characteristics and dependencies that affect development, without going into excessive details. The third section of the document is the one that defines in detail the functional and non-functional requirements that the system must meet.

2. General Description

2.1. Product perspective

"MedicByte" software It is a software product that allows access to users and administrators, to schedule appointments, in the user interface we can appreciate its functions such as creating an appointment, selecting the specialty, as well as entering personal data and Preference date / time data for shift allocation

2.2. Funcionalidad del producto
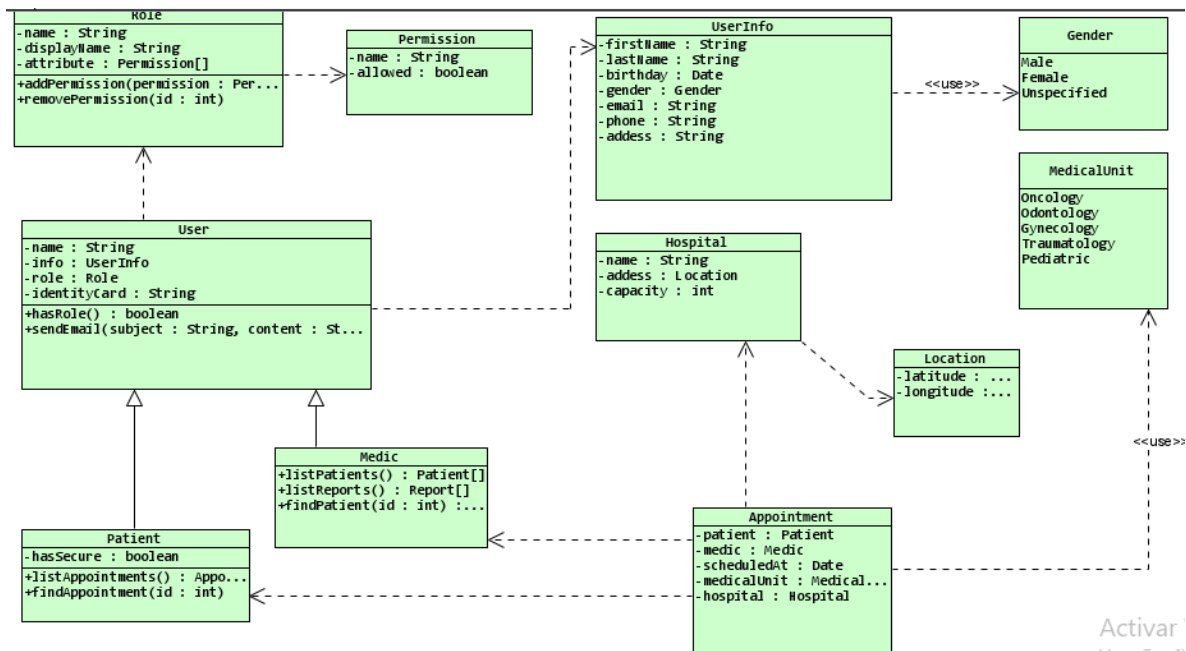
2.3. User characteristics

Type of user	User
Formation	Basic Education

Activities	Register in the system with your personal data, Request a shift with time and date of preference

Typo of user	Administrator
Formacion	Basic Education
Activities	Create an appointment, add doctors, show doctors

3. Specific requirements

3.1. Functional Requirements

Functional Requirement 1 (RF1): Administrator logging. The program should allow administrator access.

Functional Requirement 2 (RF2): User interaction with the program. The program it should display a menu with options and allow the user to choose one.

Functional Requirement 3 (RF3): Option exit. The program must allow the user and administrator exit the program.

Functional Requirement 4 (RF4): Menu validation. The menu start will count 3 options and can only be entered numbers from 1 to 3.

Functional Requirement 5 (RF5): to ask for an appointment. The program should allow the user the option to request a medical appointment.

Functional Requirement 6 (RF6): Choose one of the 3 specialties. The program should allow the user the option to choose any of the 3 specialties available.

Functional Requirement 7 (RF7): Schedule Appointment. The program must generate a medical appointment.

Functional Requirement 8 (RF8): Cancel a medical appointment. The program must cancel a previously scheduled medical appointment.

Functional Requirement 9 (RF9): Show medical appointments. The administrator will be able to choose the option to show the medical appointments that have previously been scheduled with their respective specifications.

Functional Requirement 10 (RF10): Add doctor. Administrators should be allowed to add different new doctors with their respective personal information and professional.

Functional Requirement 11 (RF11): Show doctors. The administrator will be able to display the list of doctors that the hospital has divided into their respective specialties.

Functional Requirement 12 (RF12): Consult appointment. The user can consult the information of a previously scheduled appointment.

The development of this software is to simulate a solution to the problems presented day by day by hundreds of users who want to get a medical appointment, leaving behind the many calls, long lines and having to get up early, saving time on their day.

3.2. Non-Functional Requirements

Non-Functional Requirements (N-FR1): The system must have properly structured user manuals.

Non-Functional Requirements (N-FR2): The system must be able to operate properly with normal number of users with concurrent sessions

Non-Functional Requirements (N-FR3): The access permissions to the system can only be changed by the data access administrator.

Non-Functional Requirements (N-FR4): The system will not reveal to its operator's other personal data of users other than names and reference numbers.

Non-Functional Requirements (N-FR5): Software testing will be managed with a software testing management tool.

Non-Functional Requirements (N-FR6): Medical data systems: The new system and its data maintenance procedures must comply with medical data protection laws and regulations.

Non-Functional Requirements (N-FR7): A user friendly design

Non-Functional Requirements (N-FR8): The software must be portable. Therefore, moving from one operating system to another does not create a problem

4. Use Cases Diagram

The MedicByte v1.0.0 Medical Apoiment use case diagram showing actors Medic, Hospital/System, and Patient with use cases: Show appointment information, Generate scheduled appointment, Assign appointment, Submit information, Modify appointment, and Cancel appointment connected with <<Include>> relationships.
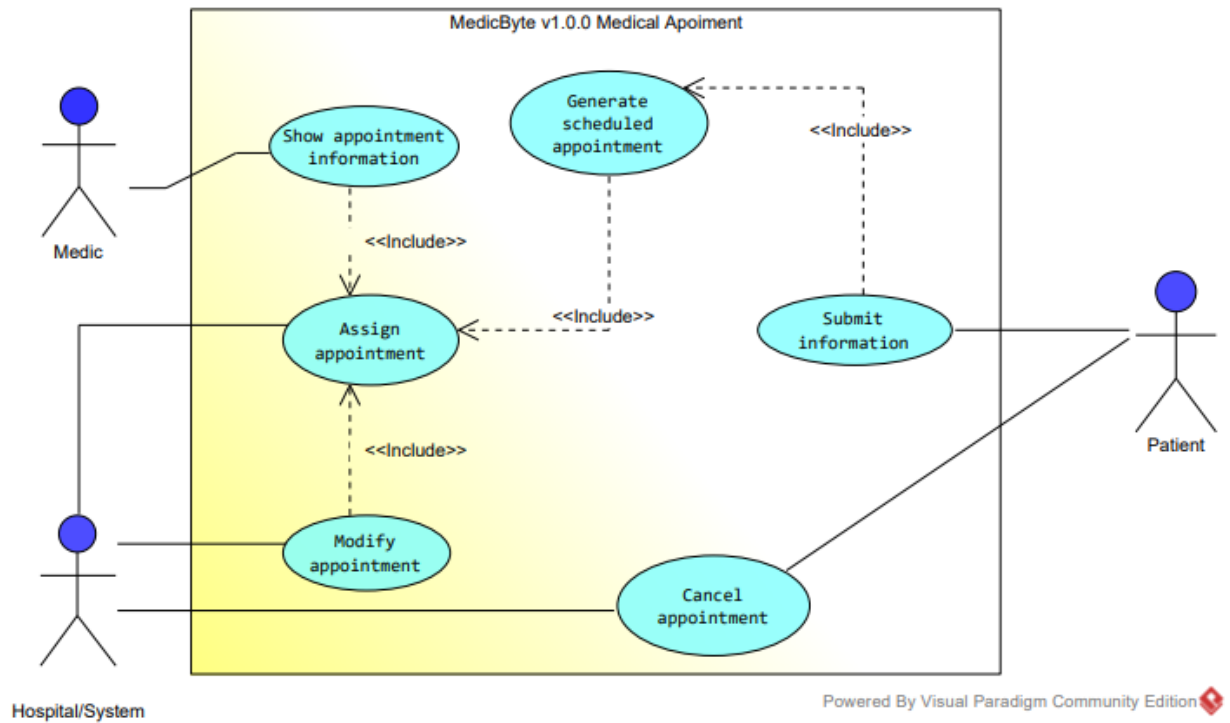
5. Specification Use cases

5.1 Shift registration application

Use Case 001

Produced by: BugBusters

Project's name:	MedicByte
Description (Scope and Objectives):	At the start of the program, you must choose whether to enter as a user, administrator or to exit.
Associated requirements	UC-1
Input Variables (Inputs):	Admin menu: (1) Users menú: (2)
Normal flow of the event:	When deciding to enter, a menu will be displayed depending on the option chosen
Expected result:	You can enter and see the options corresponding to how we decided to enter
Alternate flow	If any other data is entered
Expected alternative result:	The message indicating choose an option will be displayed again until one of the valid options is chosen.

Test evaluation	
Execution Date:	2020 / 86 / 21
Executed by:	Isidoro Castañeda
Place of execution	Quitumbe Be 9385-1e
Results obtained	Correct execution of the program
Observations:	The program runs as intended.
Error severity:	None

Developer Notes	
State:	Optimum
Corrective actions:	None
Corrected by:	Johnny Loachamin

Produced by: BugBusters

Project's name:	MedicByte
Description (Scope and Objectives):	Choose option 1 the program will display a menu of options 1) Crear cita 2) Eliminar cita 3) Mostrar citas médicas 4) Agregar Medico 5) Mostrar médicos 6) Regresar al menú principal.
Associated requirements	UC-2
Input Variables (Inputs):	Option: 1,2,3,4,5,6
Normal flow of the event:	By selecting any option, you can access it.
Expected result:	We can enter.
Alternate flow	It will not be possible to enter the requested option.
Expected alternative result:	The program will bounce an error for entering options.
Test evaluation	
Execution Date:	20 / 06 / 2020
Executed by:	Sara Guijarro
Place of execution	Iñaquito Oe - 23;462
Results obtained	Failure to enter options.
Observations:	Can't select any of the options
Error severity:	high
Developer Notes	
State:	Corrected
Corrective actions:	Cleaning functions
Corrected by:	Johnny Loachamin

Produced by: BugBusters

Project's name:	MedicByte
Description (Scope and Objectives):	Choose option 2 the program will display a menu of options 1) Solicitar cita 2) Regresar al menu principal.
Associated requirements	UC-3
Input Variables (Inputs):	Option 1,2
Normal flow of the event:	When selecting the first option a new menu will appear giving us 3 different options.
Expected result:	You can enter and view the 3 different options.
Alternate flow	The menu of the selected options is not displayed.
Expected alternative result:	We can see the 3 selected options
Test evaluation	
Execution Date:	23 / 06 / 2020
Executed by:	Manuel Angel Centeno
Place of execution	La Mariscal Oe - 213464
Results obtained	Executed
Observations:	You can Enter
Error severity:	None
Developer Notes	
State:	Optimum
Corrective actions:	None
Corrected by:	Michael Cobcango

Use Case 004

Produced by: BugBusters

Project's name:	MedicByte
Description (Scope and Objectives):	The program will allow the user to select and enter the specialty required by it, displaying a new menu of options.
Associated requirements	UC-4
Input Variables (Inputs):	Option 1) Pediatría 2) Traumatología 3) Odontología
Normal flow of the event:	By selecting any of 3 options, you can access it.
Expected result:	You can enter and see the options corresponding to how we decided to enter
Alternate flow	The menu of the selected options is not displayed.
Expected alternative result:	Failed to try to enter one displaying a crash.
Test evaluation	
Execution Date:	22 / 06 / 2020
Executed by:	Beñat Abril
Place of execution	La Floresta De-24Se83
Results obtained	Fatal Error
Observations:	Couldn't enter running faults
Error severity:	Very serius.
Developer Notes	
State:	In process
Corrective actions:	
Corrected by:	Andres Jacome

Use case 005	
Produced by: BugBuster	
Description(Scope and Objects):	The program will allow the user to select and enter the speciality
Associated requirements	UC-5
Input Variable (Inputs)	Option 1)Pediatra 2)Traumatologia3)Odontologia
Normal flow of the event	By selecting any of 3, you can acces it
Expected result	You can enter and see the options corresponding to how we decided to enter
Alternate flow	The menu of the selected options is not displayed
Expected alternative result	You can create an appointment choosing one of the specialties shown in the menu
Test evaluation	
Execution Date	23/06/2020
Executed by	Jacome Andres
Place of execution	Sangolqui
Results obtained	correct execution of the selection of a specialty for the medical appointment
observations	The program runs as intented
Error severity	none
Developer Notes	
State:	Optimum
Corrective actions:	None
Corrected by:	Adrian Iza

6. User interface

Main menu

```
jun 26, 2020 3:04:25 AM org.jline.utils.Log logr
ADVERTENCIA: Unable to create a system terminal, creating a dumb terminal (enable debug logging for more information)
↑ MedicByte
 1: Admin Menu
 2: Users Menu
 3: Exit

|

Enter an option:
```

Admin menu

```
Enter an option: 1


Enter username: Adrian
Enter password: 145256

invalid credentials
retry again? (y/n): |
```

User Menu

```
MedicByte / users
 1: Solicitar cita
 2: ver citas
 3: Volver al menu principal



Enter an option: 2


Cedula de identidad: 1727891424

No se encontraron citas


Press <enter> to continue...|


   MedicByte / users
    1: Solicitar cita
    2: ver citas
    3: Volver al menu principal



   Enter an option: 1



 1: Pediatria
 2: Traumatologia
 3: Odontologia

 Seleccione la especialidad: |
```