Software Requirements Specification

Electronic News

Introduced By

CSE 2018 G09

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1. Introduction

1.1 Executive Summary

This software system will be a Web Software which will offer a punch of great a lot of things, so lets now be more specified and knows more details on our project
Simply our project is an electronic website in which you can find and read everything and latest news in electronic devices, also the user is allowed to Sign up on our website to receive notifications about the latest news and updates, also if he wants to make a favorite list, he can do that and save it on his email in our website, also the user can compare between two different devices so if he wants to knows which of them is better than the other to buy it or just for knowledge we will make him able to do so, our website should provide something like tips to help the user using different devices, and if he wants to know some information about that device on our website.

1.2 Document Overview

The next section of this document will talk about System description and goes in details about the user interface and the system and modules, after that we will held each point in the system description and talk briefly on it to understand it well, And we will start with System users in which we will talk about user description in detail and understand everything in it, then we will talk about our second point which is System modules which we will held Module description in it and talk briefly about it.
The third section we will talk about is system functions which have punch of points inside it
Then we will talk about System models and talk about two different things:
1- case diagram 2- sequence diagram
Then we will move on to the Non-functional Requirements in which we have a lot of things inside it which we will discuss in detail, it contains all the requirements needed in our system illustrated Like:
1- Security 2- usability 3- Performance …etc
For sure we all knows the importance of those requirements and how we need those things being applied on our website to make it more flexible
Another section we will discuss in that document Is the Domain requirements which is very important for any developer to understand what is needed in that website
Then the last section we will discuss is System interface which includes different interfaces like:
1- Communication interfaces
2- Hardware interfaces if required And any other interface required in the project

2. System Description

2.1 Introduction

As mentioned above that our system is something that allows you to do multiple things and now, we will make a quick introduction through it, imagine a system where all you want to know about electronics is here. first the user needs to sign up an account to receive notifications about the latest news in electronics world and electronic devices. the system offers to build the electronic device user wants to buy based on choosing the specifications he is interested about like: type, price, color…etc.

2.2 Modules

2.2.1 Build your system Module

Build your system module enable the user to interact with the devices on the website by search and show the details of the devices and filter the devices by user's specifications and compare between the devices. that will enable the user to get the most suitable device he is looking for

2.2.2 Subject

Subject module manage the user to view the different topics on the system by search on the topics or the devices he is looking for .this module also allow the user to ask about what he would like to know , also this module will show to the use a daily Tips in different fields of electronics

2.2.3 Shop Owner Module

shop owner module allow the shop owner to add subject to preview its products showing to the customers , all the features of shop products. this thing make it better to buy the products.This module also make the shop owner negotiate with the customer and provides a lot of features . These features like providing discount in a certain period of time , advertise your product by paying money and letting the shop owner make discount and other features to the customer who will buy a lot of product from him .

2.2.4 Registration Module

This module allow the user to have an email on the system which allow him to benefit from the website account services , so the registered user can choose the topics he is interested in to get these topics later , also the user will get email notifications when any new topic is added of his interests fields

2.2.5 Control module

control module is an important module for the admins of the system it will enable the admin to manage the system easily through a control panel that manage him doing so many functions that allow him to control the system and interact easily with database and users of the system.

2.3 System Users

Here in our system we have four types of users, that they can access or do different things depending on there role in our system, so let's stop talking and talk about our users and what each one of them can do.
1. Admin:
The first user in our website is the admin who has a lot of features that makes him able to do a lot of things, the admin can edit topics and add another and respond to questions on the website and the questions forwarded to him, also he is the person who is responsible for accessing the shop owner's edits
2. Shop Owner:
The second user in our website is the shop owner who has a page made for him to put his latest products and everything he wants to publish to make others see it and share his things with others.
3. Registered user
Our third user is the user who registered in our website and he has a profile and we will send a daily tip for him on his email and he will be accessed to do a lot of other features like adding things he likes or interested with to his favorite list.
4- viewer
Our last user is the user who just entered our website to see what he wants but he didn't registered in our website, and he can view and check whatever he wants and see comparisons, but he will be denied from using some of the system features

3. System Modules

3.1 Build your system Module

Build your system module enable the user to interact with the devices on the website by search and show the details of the devices and filter the devices by user's specifications and compare between the devices. that will enable the user to get the most suitable device he is looking for, it contains three functions :

3.1.1 Select function

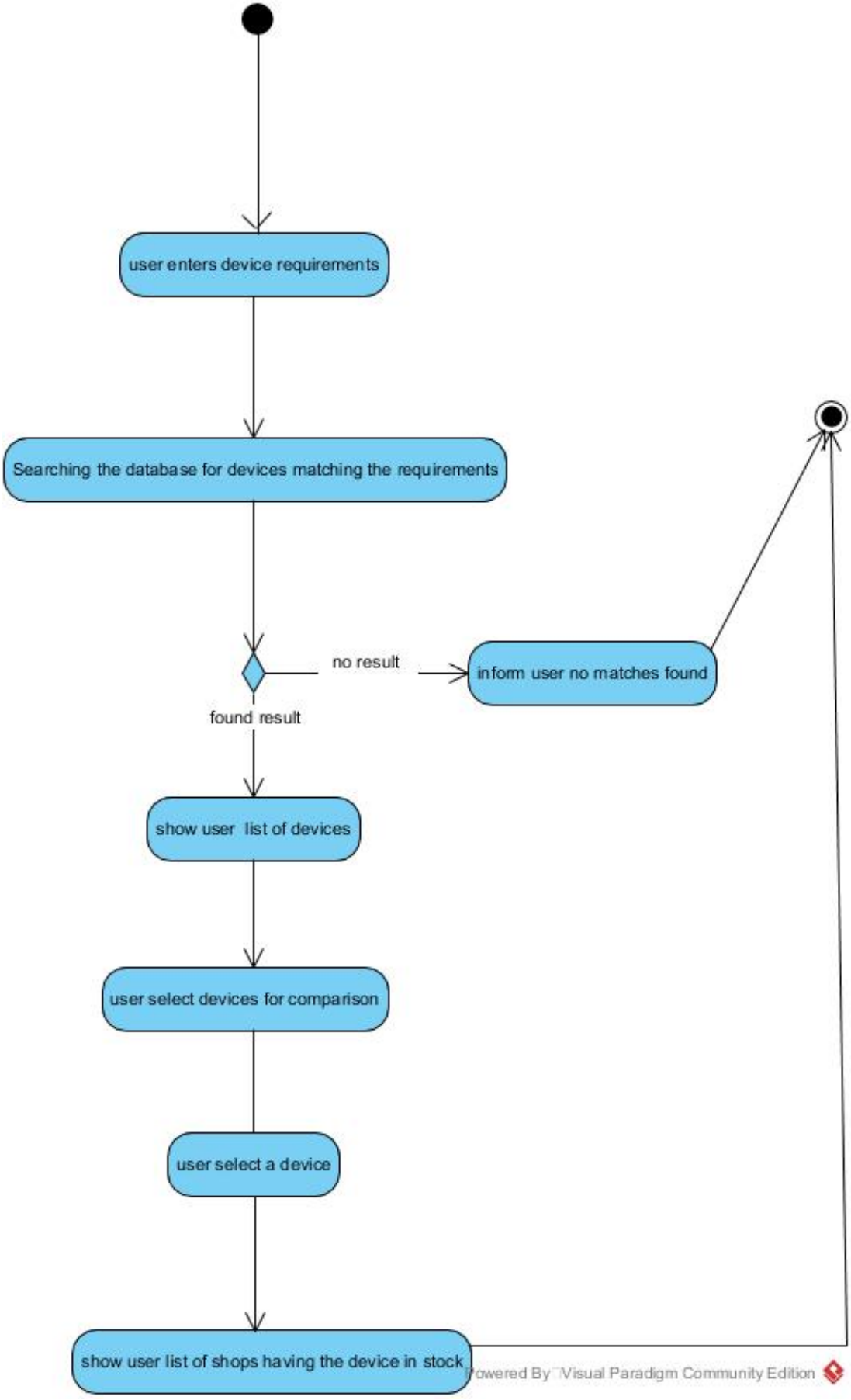
This function enable the user to find devices matching his requirements .
The user enters the requirements of the devices including RAM , Graphic card and CPU and then he is shown a list of devices that match those requirements.

3.1.2 Compare function

This function enable the user to compare between two devices.
The user enters the names of two devices then he is shown a table containing the information of the two devices next to each other so the user can compare between the devices clearly.
Comparison aspects include : RAM ,Graphic card and CPU.

3.1.3 Shop guide

This function enable the user to find shops which have the device he wants to buy.The user searches for the device he wants to buy, then he is shown a list of all shops which have the device in stock.


user enters device requirements
Searching the database for devices matching the requirements
no result
inform user no matches found
found result
show user list of devices
user select devices for comparison
user select a device
show user list of shops having the device in stock
Powered By Visual Paradigm Community Edition

3.2 Subjects Module

Subject module manage the user to view the different topics on the system by search on the topic or the device he is looking for .this module also manage the user to ask about what he would like to know , also this module will show to the use a daily Tips in different fields of electronics
it contains four functions :

3.2.1 View

Here the user can view any product he wants by clicking on it and we will also use this function to show the result of his search

3.2.2 Search

This function makes the user able to search about whatever he wants in our website and For sure we will need a massive database analysis for doing this to allow the user from searching for a certain thing and in searching section we have two options:
either the user wants to search about a question OR he wants to search about a certain product, and in both cases we will manage him from doing such a thing by Django… if we looked at the first time and thought about this thing we will think that's a very difficult thing but its pretty easy, we will do that using some functions in Django which will search in our database and get the result then view it to the user,

3.2.3 Ask

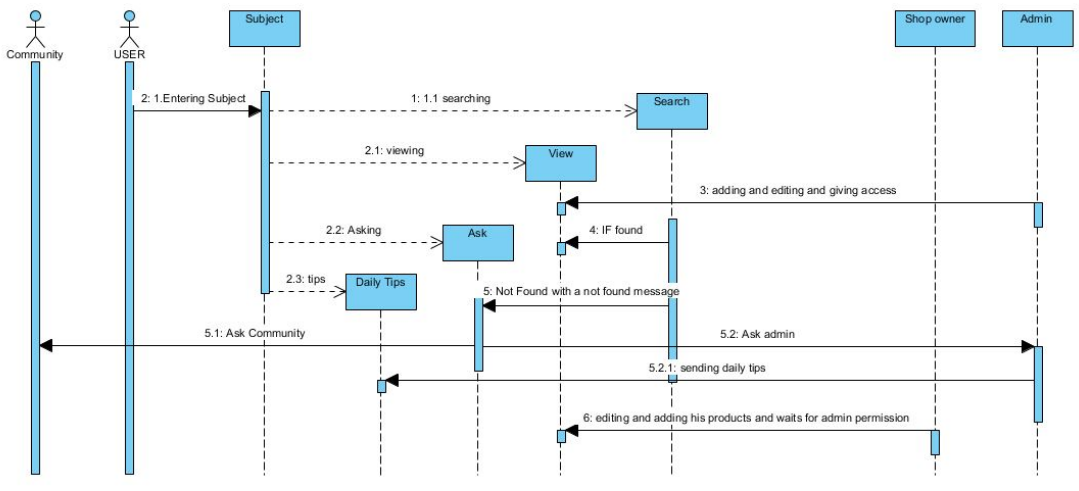
In this function our user will be able to ask about anything he wants and for sure there will be two databases one for questions and one for products, to make it easier for him and for us for understanding what he wants well and if we couldn't find whatever he wants in our database we will print a message for our user telling him that we couldn't find what he wants, offering to ask about what he wants, in Ask section we have two options:

3.2.3.1 The first one is to ask for a product to buy or to be added and in such a case his question will be directed to the admin

3.2.3.2 The second one that he wants to ask about something he wants to understand and in such a case our user's question will be added on our website to manage other people OR our support team from answering him

3.2.4 Daily Tips

Here we will send a daily tip about the latest achievements and things in electronics in general to those who registered in our website



3.3 Registration Module

This module allow the user to have an email on the system which allow him to benefit from the website account services , so the registered user can choose the topics he is interested in to get these topics later , also the user will get email notifications when any new topic is added of his interests fields, it contains three functions:

3.3.1 Email notifications

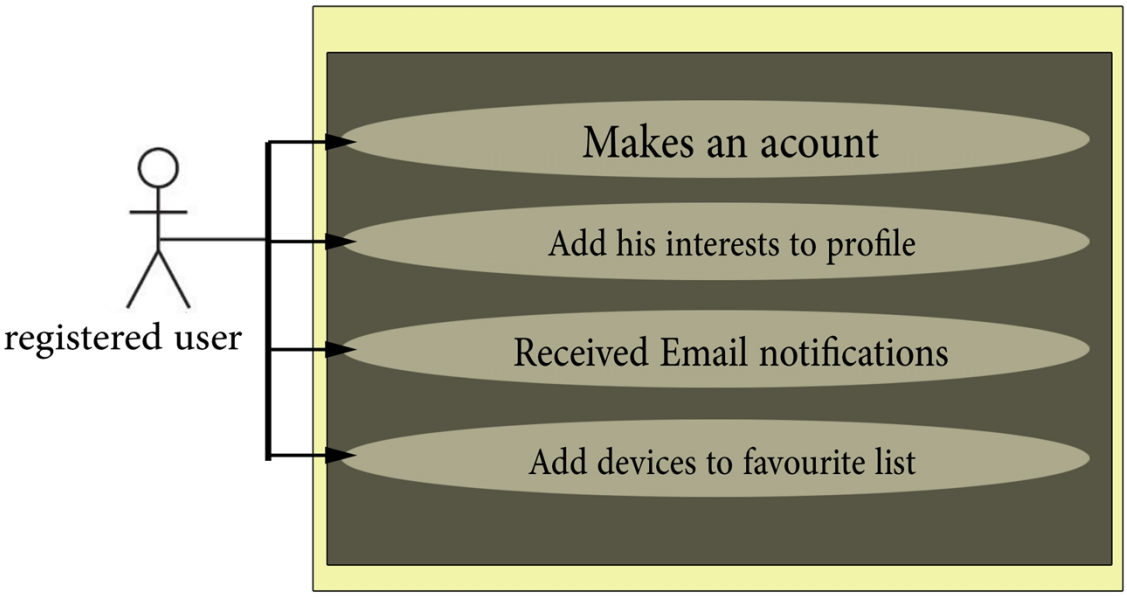
One of email benefits is that the website sends to all the users the new releases of mobiles and laptops with their specifications, so the user can regularly see the latest versions of devices.

3.3.2 Add to favorite

The user can browse the home page which full of devices like (laptops and mobiles) of different types and prices. If the user finds one or more devices that sorts him , he can add them to a favorite list.

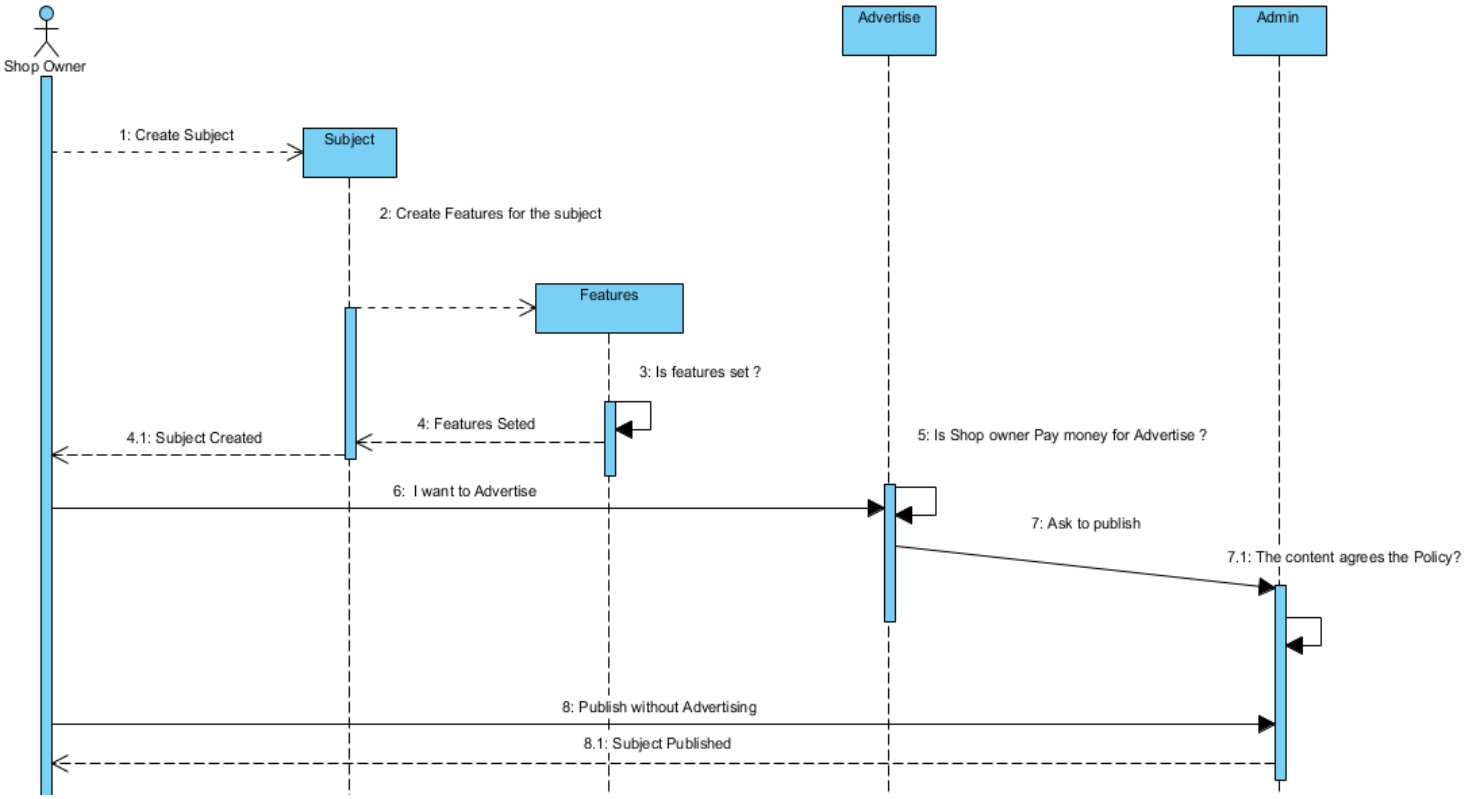
3.3.3 User interests

In profile info the user fills his interests like a certain type of mobiles (ex : iphone mobiles) he wants to know everything about , so the account displays to the user all the versions of iphone mobiles with its specifications.



3.4 Shop Owner Module

shop owner module allow the shop owner to add subject to preview its products showing to the customers , all the features of shop products. this thing make it better to buy the products.This module also make the shop owner negotiate with the customer and provides a lot of features . These features like providing discount in a certain period of time , advertise your product by paying money and letting the shop owner make discount and other features to the customer who will buy a lot of product from him .



3.5 Control module

control module is an important module for the admins of the system it will enable the admin to manage the system easily through a control panel that manage him doing so many functions that allaw him to control the system and interact easily with database and users of the system
this module has three main functions

3.5.1 Add function

this function allow the admin to create a new subject or add a new device on the system by fill the fields that describe the item he want to add

3.5.2 Edit function

this function allow the admin to edit the subjects on the system by changing on it's content or delete it

3.5.3 Access control

this function allow the admin to interact with the users and the shop owners.

4. System Functions

4.1 build your system module

4.1.1 Select Function

Description: Build a product of specifications you selected first .
Inputs: GPU,CPU, RAM ,hard desk.
Outputs: Product .
Pre-conditions: GPU,CPU & RAM must be selected first .
Post-conditions: none

4.1.2 Compare Function

Description: This function enable the user to compare between two devices.
Inputs: device1 , device2
Outputs: comparison table .
Pre-conditions: device1 & device2 must be selected.
Post-conditions: none

4.1.3 Shop guide

Description: This function enable the user to find shops which have the device he wants to buy.
Inputs: product
Outputs: shops
Pre-conditions: product must be selected.
Post-conditions: none

4.2 Subject Module

4.2.1 Search

Description: This function enable the user to search about whatever he wants on the system.
Inputs: subject title or product name
Outputs: subject or product
Pre-conditions: user must enter the keyword of what he looking for.
Post-conditions: none

4.2.2 Ask

Description: this function allow the user can ask about anything he wants.
Inputs: question
Outputs: answer
Pre-conditions: question must be clear.
Post-conditions: none

4.3 Shop Owner Functions

4.3.1 Add Subject Function

Description: shop owner create subject .
Inputs: product .
Outputs: subject of desired product .
Pre-conditions: The product must be created first & shop owner must be logged in.
Post-conditions: none

4.3.2 Negotiate Function

Description: make the customer negotiate with the shop owner .
Inputs: product desired .
Outputs: enable negotiate or not .
Pre-conditions: The product must be created first & shop owner must be logged in.
Post-conditions: the price of the product may be become changeable .

4.3.3 Enable Discount Function

Description: make a discount for your product in certain time .
Inputs: product.
Outputs: Product after discounted.
Pre-conditions: The product must be created first & shop owner must be logged in.
Post-conditions: the price of the product may be become changeable .

4.3.4 Advertise your product Function

Description: advertise your product and make everyone see it in special view .
Inputs: product and fund to enable this feature .
Outputs: Product after advertised .
Pre-conditions: The product must be created first & shop owner must be logged in.
Post-conditions: the product will be appear clearly to everyone for a certain time .

4.3.5 Specify features Function

Description: make a discount for some customers who buy from you products before .
Inputs: customers .
Outputs: customers with features .
Pre-conditions: shop owner must be logged in and customers buy from him some products the quantity let for the shop owner to specify .
Post-conditions: the price of the shop owner products may be become changeable to some customers.

4.4 Registration Module

4.4.1 Registration Function

Description: visitor to website makes an account to benefit from website services
Inputs: user enters his personal information from name, email, profession
Outputs: sign up is successful
Pre conditions: -------
Post conditions: profile page is opened

4.4.2 add to favorite

Description: the user adds his favorite devices to favorite list
Inputs: user clicks on add to favorite list
Outputs:------
Pre conditions: the user should have an account on the website
Post conditions: add to favorite page is opened

4.4.3 email notifications

Description: the website sends to all the users the new releases of mobiles and laptops with their specifications
Inputs:------
Outputs:-----
Pre conditions: the user should have an account on the website
Post conditions : the website sends to all the users the new releases of mobiles and laptops with their specifications

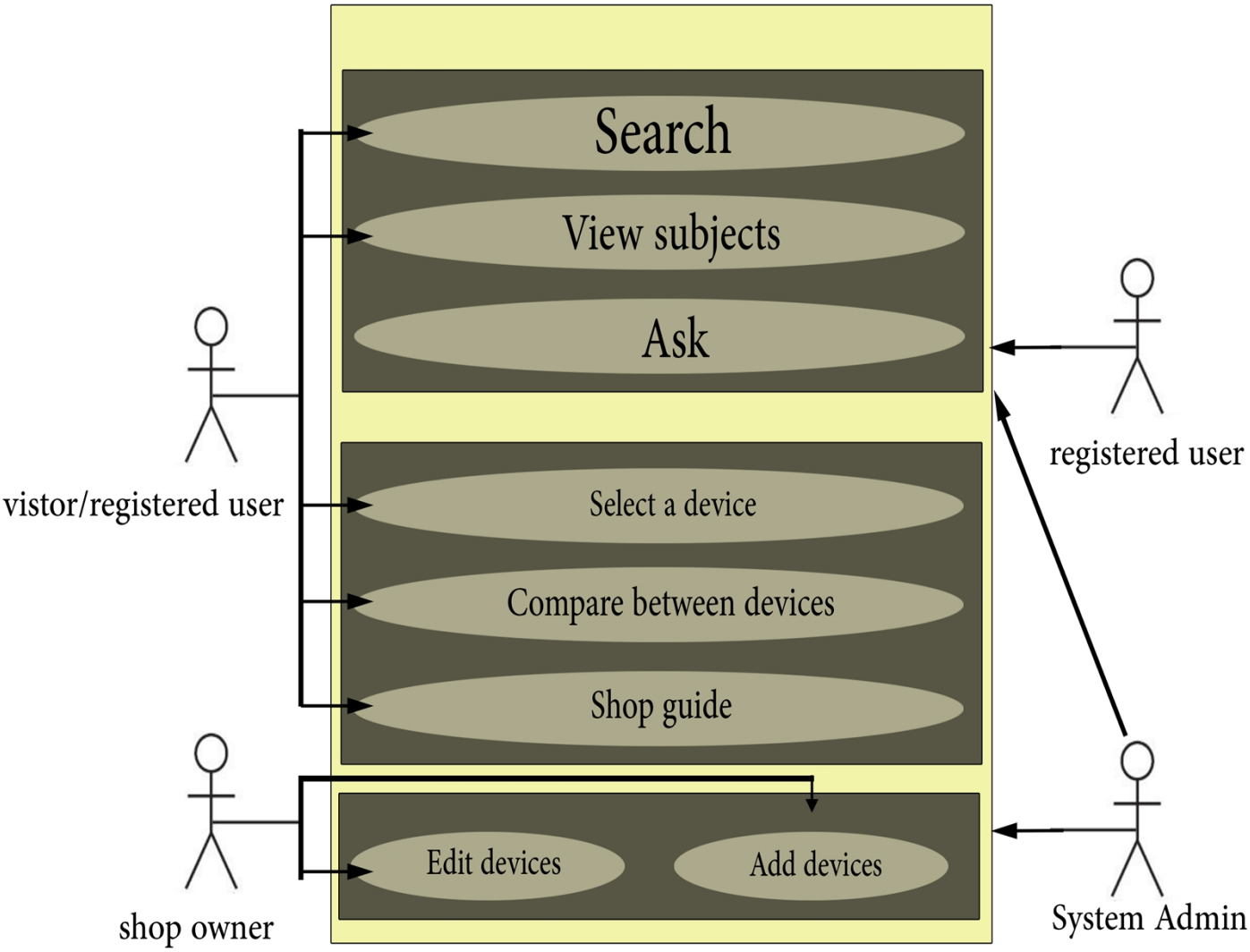
4.4.4 user interests

Description: the user fills his interests like a certain type of mobiles he wants to know everything about .

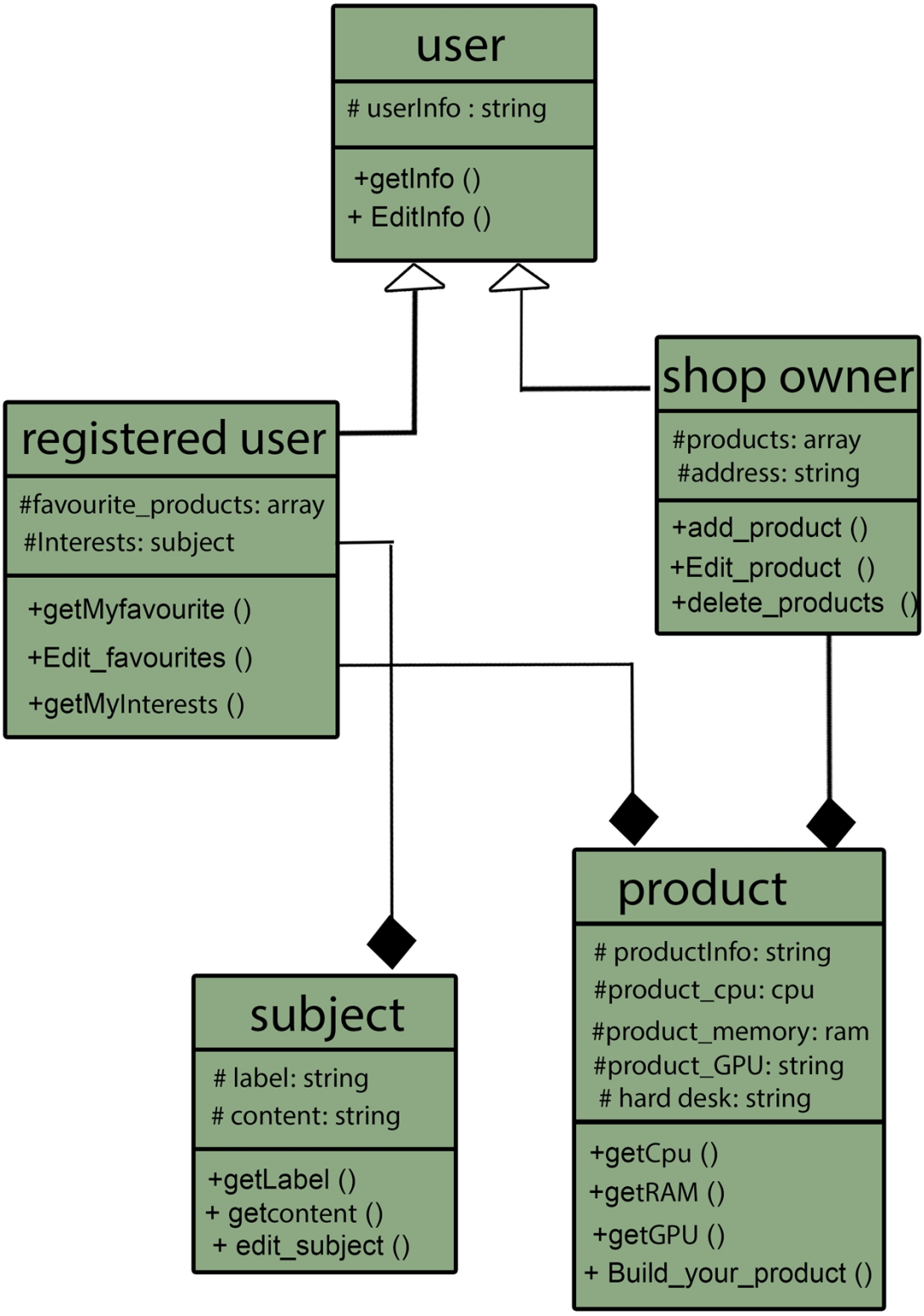
Inputs: the user enters his interests from electronic devices
Outputs:-----
Pre conditions: the user should have an account on the website
Post conditions: the account displays to the user all the versions of this mobile with its specifications.

5. System Models

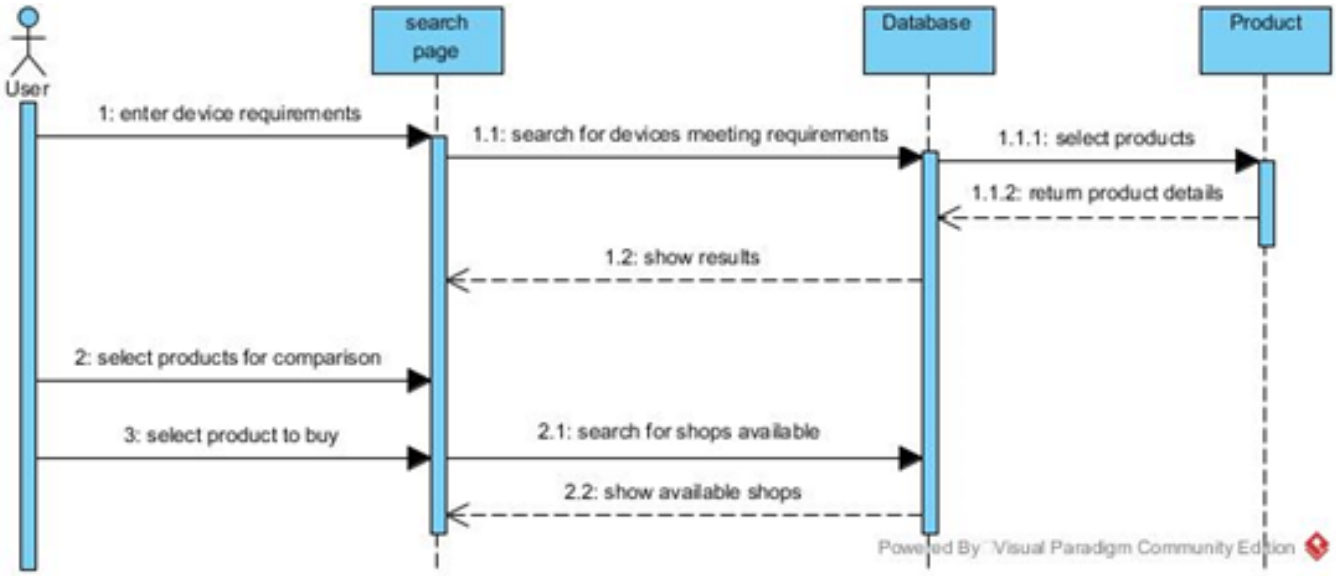
5.1 by Use Case



5.2 By class diagram



5.3 By Sequence Diagram



6. Non-Functional Requirements

6.1 Security Requirements

The system must be secure in storing passwords in Database, so Hashing the Passwords is required.

6.2 Usability Requirements

System should be usable for all kind of people to make Shopping easier to them , so Items should be viewed in organized way. Also You must make comparing between items very clear to the visitor.

6.3 Performance Requirements

You should treat with the load on the website to make the server always working and avoiding the server dropping . It is expected that the number of visitors will be average in the range : (1500-3000)visitor daily .

6.4 Technology Requirements

The customer wants this website to performed in python – Django , so you need to setup an IDE for python and Supports Django .

6.5 <IDE>Requirements

We suggests to work by PyCharm IDE . It's an excellent IDE having a lot of features and easy to use .

6.6 Python>Environment

You also need to setup Python environment on your Computer ,so we suggests Python 3.7. It is the latest version until now.

6.7 Deployment Requirement

Also you need website for your deployment to deploy your python – Django website. We suggests PythonAnywhere as Deployment way for python.

6.7.1 <Development > Language

You should be aware of Python language to do this website.

6.7.2 <Web Development>Framework

You must learn how to use Django to make this website , so choose any source and learn quickly .

6.8 Delivery Requirements

This project must be delivered before the end of January.
Deliver it by include the source code of all the Phases of this project.

7. Domain Requirements

7.1 Fund Requirements

You should have the required fund to deploy the website on a good server to avoid any server down problems.

7.2 Requirements

Network speed must be stable and high to access the website quickly.

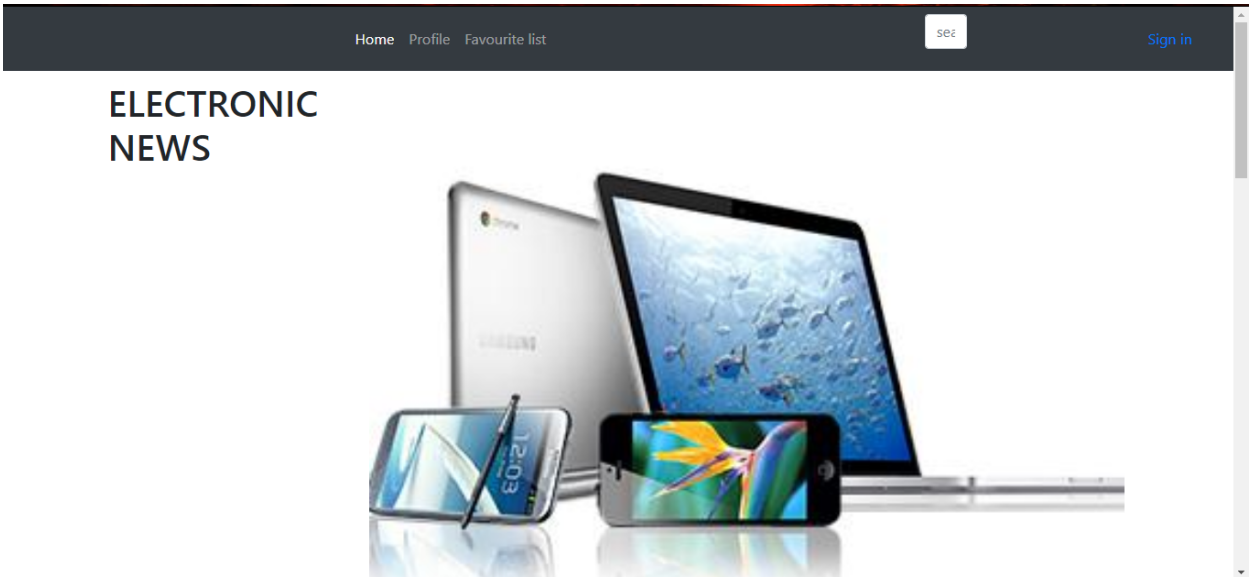
7.3 Security Requirements

You must take care of any external device to the device you store the backup data to avoid stealing the personal data of the users.

7.4 Buying Requirements

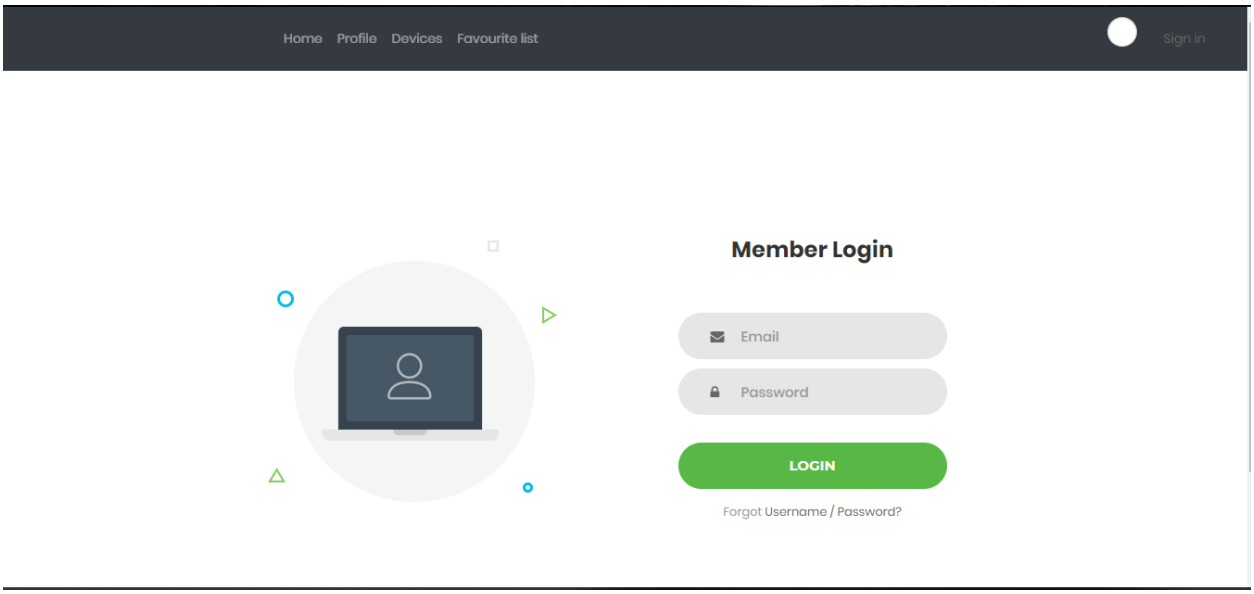
You should notice that the website isn't responsible for any product . the website just a linker between the customer and the shop owner.

8. System Interfaces

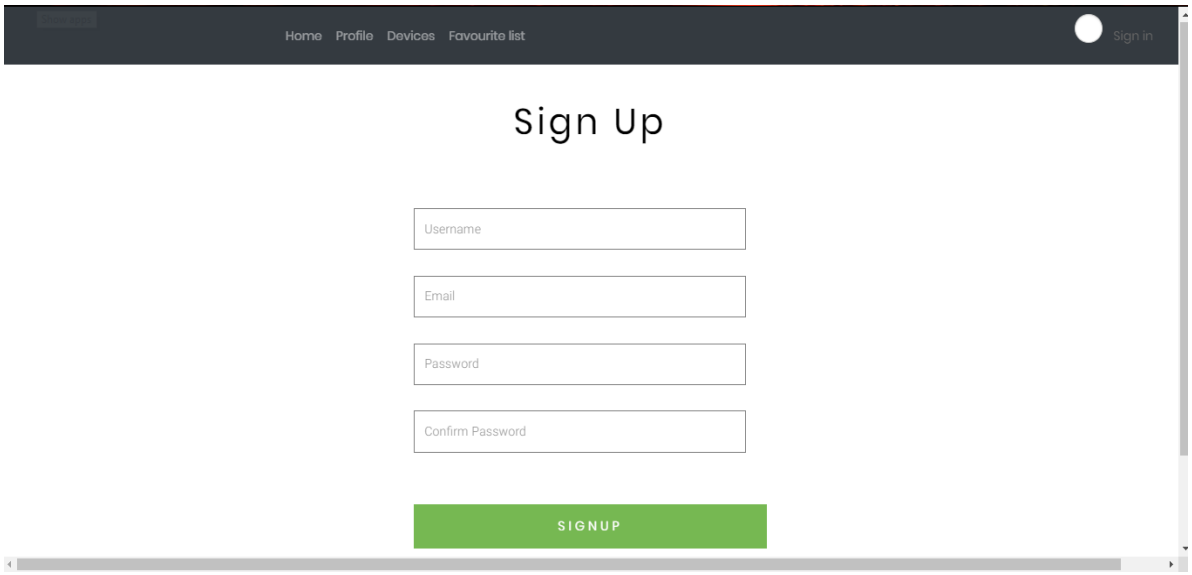


8.1 Home page

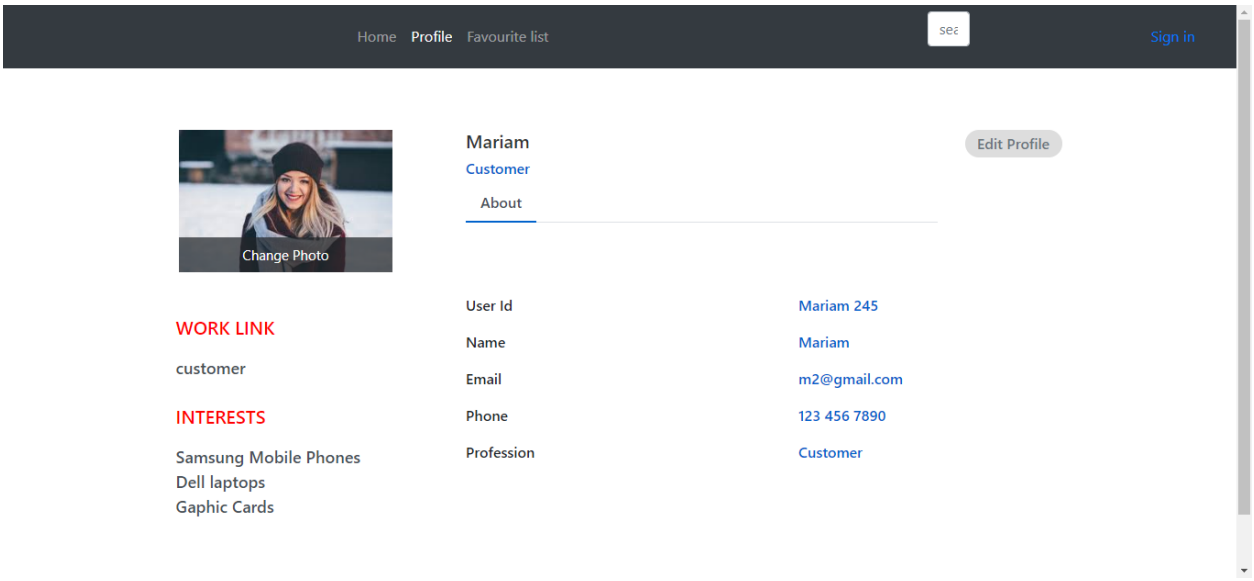
8.2 Login Screens



8.3 Sign up



8.4 Profile



8.5 Electronic news