WEB HARMONY

TECH-ILA

WEB HARMONY

C3.ai

PROPOSAL

The aim is to develop a framework that is capable of carrying out automated tests on web pages regardless of their version. The framework must be able to identify objects in the interface of any web page even though they change between versions, it will also be able to save reports in a database, all the objects found in each scenario will be saved, the objects previously identified and the new ones identified, in addition to which failed. Once the tests have finished, the user/engineer will be asked if any anomaly arises and they will report the errors found. We will work hand in hand with C3.AI to carry out this project

MISSION

Tech-ila's mission is to drive digital transformation with solutions innovative and high quality, satisfying the specific needs of our

clients and helping them achieve their goals business efficiently and effectively. We are committed to leading the market with excellence technical and customer satisfaction

VISION

Our vision focuses on offering support to the business technology network, being part of the comprehensive development of platforms. business and taking their development hand in hand with AI.

TECH-ILA

Methodology
SCRUM

Angela Sofia Pontón Ochoa	Scrum master
Daniel Arguedas Alvarado	BackEnd Developer
Fernando José Cabrera White	Testing
Diego Alejandro Hernandez Romero	Front End Developer
Marco Antonio Rodríguez Amezcua	Product Owner

VALUES

The values   by which the team is governed are responsibility, respect, passion for challenges, creativity, excellence, improvement and perseverance.

TOOLS

- *Python*
- *Selenium*
- *Python libraries*

REQUIREMENTS GENERAL

- THAT CAN BE USED FOR CHROME, FIREFOX AND SAFARI

- RUN TEST CASES ON DIFFERENT WEB PAGES (THEIR FUNCTIONALITIES ARE APPLICABLE TO DIFFERENT INTERFACES) EVEN IF THEY ARE CURRENTLY LAUNCHED (NEW VERSIONS OF THE PAGE)

- IDENTIFIES THE OBJECTS OF THE INTERFACE THAT IS BEING TESTED AND ALLOWS YOU TO SAVE THEM TO ACCESS THEM AGAIN WITHIN THE TEST

- THE OPTION IS GIVEN TO THE USER TO CONFIRM THE ACTIONS MADE BY THE FRAMEWORK, EX: CASES ARE MADE ON A WEB PAGE, AS SOME OBJECTS SUCH AS BUTTONS CHANGE PLACE, WHEN THE EXECUTION IS COMPLETED, THE USER WILL BE ASKED IF THE BUTTONS WERE CORRECTLY IDENTIFIED

- TEST DATA MANAGEMENT WITH MULTIPLE ELEMENTS (INPUT) IN THE OBJECTS (BUTTONS, SEARCH BARS)

- ALL OBJECTS WILL BE SAVED IN A DATABASE

REQUIREMENTS

FUNCTIONAL

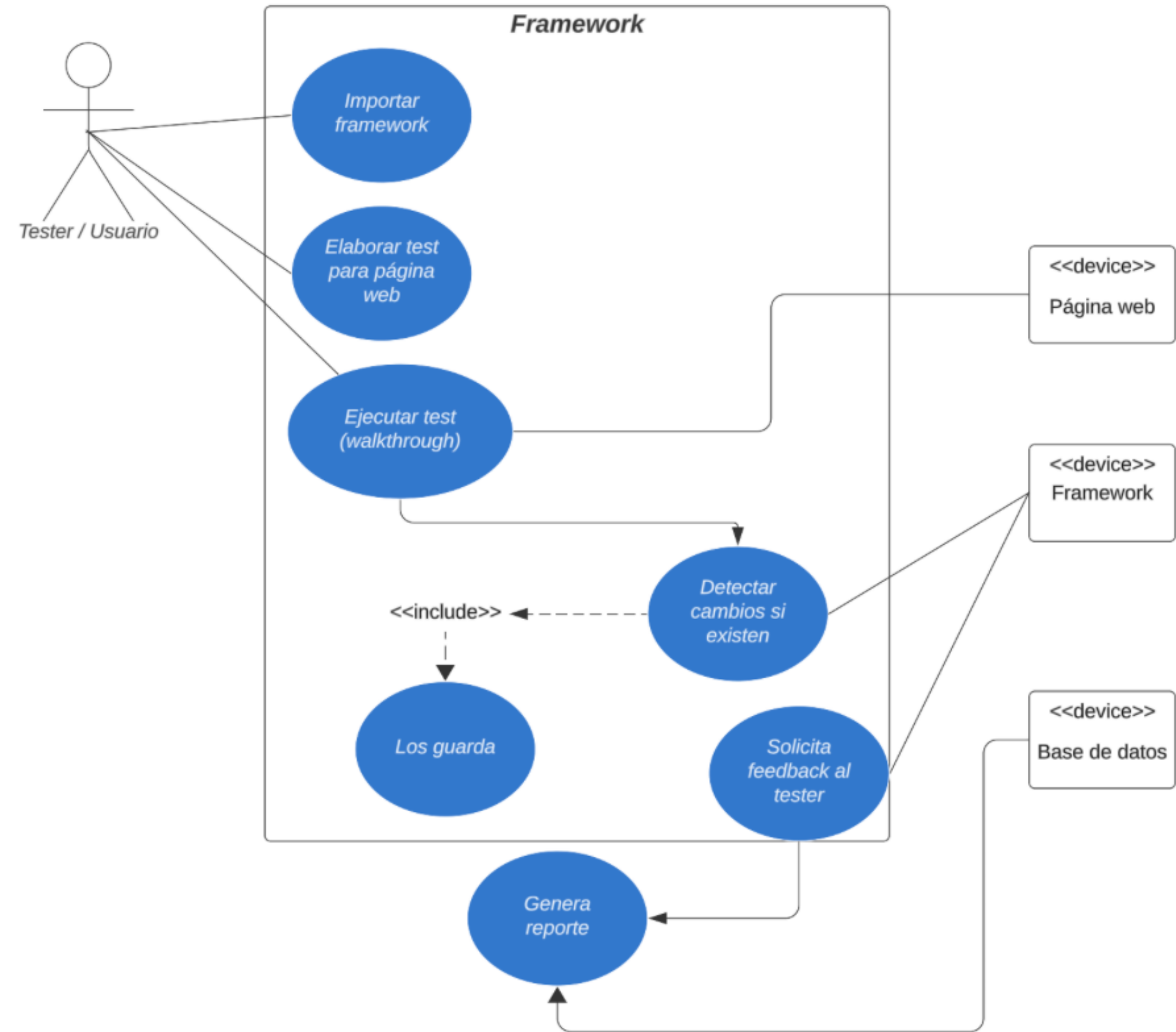|	Request	Description	Priority
RF01	Feedback to user for changes	The system will send a message to the user through the terminal, asking about the changes made or if they want to continue with the tests, and the user confirms whether to proceed with the test taking said changes into account.	high
RF02	Feedback to user for report	The system sends a message to the user before saving a report so that they can decide whether to save it or discard it.	Half
RF03	Management Data of tests, input	The system allows the user to test with multiple inputs from files, dictionaries or some other collection of data to be entered.	Half
RF04	Creation of report	A report will be displayed in XLS	high

REQUIREMENTS

NOT FUNCTIONAL

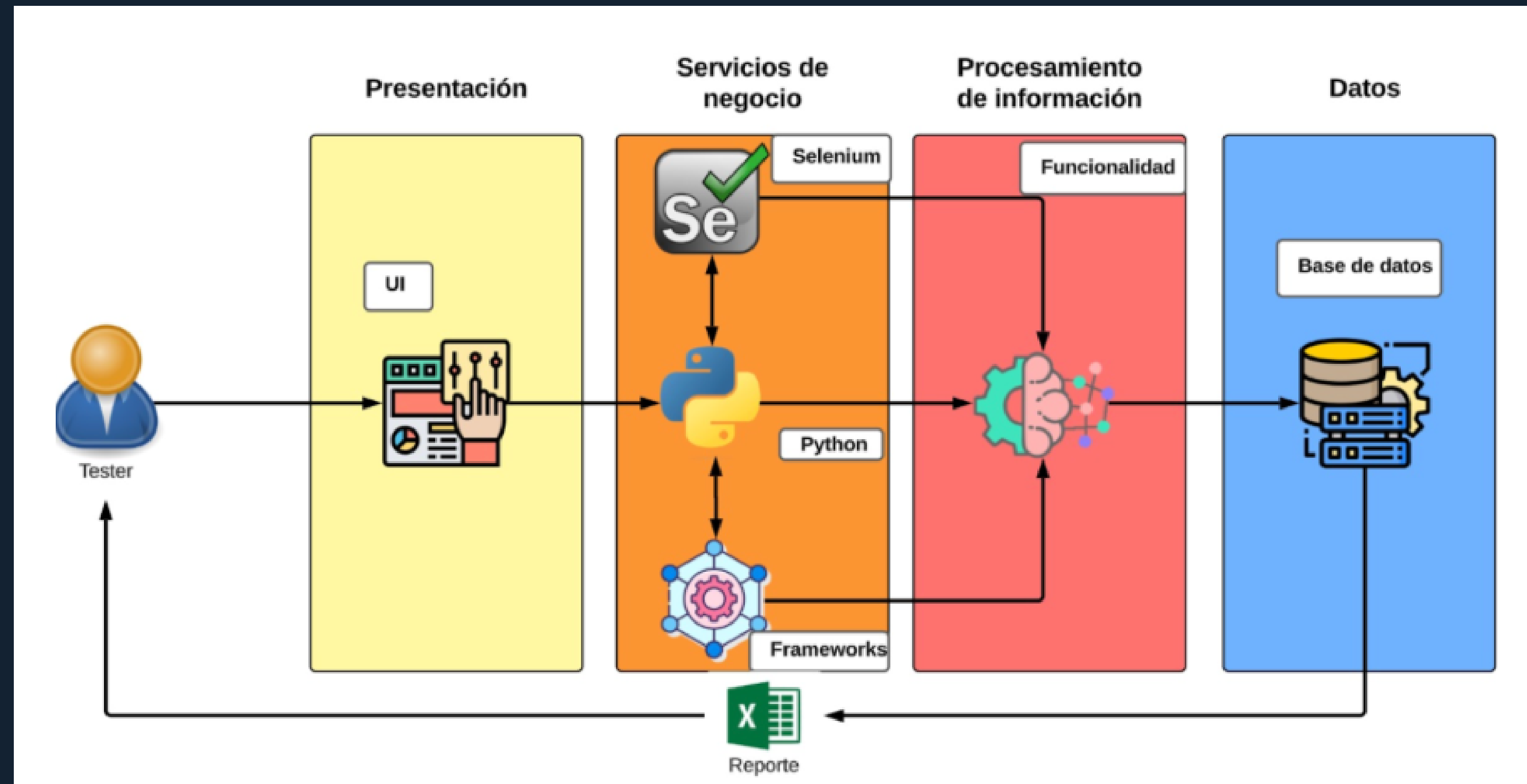|	Request	Description	Priority
RNF01	Operation in Browsers	The system must be able to perform automated tests in Chrome, Firefox and Safari	high
RNF02	Generic Operation	The system should work on most web pages,	high
RNF03	Operation after update	The system must be able to carry out tests after a web page is updated	high
RNF04	Save Objects	The system will be able to save objects (Buttons, text boxes, etc.) and then access them again without having to search for them again.	high
RNF05	Save objects in the Database	The system will save all the objects that were identified in the scenario tests (pages)	high
RNF06	Classification in the Database	The system will classify objects between those that had already been identified in past tests and new objects	high
RNF07	Report Creation	A report will be created in XLS format with the data collected in the Database	high

PROTOTYPE

CASE OF USE

SOFTWARE ARCHITECTURE

BY LAYERS

PROCESS EVALUATION PLAN

Activity / Requirements	Time (hours)
RF01. User feedback for changes	20 hrs
RF02. Feedback to the user to report you	20 hrs
RF03. Test data management, input	80 hours
RNF01. Operation in Browsers	20 hrs
RNF02. Generic Operation	40 hours
RNF03. Operation after update	100 hours
RNF04. Save objects	100 hours
RNF05. Save objects to the database	60 hours
RNF06. Classification in the database	120 hours
RNF07. Report Creation	140 hours

Total hours (story points) = 700 (70) PH per person:
14
Total PH per day:42(PH per person * development team people)
Speed:420 ph(total PH per day * sprint duration [days]) Sprint duration: 2 weeks (10 days)
Total sprints: 5 (total weeks / sprint duration [weeks])

Total Weeks: 10 (sprint duration [weeks] * total sprints)

USER STORIES

ID	Name	Description	Criteria of acceptance	Priority
HU1	User feedback for changes	As a user/tester, I want the system to ask me before saving the changes before starting the test.	- The system will ask you if you want to save changes. The user will - answer yes if they want it to be saved. It will be saved and will proceed to testing. - If not, you can continue there	HALF
HU2	User feedback for report	As a tester, I want my tests to be carried out on websites of different types, to ensure their correct functioning.	- A message is sent to the tester with the option to generate a report. - Depending on the option selected by the tester, the report is generated and saved, or not. - The report can be consulted and contains the test data	HALF
HU3	Test data management, input	As a user/tester, I want the system to allow me to test with multiple inputs from files or data collections to save time	- Test inputs are accepted from files All inputs - are tested correctly	HIGH
HU4	Operation in Browsers	As a user/tester I want to be able to use the system in Chrome, Firefox and Safari, to have a wide range of possibilities in terms of browsers.	- The system is capable of testing in Chrome The - system is capable of testing in Safari The system - is capable of testing in Firefox	HIGH
HU5	Generic Operation	As a tester, I want my tests to be carried out on websites of different types, to ensure their correct functioning.	- The framework can perform tests on sites where forms are required to be filled out. - The framework can perform tests on reservation sites.	HIGH

USER STORIES

HU6	Functioning after update	As a user/tester, I want my tests to be able to be re-run on web pages that have undergone updates, and that I have also visited previously, to know and analyze their new changes.	- The framework can access web pages that you have already tested before. - The framework can detect changes in recently updated web pages. - The framework can be run multiple times on the same web page, considering whether it is updated at that time.	HIGH
HU7	Save objects	As a user/tester, I want to be able to save the objects or elements that the framework selects during my tests so that once I go through them again or contemplate them, I have their functionality stored.	- The framework must be able to select the available elements or paths (bars, buttons, etc.). - The framework must store the functionality or path of each button.	HIGH
HU8	save objects on the basis of data	As a user/tester, I want every time I do a test to have all the scenario objects saved in the database, to later show them as a report.	- The database will have a table with the following attributes: identified, new, changed and new The system is capable of - identifying objects and classifying them	HIGH
HU9	Classification in the basis of data	As a user/tester, I want the objects saved in the database to be classified as identified (objects previously already identified) and new objects (objects added between versions) changed objects (objects that were already there before and changed) and new objects (completely new objects to have a better view of what changed between versions	- The database will have a table with the following attributes: identified, new, changed and new The system is capable of - identifying objects and classifying them	HIGH
HU10	Creation of Report	As a user/tester, I want the system to create the report in XLS (Excel) format through the database to be able to have the report in a more dynamic way.	The database correctly creates the report in XLS format	LOW