



# **An Aggregated Platform of E-commerce Products Comparison**

## **Software Project-1**

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## Declaration

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We declare that this project is our original work and has not been submitted in any form for another degree or diploma at any university or other institute of tertiary education.

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# **Approval**

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The project titled “An aggregated platform of e-commerce products comparison” has been submitted to the following respected members of the board of examiners of the department of computer science in partial fulfilment of the requirements for the degree of Bachelor of Science in Computer Science and has been accepted as satisfactory.

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## Acknowledgement

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# **Chapter 1. Project Initiation**

This section gives a scope description and overview of everything included in this SRS document. Also, the purpose for this document is described and a list of abbreviations and definitions is provided.

## **1.1 Objectives**

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“A platform of information about e-commerce gadgets” specifically will be developed where user can see specifications of products, prices (price comparison) of products and also can write or read opinions of products or e-commerce companies from one place. Throughout this document, “A platform of information about e-commerce gadgets” will sometimes be referred to as "this website" or "our website system". That's all our main objective.

Besides, other objectives are:

- Build a system including some major features such as showing product's specifications, price comparison and capable of showing and writing reviews.
- Secure users' personal information.
- Make the website user friendly.
- Don't misuse the data of the users.
- Secure the payment procedure.
- To deliver the service whatever data will be used, all that data on the website will be up to date, trusted and verified.

## **1.2 Scopes**

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According to the information from the internet, currently the population of Bangladesh is approximately 163 million [1], where youth is more than 50 million [2]. Based on this information we can assume that there is nearly 17 million gadget lovers who are frequently googling on the internet about their desirable gadgets. Last but not least is that we can say that there is nearly 6 million die-hard gadget lover fans who are curious about gadgets or buying gadgets every single day or a week. This system is mainly targeted for those gadget lovers.

Besides, this website isn't like other typical e-commerce websites e.g. Daraz, Aarong, Yellow, Amazon, Alibaba, etc. where user can buy products and so on. It's all about gathering information about gadgets from all the angle as much as possible. There isn't a single website exists in Bangladesh yet! It'll be a unique & first website in Bangladesh.

As a result, the scopes are huge and positive scenarios from the business perspective in future.

## 1.3 Definitions, Acronyms, and Abbreviations

Term	Definition
<b>FR</b>	Functional Requirement
<b>QR</b>	Quality Requirement
<b>DESC</b>	Description
<b>DEP</b>	Dependency
<b>TAG</b>	A unique, persistent identifier contained in a PLanguage statement
<b>GIST</b>	A short, simple description of The Concept contained in a PLanguage statement
<b>SCALE</b>	The scale of measure used by The requirement contained in a PLanguage statement

**WISH**

A desirable level of achievement that may not be attainable through available means contained in a PLanguage statement

**MUST**

The minimum level required to avoid failure contained in a

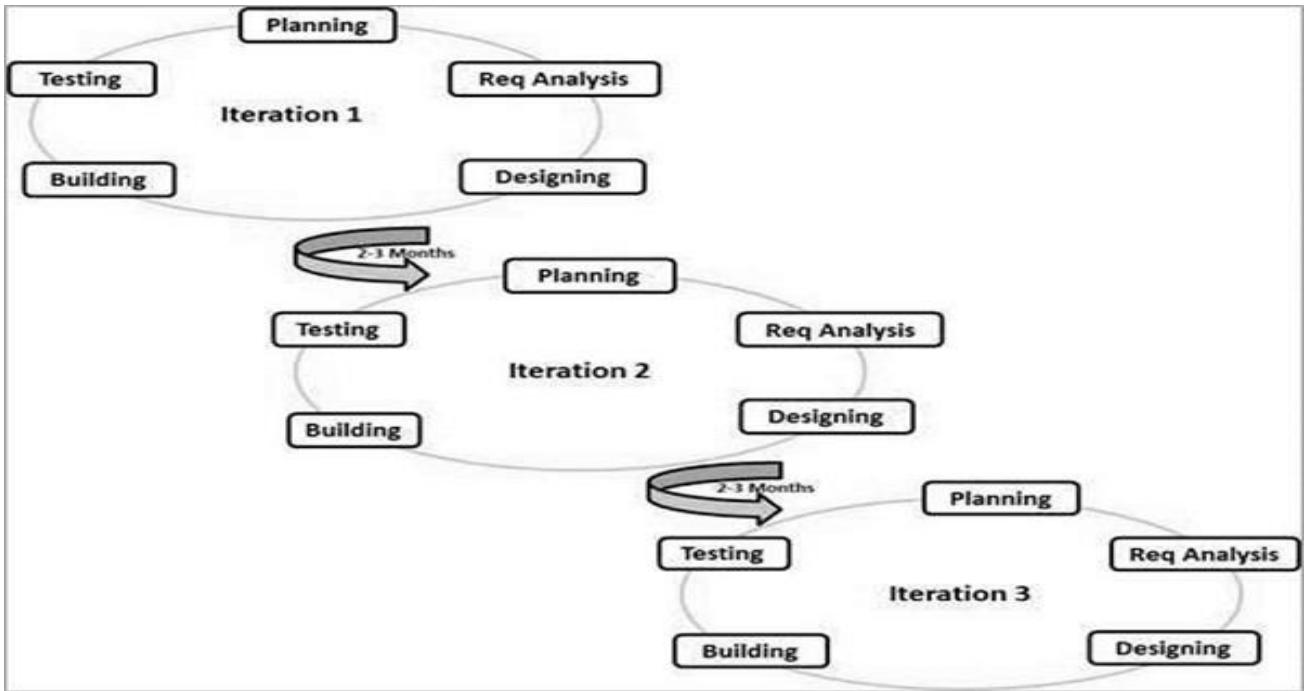
PLanguage statement

## **Chapter 2. SDLC:**

Nowadays, more and more professionals prefer to follow agile methodology in the development of software life cycle. This has enormous effects on the software. So, we also used this methodology throughout our project.

First of all, we planned what we will develop. Secondly, we gathered and analyzed all the requirements based on user stories. Thirdly, before building the product we designed it into two way. First is the paper prototype and second is the wire framing tool mock-up. Finally, we developed the product. Last but not least, after developing we tested the product.

In conclusion, above tasks we did with couple of iterations. We did it into three iterations. Each iteration takes 2 months. All in all, we use agile methodology around 6 months in our project.



*Fig: SDLC in Agile*

## **Chapter 3. Requirement specification:**

### **3.1 System Feature:**

#### **3.1.1 Description of features:**

In our system there are some features. Like- search options (here user can search which he/she wants to see. And also user can give review about e-commerce Company or gadgets and also see the gadgets or e-commerce Company. But the user must be registered if he/she wants to give the review about e-commerce Company or gadgets. There are also some features which are shown in functional requirements.

### **3.2 Functional Requirements:**

This section includes the requirements that specify all the fundamental actions of the website system.

User is someone who interacts with the website. There are 4 types of user who will use the system. Unregistered Normal User, registered Normal User, Super Admin and Normal Admin they are the 4 types of user.

## *User Class 1 - Unregistered Normal User*

### **ID: FR1**

TITLE: Browse website

DESC: A user should be able to browse the website through a browser.

DEP: None

### **ID: FR2**

TITLE: User sign-up

DESC: Given that a user has browsed the website, then the user should be able to sign up through the website. The user must provide user-name, password and e-mail address. The user can choose to provide a regularly used phone number.

DEP: FR1

### **ID: FR3**

TITLE: Website - Search by category.

DESC: Categories of product should be displayed in the home page in a grid view at ascending order alphabetically by default. In home page 50 categories of product is displayed. A user should be able to find any product based on categories. If categories of product's number are more than then user should be able to go to next grid view or jump to specific grid view to find all the categories of product.

DEP: F1

### **ID: FR4**

TITLE: Website - Selecting the category

DESC: A user should be able to select the category of product from the categories, which is included on all result items. The link will direct the user to an information page, which includes a list of brand. Then, by selecting the brand it'll direct the user to an information page, which includes name and picture of the product. The result is displayed in a grid view by default at ascending order alphabetically.

For brands & product's list maximally 20 & 40 numbers respectively will be displayed. If the number is more than then user should be able to go to next grid view or jump to specific grid view to find the brand or product.

DEP: FR3

### **ID: FR5**

TITLE: Website - Search by specific product

DESC: A user should be able to search by a specific product's name under the section of category. The result is displayed in a grid view by default at ascending order alphabetically.

DEP: FR4

### **ID: FR6**

TITLE: Website - Free-text search

DESC: Given that a user has browsed the website, then the first page that is shown there should be the search field in where the user should be able to search anything related to the site.

DEP: FR1

### **ID: FR7**

TITLE: Website - No match found

DESC: If no match is found the user should be informed but kept on the search page in order to get the possibility to conduct a new search right away.

DEP:FR5,FR6

### **ID: FR8**

TITLE: Website - Search result in a grid view

DESC: There should be maximally 50 results displayed. If the result contains more products than what can be displayed on the screen at one time, the user should be able to scroll through them. Beside this, the grid view should include a header with different selectable sorting options.

DEP: FR5, FR6

### **ID: FR9**

TITLE: Website - Sorting results

DESC: When viewing the results in a grid view, a user should be able to sort the results according to ascending or descending order alphabetically.

DEP: FR8

### **ID: FR10**

TITLE: Selecting preferred view on the website.

DESC: Although brands name and their products under a category are displayed in grid view by default but user should be able to select a preferred view between grid and list view.

DEP: FR1

### **ID: FR11**

TITLE: Switch preferred view on the website.

DESC: A user should be able to switch a preferred view between grid and list view.

DEP: FR10

### **ID: FR12**

TITLE: Selecting preferred language on the website.

DESC: In order to understand the website the user should be able to select a preferred language between English or Bengali for the website. The website is displayed in English language by default.

DEP: FR1

### **ID: FR13**

TITLE: Website - Switch preferred language

DESC: A user should be able to switch between English and Bengali language.

DEP: FR12

### **ID: FR14**

TITLE: See product specifications, prices and reviews

DESC: By clicking on the product's name and picture it will direct user on to another page to see the specifications, prices and reviews of the product in a page.

DEP: FR4

### **ID: FR15**

TITLE: See similar products

DESC: A user should be able to see similar products related to the same category under the specifications, prices and reviews.

DEP: FR14

### **ID: FR16**

TITLE: Take onto the linked e-commerce Company's site

DESC: By clicking on the desirable price user should be able to see the linked e-commerce site in a new window or tab.

DEP: FR14

### **ID: FR17**

TITLE: Select review option

DESC: A user should be able to select between see and give review option.

DEP: FR14

### **ID: FR18**

TITLE: See review about product.

DESC: By clicking on the see review option it'll direct link user to an information page of review sections where a user should be able to see review (ratings and comments) about the product.

DEP: FR17

### **ID: FR19**

TITLE: See review about e-commerce Company

DESC: By clicking on the see review option it'll direct link user to an information page of review sections where a user should be able to see review (ratings and comments) about the e-commerce company.

DEP: FR17

## **ID: FR20**

TITLE: Showing results of reviews

DESC: There should be maximally 20 results displayed in list view by default. If the result contains more reviews than what can be displayed on the screen at one time, the user should be able to scroll through them. Beside this, the list view should include a header with different selectable sorting options.

DEP: FR18/19

## **ID: FR21**

TITLE: Reviews' sorting results

DESC: When viewing the results in a list view, a user should be able to sort the results according to newest first or oldest first or best rating.

DEP: FR20

## **ID: FR22**

TITLE: Share product's info

DESC: A user should be able to share the information about the product on the social networking sites.

DEP: FR14

## **ID: FR23**

TITLE: Rate usefulness of the product information

DESC: A user should be able to answer the usefulness about the Product's information.

DEP: FR14

## **ID: FR24**

TITLE: Going previous page on the website

DESC: A user should be able to go to the previous page from the current page.

DEP: FR1

### **ID: FR25**

TITLE: Jump to the home page on the website

DESC: A user should be able to go to the home page from any page.

DEP: FR1

### **ID: FR26**

TITLE: Help by message on the website

DESC: A user should be able to send a message for any kind of query.

A user must fill the email to send a message.

DEP: FR1

### **ID: FR27**

TITLE: Help by FAQ on the website

DESC: A user should be able to see FAQ (frequently asked questions) on the website.

DEP: FR1

### **ID: FR28**

TITLE: Website – User subscription

DESC: A user should be able to subscribe via email the website to keep in touch about all the latest news.

DEP: FR1

### **ID: FR29**

TITLE: Notify users of new things

DESC: When new things are released, the user should be able to know and user checks these manually.

DEP: FR28

### **ID: FR30**

TITLE: Website – giving feedback

DESC: A user shall able to give feedback about the website via Email.

DEP: FR1

### **ID: FR31**

TITLE: Going from bottom to top

DESC: A user shall able to go from bottom to top of a page of the website whenever he/she click on the upward direction button.

DEP: FR1

## *User Class 2 - Registered Normal User*

Has all the FRs of unregistered normal user. Beside, this type of user has below FRs.

### **ID: FR32**

TITLE: User log-in

DESC: Given that a user has registered, then the user should be able to log in. The log-in information will be stored on the website's server and also in the phone (if user wants) and in the future the user should be logged in faster.

DEP: FR1, FR2

### **ID: FR33**

TITLE: Retrieve password

DESC: Given that a user has registered, then the user should be able to retrieve his/her password by e-mail.

DEP: FR1, FR2

### **ID: FR34**

TITLE: Give review about product.

DESC: By clicking on the review section it'll direct link user to an information page of review sections where a user should be able to give are view (ratings and comments) about the product.

DEP: FR32, FR17

### **ID: FR35**

TITLE: Give review about e-commerce Company

DESC: By clicking on the review section it'll direct link user to an information page of review sections where a user should be able to give review (ratings and comments) about the e-commerce company.

DEP: FR32, FR17

### **ID: FR36**

TITLE: Edit review

DESC: A user should be able to edit (modify, delete) the posted review (rating and comment).

DEP: FR32, FR34/35

### **ID: FR37**

TITLE: Showing Information in the profile account

DESC: After logging, on the profile home page a user should able to see his/her information, which includes personal information (avatar, password, e-mail address, phone number), history (browse or seen products) and activity log.

DEP: FR1, FR32

### **ID: FR38**

TITLE: Showing results of history and activity log

DESC: There should be maximally 25 results displayed in list view according to newest to oldest by default. If the result contains more history and activity log than what can be displayed on the screen at one time, the user should be able to scroll through them.

DEP: FR1, FR32

### **ID: FR39**

TITLE: Edit profile account on the website

DESC: On the profile page a user can edit his/her information, which includes the avatar, password, e-mail address and phone number.

DEP: FR1, FR32

### **ID: FR40**

TITLE: Clear history and activity log

DESC: A user can clear history and activity log of his/her profile account.

DEP: FR1, FR32

### **ID: FR41**

TITLE: Clear history and activity log by selected

DESC: A user should be able to clear selected history and activity log.

DEP: FR1, FR32

### **ID: FR42**

TITLE: Clear history and activity log by all

DESC: A user should be able to clear all history and activity log at once.

DEP: FR1, FR32

### **ID: FR43**

TITLE: User log-out

DESC: A user should be able to logout.

DEP: FR1, FR32

### *User Class 3 - Normal Admin*

Has some of the FRs of registered normal user which are FR32, 33, 37, 39 and 43. Beside, this type of user has below FRs.

#### **ID: FR44**

TITLE: Manage gadget Info

DESC: Should be able to manage gadget categories, brand categories, specifications categories, specifications info type, company info and reviews.

DEP: FR1, FR32

#### **ID: FR45**

TITLE: Manage User

DESC: Should be able to manage requested, blocked and registered user.

DEP: FR1, FR32

#### **ID: FR46**

TITLE: Manage Ad

DESC: Should be able to manage requested, activated and expired ad.

DEP: FR1, FR32

### **ID: FR47**

TITLE: See notifications

DESC: Should be able to see notifications.

DEP: FR1, FR32

### **ID: FR48**

TITLE: Apply for leave

DESC: Should be able to apply for leave permanently or temporary if he/she wants.

DEP: FR1, FR32

### *User Class 4 - Super Admin*

Has not only some of the FRs of registered normal user which are FR32, 33, 37, 39 and 43 but also all the FRs of normal admin except FR48. Beside, this type of user has below FRs.

### **ID: FR49**

TITLE: Manage admin

DESC: Should be able to create an admin, make an admin and manage exist admin.

DEP: FR1, FR32

### **ID: FR50**

TITLE: Manage database

DESC: Should be able to backup or restore database.

DEP: FR1, FR32

## **3.3 Non-functional Requirements**

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### **ID: QR1**

TITLE: Eminent search feature

DESC: The search feature should be eminent and easy to find for the user.

DEP: none

### **ID: QR2**

TITLE: Usage of the search feature

DESC: The different search options should be evident, simple and easy to understand.

DEP: none

### **ID: QR3**

TITLE: Usage of the result in the grid and list view

DESC: The results displayed in the list and grid view should be user friendly and easy to understand. Selecting an element in the result list should only take one click.

DEP: none

### **ID: QR4**

TITLE: Usage of the information link

DESC: The information link should be eminent and it should be evident that it is a usable link. Selecting the information link should only take one click.

DEP: none

### **ID: QR5**

TAG: Response Time

GIST: The fastness of the search.

SCALE: The response time of a search.

MUST: No more than 3 seconds 100% of the time.

WISH: No more than 2 seconds 100% of the time.

### **ID: QR6**

TAG: System Dependability

GIST: The fault tolerance of the system.

SCALE: If the system loses the connection to the Internet or the system gets some strange input, the user should be informed.

MUST: 100% of the time.

### **ID: QR7**

TAG: System Reliability

GIST: The reliability of the system.

SCALE: There liability that the system gives the right result on a search.

### **ID: QR8**

TAG: System Availability

GIST: The availability of the system when it is used.

SCALE: The average system availability (not considering network failing).

MUST: More than 98% of the time.

PLAN: More than 99% of the time.

WISH: 100% of the time.

### **ID: QR9**

TAG: User Login Account Security

GIST: Security of account

SCALE: If a user tries to login to the account portal with a non-existing account then the user should not be logged in. The user should be notified about log-in failure.

MUST: 100% of the time.

### **ID: QR10**

TAG: User Create Account Security

GIST: The security of creating account for users.

SCALE: If a user wants to create an account and the desired username is occupied, the user should be asked to choose a different username.

MUST: 100% of the time.

### **ID: QR11**

TITLE: Website extendibility

DESC: The website should be easy to extend. The code should be written in a way that it favors implementation of new functions.

DEP: none

### **ID: QR12**

TITLE: Website compatible

DESC: The website should be compatible with any browser.

DEP: none

## **2.4 User Stories:**

User is someone who interacts with the website. There are 4 types of user who will use the system. Unregistered Normal User, registered Normal User, Super Admin and Normal Admin they are the 4 types of user. One by one for each type of user all the user stories are describing below.

US ID	FR ID	As a/an	I want to	So that
1	Browse website	guest user	be able to	I want to browse the website.
2	Sign-up	guest user	be able to create an account	I can do many things inside and outside the portal on the website.
3	Search by category	guest user	be able to see categories of gadget	I can search by a specific category.
4	Select the category	guest user,	able to select the category of the product from the categories	I can see the selected category of the product from the categories.
5	Search by specific product.	guest user,	be able to search by a specific product's name under the section of category.	I can see the specific products name.
6	Free-text search	guest user,	be able to search anything related to the site.	I can search anything related to the site.
7	No match found.	guest user,	be informed to conduct a new search right way if no match is found.	I can informed to conduct a new search right way.

8	Search result in a grid view.	guest user,	be able to search result	I can see search result in a grid view.
9	Sorting results	guest user,	be able to sort the results.	I can see the result according to ascending or descending order alphabetically
10	Selecting preferred view on the website.	guest user,	be able to select preferred view between grid and list view.	I can select preferred view between grid and list view.
11	Switch preferred view on the website.	guest user,	be able to switch a preferred view between grid and list view.	I can switch a preferred view between grid and list view
12	Selecting preferred language on the website.	guest user,	be able to select a preferred language.	I can select a preferred language between English or Bengali for the website.
13	Switch preferred language	guest user,	be able to switch language	I can switch between English and Bengali language.
14	See product specifications, prices and reviews	guest user,	be able to see the product details	I can see the product specifications, prices and reviews.

15	See similar products	guest user,	be able to see similar products details.	I can see the similar products related to the same category under the specifications, prices and reviews.
16	Take onto the linked e-commerce Company's site	guest user,	be able to clicking on the desirable price.	I can see the linked e-commerce site in a new window or tab.
17	Select review option	guest user,	be able to select review option.	I can to select between see and give review option.
18	See review about product.	guest user,	be able to clicking the review option.	I can see about the product.
19	See review about e-commerce Company	guest user,	be able to clicking the review option	I can see about the e-commerce company.
20	Share product's info	guest user,	be able to share the information.	I can share the information about the product on the social networking sites.
21	Rate usefulness of the product information	guest user,	be able to answer the Product's information.	I can answer the usefulness about the Product's information.

22	Going previous page on the website	guest user,	be able to go to the pages.	I can go to the previous page from the current page.
23	Jump to the home page on the website	guest user,	be able to go to the home page.	I can go to the home page from any page.
24	Take help by message on the website	guest user,	be able to send a message.	I can send a message for any kind of query and I also must fill the email to send a message.
25	Take help by FAQ on the website	guest user,	be able to see FAQ (frequently asked questions).	I can see FAQ on the website.
26	User subscription	guest user,	be able to subscribe all the latest news.	I can subscribe via email the website to keep in touch about all the latest news.
27	Giving feedback	guest user,	be able to give feedback.	I can give feedback about the website via email.
28	Going from bottom to top	guest user,	be able to go to a page of the website.	I can go to from bottom to top of a page of the website whenever I click on the upward direction button.

29	Log-in	registered user	be able to log-in the website.	I can log-in inside the website.
30	Retrieve password	registered user	be able to retrieve password.	I can retrieve password by e-mail.
31	Give review about product	registered user	be able to click the review option	I can see review section and I also give review (rating and comments) about the product.
32	Give review about e-commerce Company	registered normal user	be able to click the review option	I can see review section and I also give review (rating and comments) about the e-commerce company.
33	Edit review	registered normal user	be able to edit the review	I can edit (modify, delete) the posted review (rating and comment).
34	Seeing Information in the profile account	registered normal user	be able to see personal information	I can see personal information on the profile homepage, after logging
35	Seeing results of history and activity log	registered normal user	be able to see the results of history and activity log	I can see the results of history and activity log so that I can see whenever I login the site and also see what I save and should be able to scroll them

36	Edit profile account on the website	registered normal user	be able to edit my profile account information	I can edit my profile account information includes the avatar, password, e-mail address and phone number
37	Clear history and activity log	registered normal user	be able to clear history and activity log	I can clear history and activity log of my profile account
38	User log-out	registered normal user	be able to logout	I can logout
39	Manage gadget Info	normal admin	be able to manage gadget info	I can manage gadget categories, brand categories, specifications categories, specifications info type, company info and reviews
40	Manage User	normal admin	be able to manage user	I can manage requested, blocked and registered user
41	Manage Ad	normal admin	be able to manage ad	I can manage requested, activated and expired ad
42	See notifications	normal admin	be able to see notifications	I can see notifications
43	Apply for leave	normal admin	be able to apply for leave	I can apply for leave permanently or temporary if I wants

44	Manage admin	super admin	be able to create an admin	I can create an admin, make an admin and manage exist admin
45	Manage database	super admin	be able to manage database	I can manage to backup or restore database

## **Chapter 4.Quality Attributes:**

### **4.1 Usability:**

This system will give information about gadget at highest possible from all the angles. At a time all the information will be delivered from one place. As a result, users don't have to browse multiple sites. This system will not only save user's valuable time but also give a clear overview about a gadget. That's all about the superficial facilities of this system.

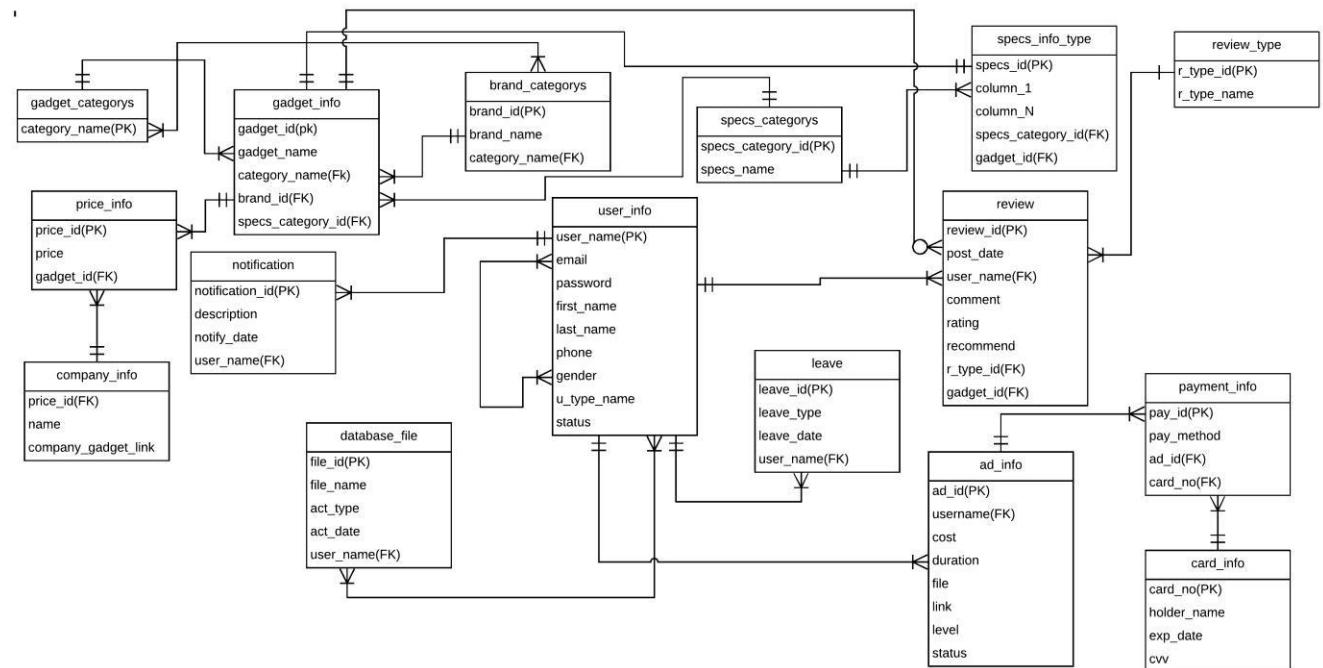
### **4.2 performance:**

This system will be used Windows 10 operating systems will be required for our website to run efficiently. And our system give all information in one place so our system will be user friendly.

# Chapter 5. Data Requirements Specification:

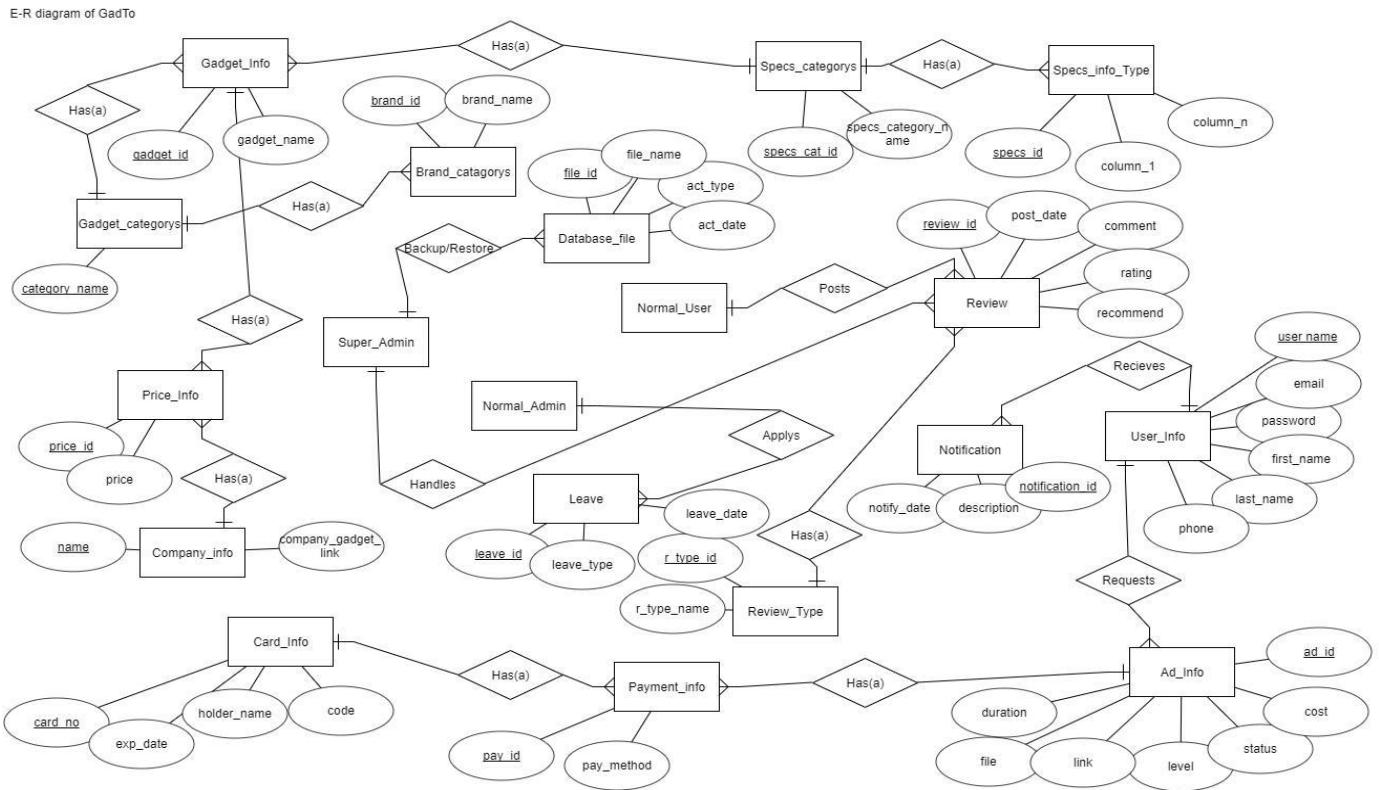
## 5.1 Logical data model-UML diagrams:

### 5.1.1 Schema Diagram:

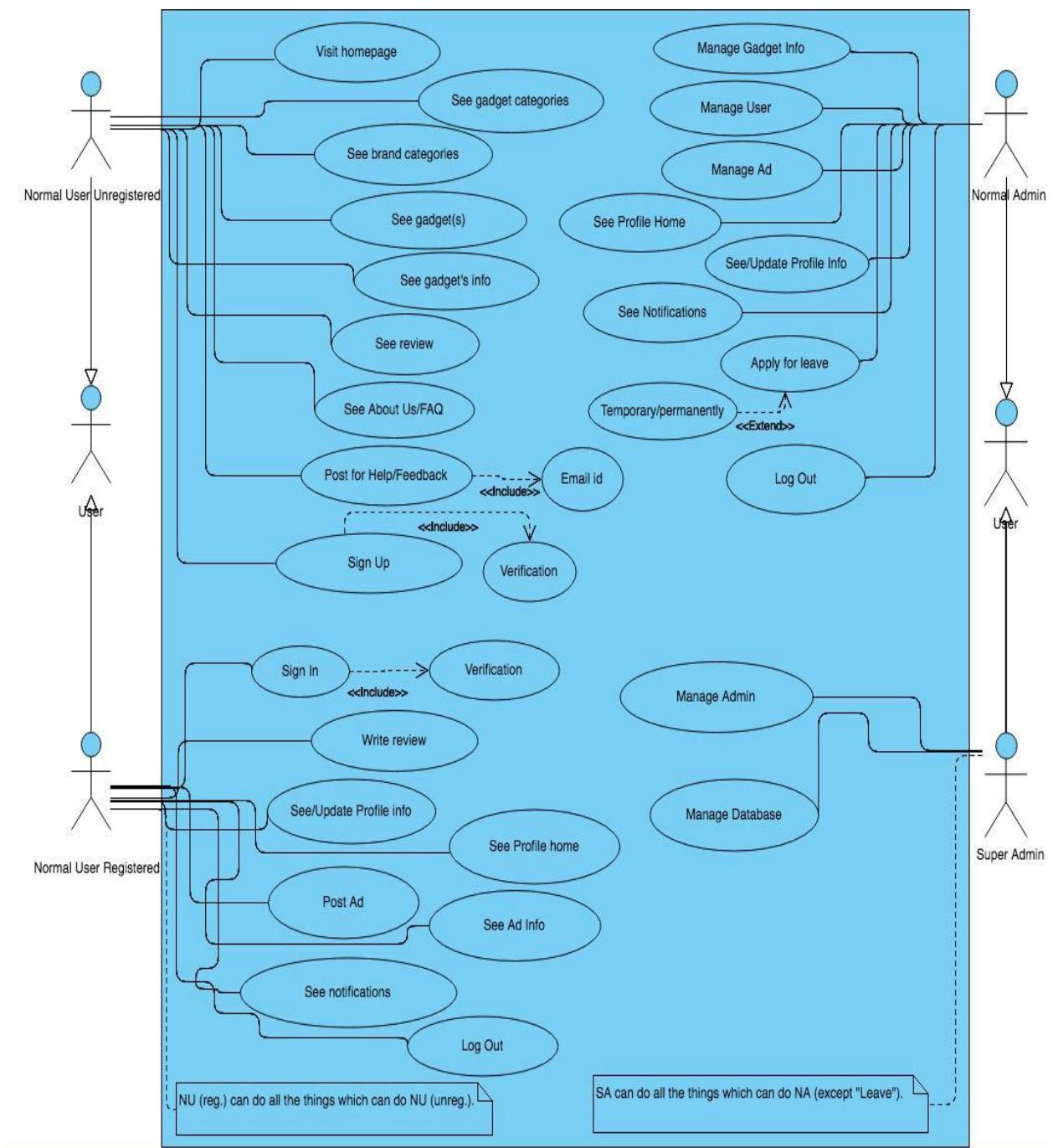


DB Schema of GadTo  
© GadTo

## 5.1.2 E-R Diagram:

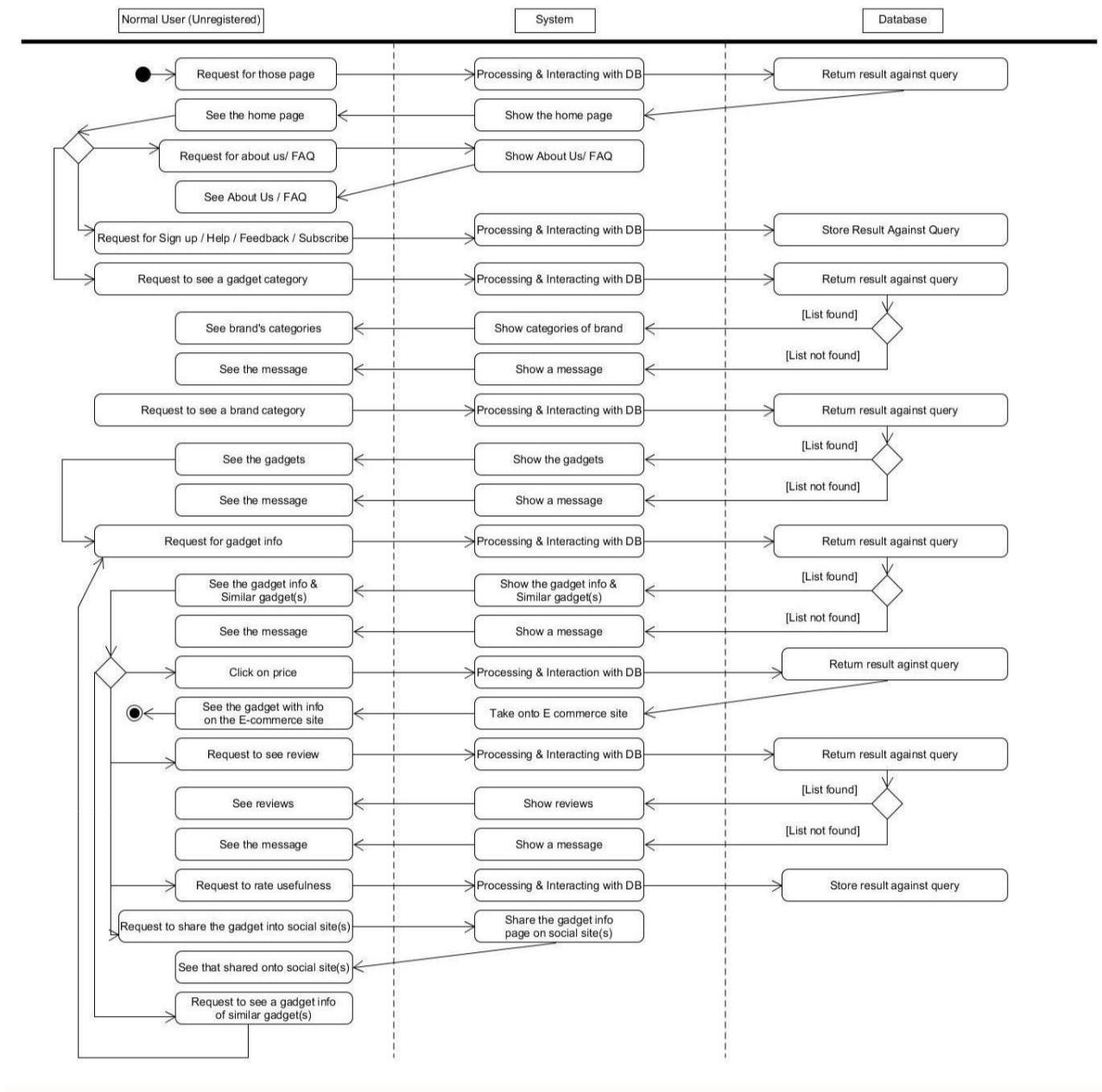


### 5.1.3 Use Case Diagram:

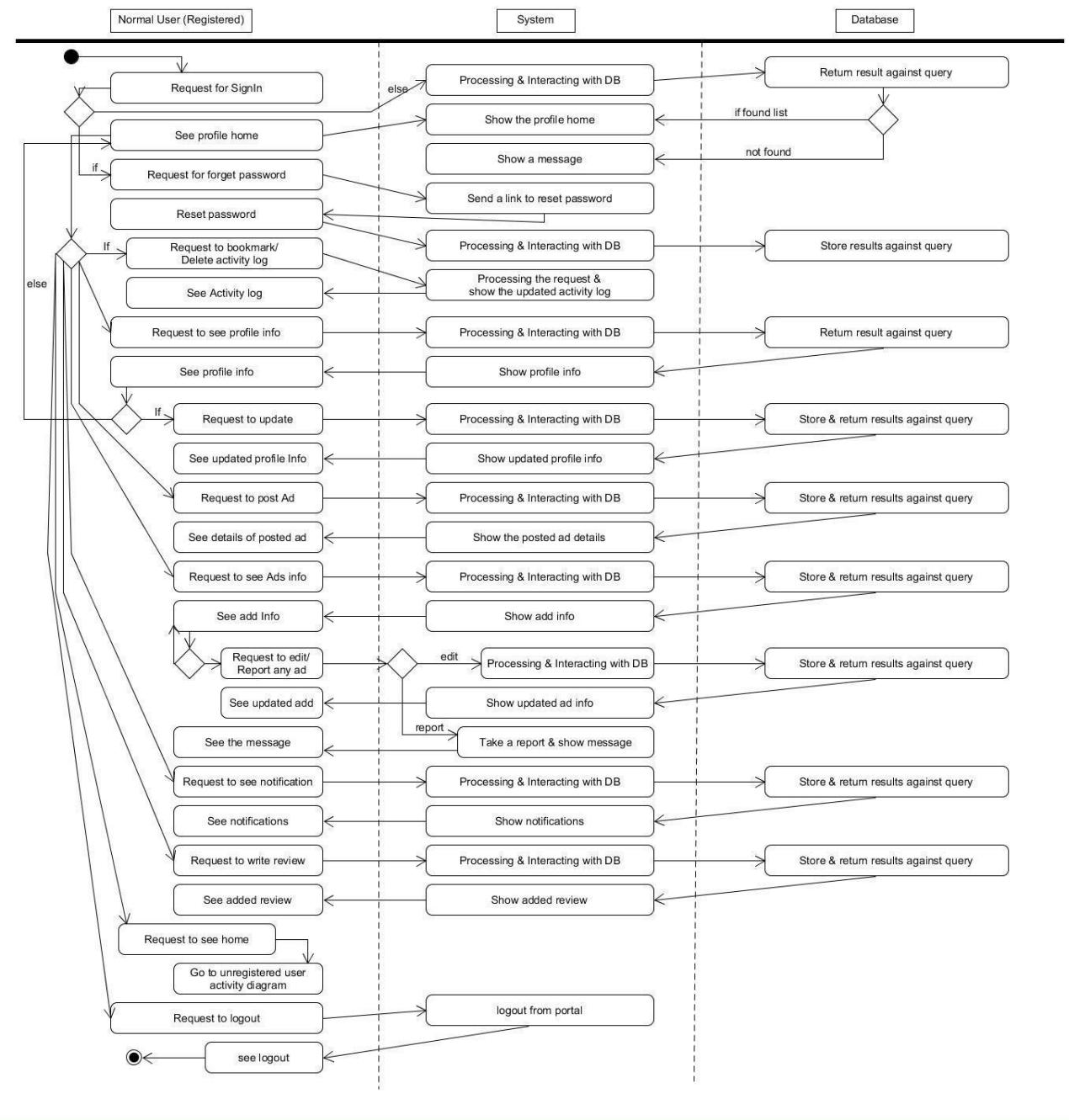


## **5.1.4 Activity Diagram:**

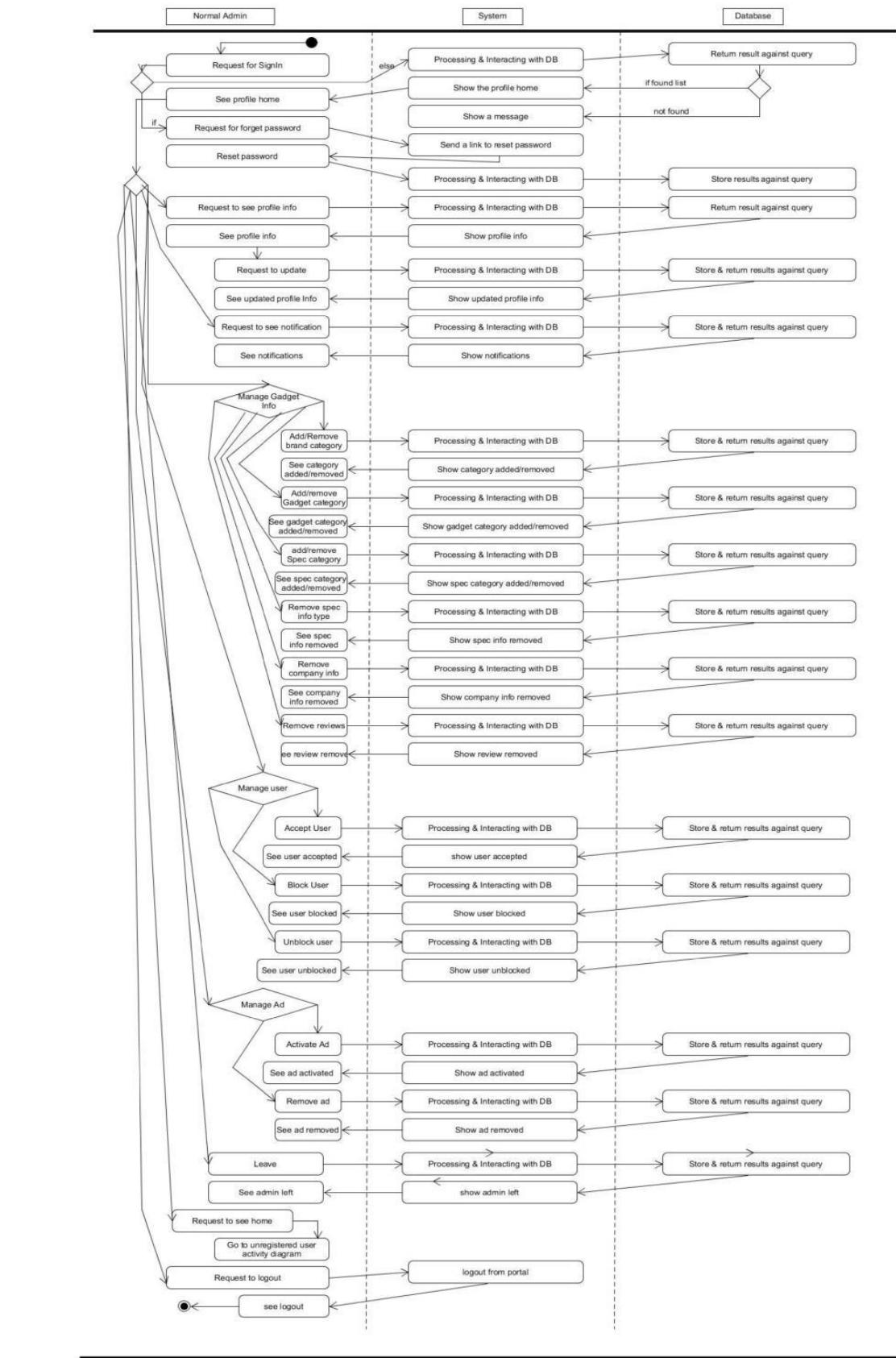
## **1. Unregistered User:**



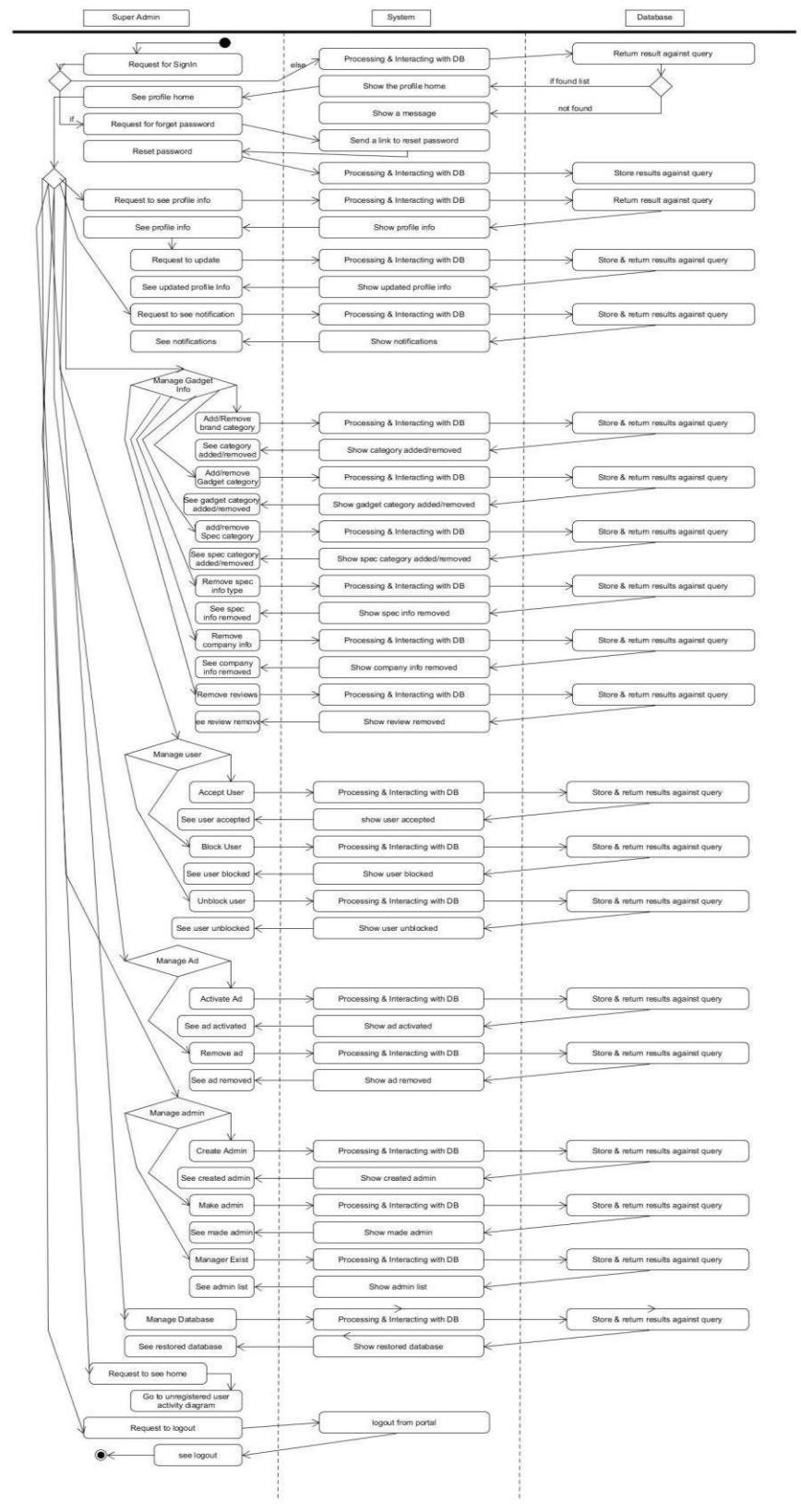
## 2. Registered User:



### 3. Normal Admin:

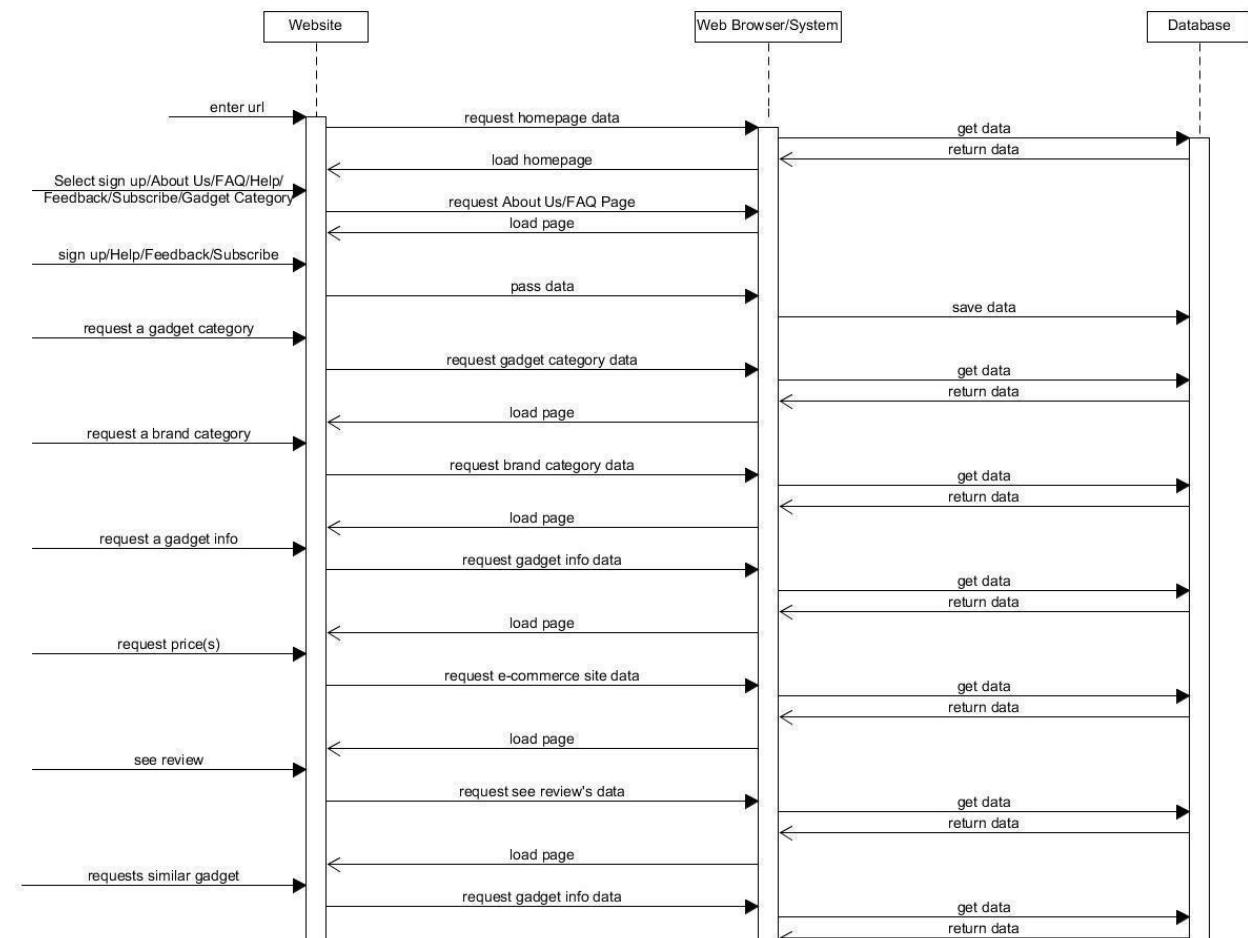


## 4. Super Admin:

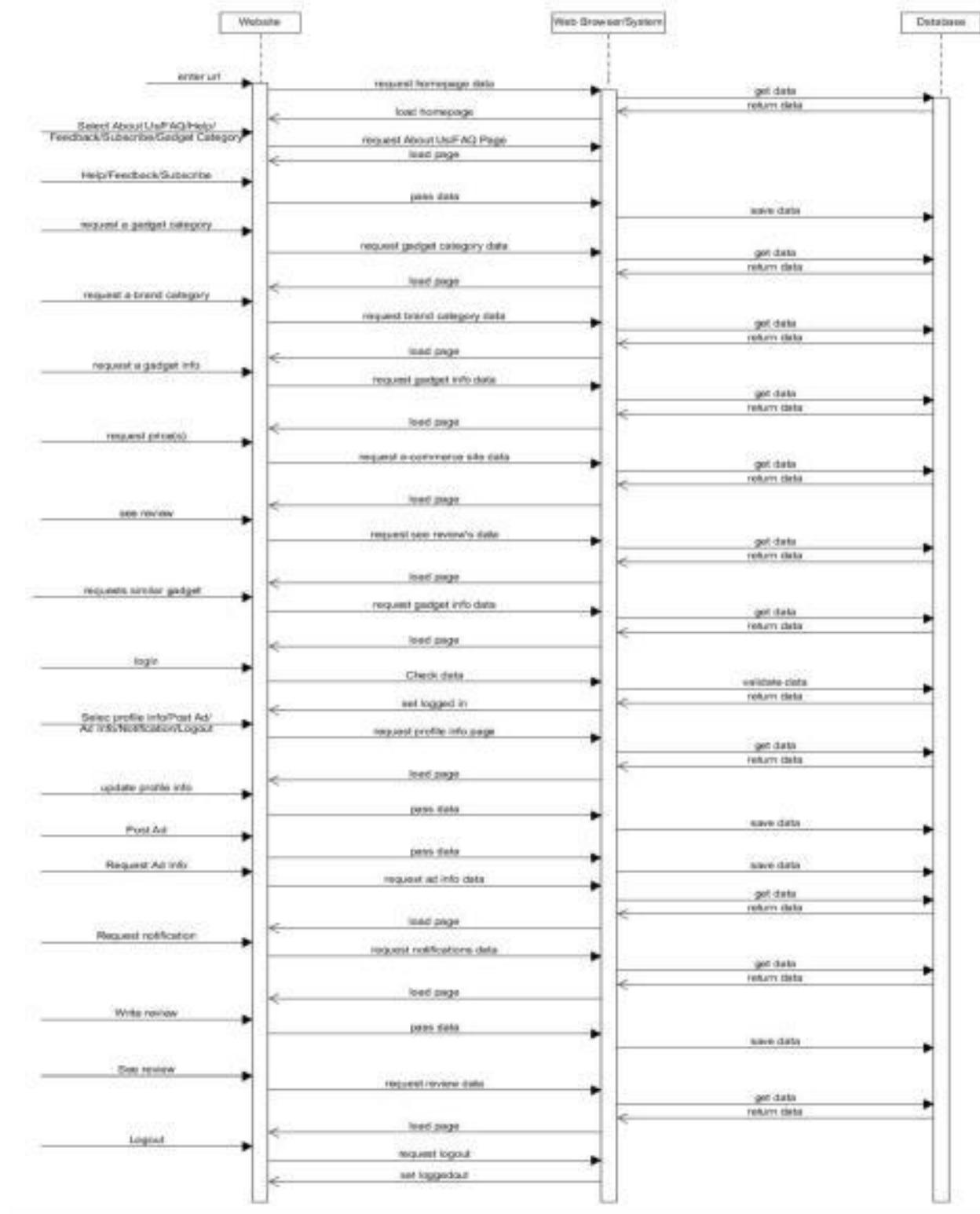


## 5.1.5 Sequence Diagram:

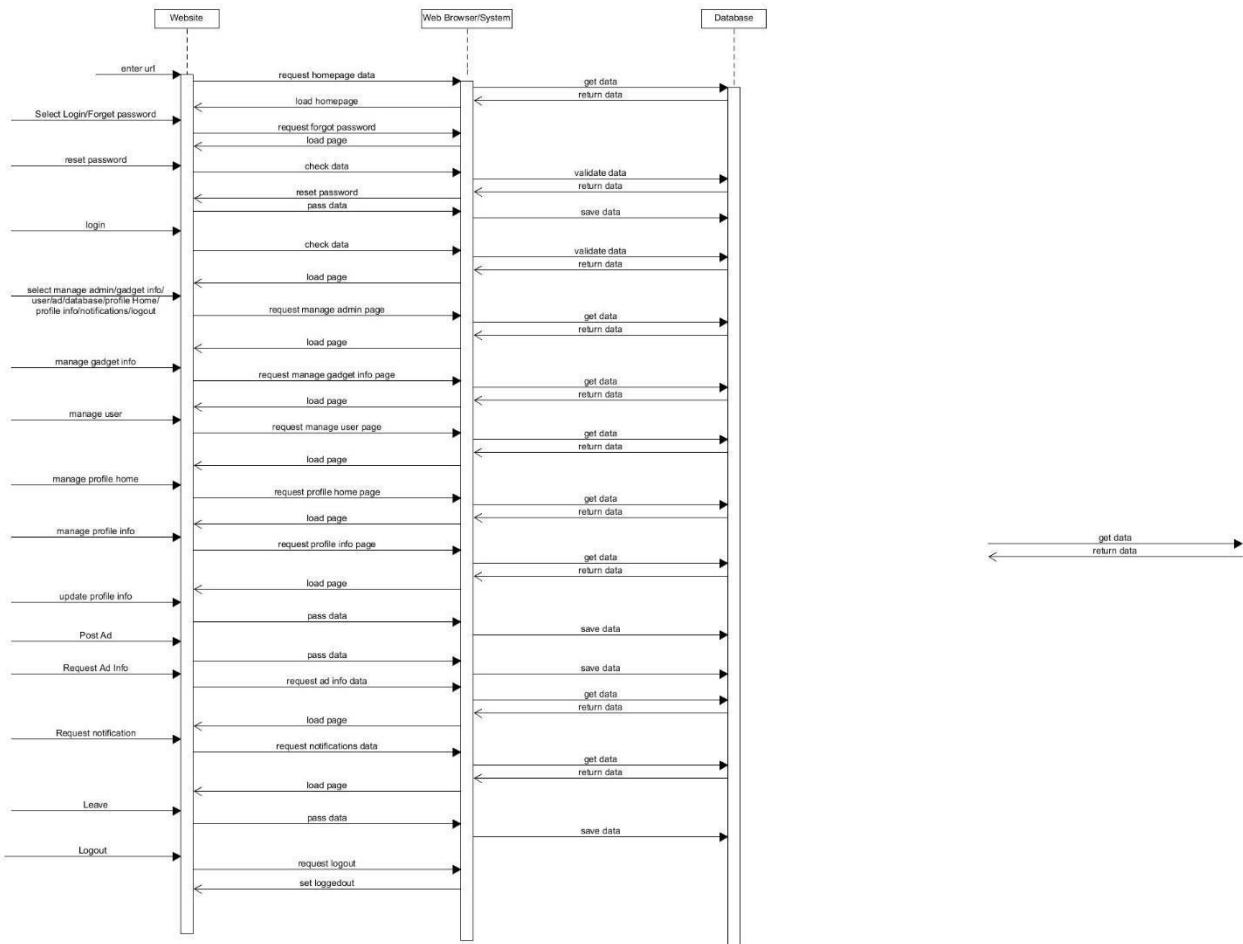
### 1. Unregistered User:



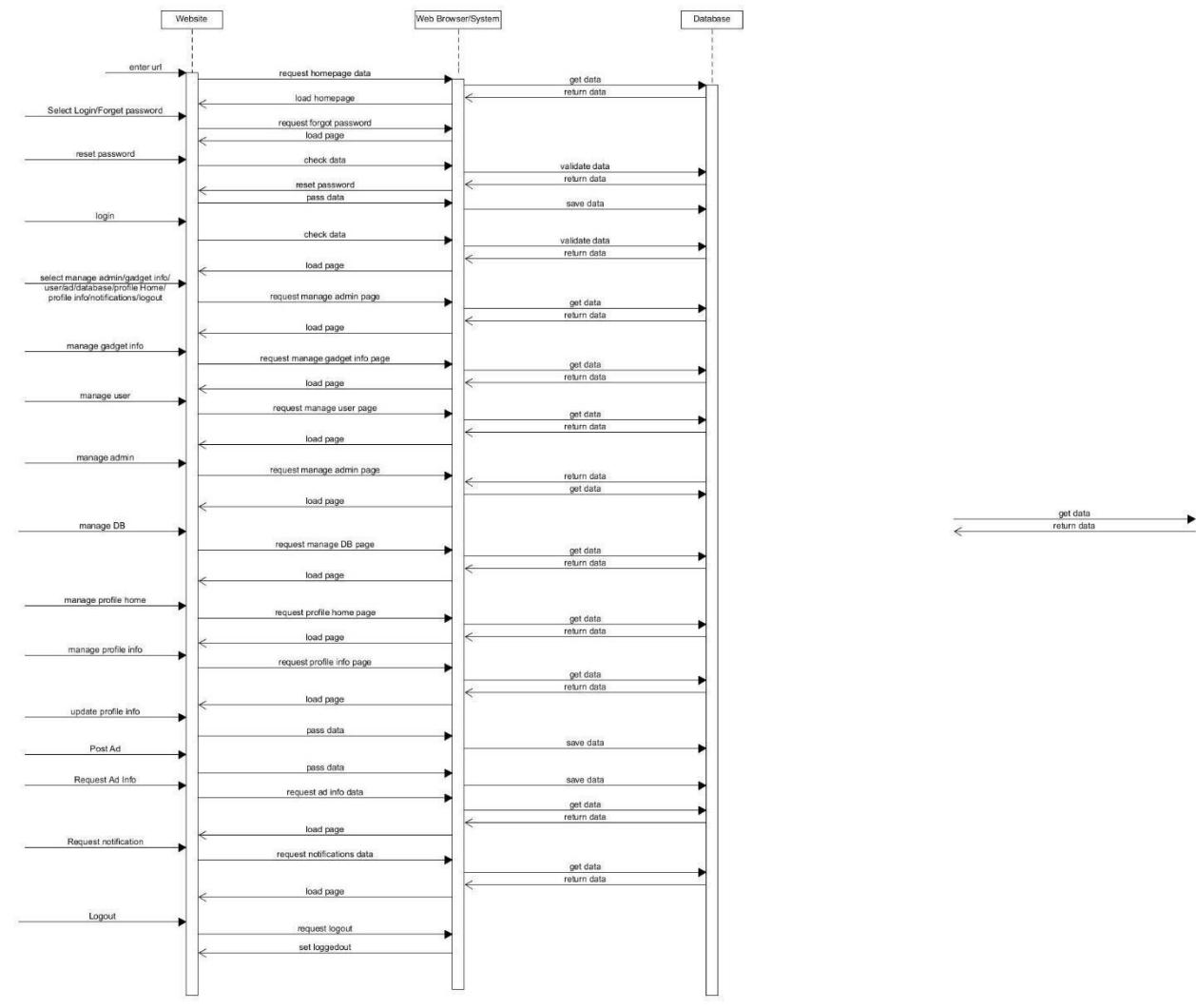
## 2. Registered User:



### 3.Normal Admin:



## 4. Super Admin:



## Chapter 6. Choice of Prioritization Method

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When prioritizing the requirements we used the MoSCoW method. We picked the requirements based on must have, should have, could have and won't or would have.

MUST (M)	SHOULD (S)	COULD (C)	WON'T or Would (W)
FR1-7	FR8-13		
FR14-20	FR21-23		
FR24-25	FR26		
FR27	FR28-31		
FR32-37	FR38		
FR39	FR40-42		
FR43-50			

## Chapter 7: Impact Analysis

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For better result, we have to firstly implement all the functional requirements in the MUST column of MoSCoW method table. Then have to implement all the remaining requirements of under SHOULD column of MoSCoW table and then finally COULD of MoSCoW table. Here, all the requirements in each column are placed in detacts way that in the implementation phase implementation will be from upward to downward step by step. All the requirements are placed based on few things such importance, impact, dependency, etc. things.

## Chapter 8: Software Testing

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Nowadays, there are many testing tools are available for testing software or websites. For, E-commerce site website has also some testing tools. In our website we also did some testing. Firstly, we identify important segments & test cases for e-commerce website testing.

We tested following segments:

1. **Homepage:** In homepage we tested that-

- Is it going to auto scroll?
- If yes, at what interval will the image be refreshed?
- When the user hovers over it, is it still going to scroll to the next one?
- Can it be hovered on?
- Can it be clicked on?
- If yes, is it taking you to the right page and right deal?
- Is it loading along with the rest of the page or loads last in comparison to the other elements on the page?
- Can the rest of the content be viewed?
- Does it render the same way in different browsers and different screen resolutions?

2. **Search:** Search algorithms are very important for the success of a retail site because we can't always place what the users want to see right in front of their eyes. So, we tested that-

- Search based on Product name, brand name or something more broadly, the category. For example: Camera, phone, computer, etc.
- Search Results have to be relevant.
- Different sort options have to be available- based on Brand, Price, and Reviews/ratings etc.
- How many results to display per page?
- For multi-page results, are there options to navigate to them
- Also, search happens in many places. Please take the search drilling down into multiple levels into consideration when validating this functionality. For example: When I search on the home page, I might see something like this:

3. **Product details page:** Once a user finds a product either through search or by browsing or by clicking on it from the homepage, the user will be taken to the product information page. We tested that-

- Image or images of the product
- Price of the product
- Product specifications
- Reviews
- Check out options
- Delivery options
- Shipping information
- In stock/Out of stock
- Multiple color or variations options
- Breadcrumb navigation for the categories (highlighted in Red below). If navigation such as that is displayed, make sure every element of it is functional.

i. **Payment details:** we are tested in our payment system that-

- Checked different payment options
- If allowing check out as Guest, simply finish the purchase and provide an option to register at the end
- Returning customers – Login to check out
- User sign up.

- If storing customer Credit card or any other financial information, perform security testing around this to make sure it is secure (PCI compliance is a must)
- If the user is signed up for a long time, make sure the session is timed out or not. Every site has a different threshold. For some, it is 10 minutes. For some, it might be different.
- Emails/Text confirmation with the order number generated.

ii. **After post-Ad tests:** After post ad an user can do the following things or not we are tested that-

- Change the Ad.
- Cancel the Ad

#### **4. Other tests:**

- Login
- FAQs
- Contact us page.
- Customer Service page, etc.

We are not still test our website by using automated tools. But in future we are using *selenium* tools for testing our website which is best for e-commerce website testing and also will be test useful test cycle which is mostly important for e-commerce website.

## **Conclusion:**

In conclusion, we are looking forward about this project. We have a plan of implementing some latest tools, technologies such as front-end framework, back-end framework, web crawling and artificial intelligences in our website to deliver the top-notch experience for the users.

Although there will always be some challenges but we strongly believe that this project will be successful to mark a significant value in people's daily life on the field of e-commerce products. We are looking forward to turn our project into reality.

## **Chapter 9. External Interface Requirements:**

This section provides a detailed description of all inputs into and outputs from the system. It also gives a description of the software, hardware and communication interfaces and provides basic prototypes of the user interface.

### **9.1 User Interface:**

In UI designs are drawn for 4 types of user. At the first design can be used all types of user.

A user should be able to see the login page when he/she go to open the application. If the user has not registered than he/she should be able to do that on the log in page.

If the user are not an unregistered user than he/she should be able to see directly the search page when the application is opened and here the users chooses the types of search he/she wants to conduct.

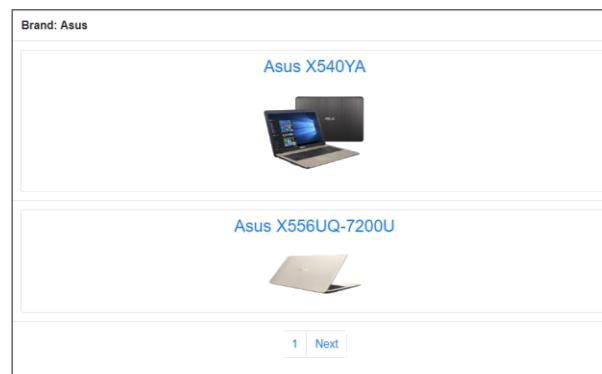
Every registered users should have a profile page where they can edit their email address, phone number, address, and password. And also select his preferred language.

*Following UI designs are the common things which are for all types of users:*

The screenshot shows the GadTo website homepage. At the top, there is a navigation bar with links for Home, About Us, FAQ, Help, Feedback, Sign In, Sign Up, and a search bar. Below the navigation bar, a banner highlights the website's features: "GadTo (Gadget Tottho) is different. Here is how?". The banner is divided into three sections: "Gadget Specification" (with an icon of a smartphone), "Gadget Price" (with an icon of a price tag), and "Gadget & E-commerce Company reviews" (with an icon of two people). Below the banner, there is a section titled "Categories" with three items: "Computer" (with an icon of a laptop), "Mobile" (with an icon of several smartphones), and "Watch" (with an icon of three watches). At the bottom of the page, there is a copyright notice: "Copyright © 2018-2018 GadTo".

The screenshot shows the GadTo website's Gadget's Category page for the "Computer" category. The page title is "Category: Computer". It lists four brands: Asus, Acer, HP, and Apple. Each brand has its logo and name displayed. The Asus entry includes the text "IN SEARCH OF INCREDIBLE". At the bottom of the page, there is a copyright notice: "Copyright © 2018-2018 GadTo".

**Figure: Website Homepage & Gadget's Category page.**



Copyright © 2018-2018 GadTo

**Figure: Selected Gadget's Brand page.**

**Computer : Asus X540YA**

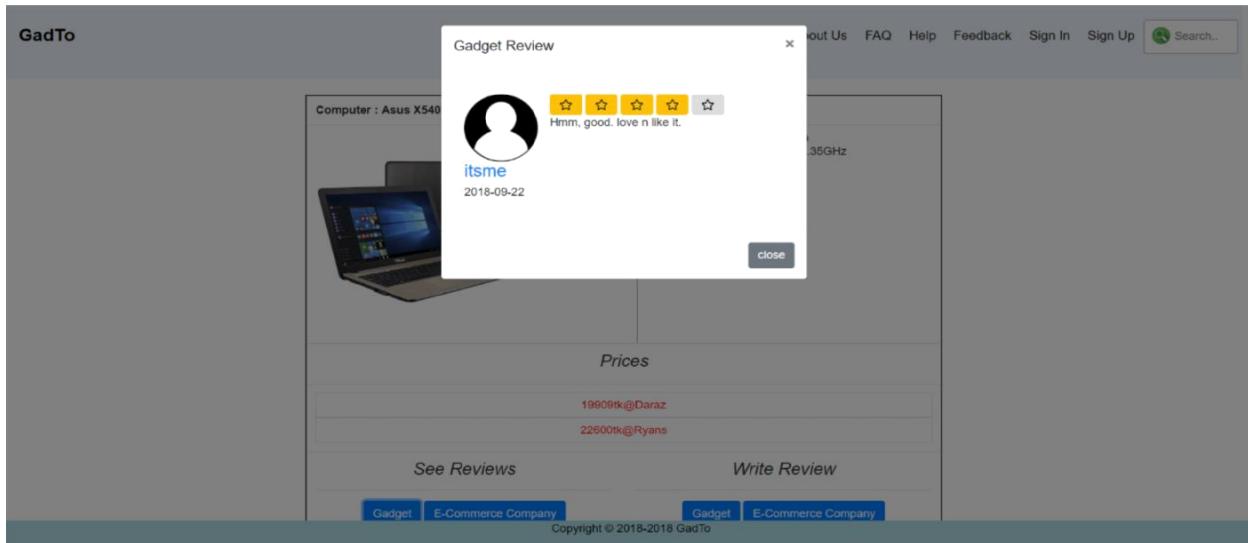
	<ul style="list-style-type: none"> <li>• Processor: AMD E1-6010</li> <li>• Processor clock speed: 1.35GHz</li> <li>• Display: 15.6"</li> <li>• RAM: 4GB</li> <li>• Ram Type: DDR3L</li> <li>• HDD: 500GB</li> <li>• OS: FreeDOS</li> </ul>
<b>Prices</b>	
19999k@Daraz	
22600k@Ryans	
<a href="#">See Reviews</a>	<a href="#">Write Review</a>
<a href="#">Gadget</a>	<a href="#">E-Commerce Company</a>
<a href="#">Gadget</a>	<a href="#">E-Commerce Company</a>

**Similar Gadget**


<a href="#">Asus X556UQ-7200U</a>

Copyright © 2018-2018 GadTo

**Figure: Selected Gadget Brand Specification, Price Comparison page.**



The screenshot shows the "Sign Up" page. It starts with a header with links for Home, Sign In, Sign Up, About Us, FAQ, Help, Feedback, and a search bar. The main content area is titled "Hello & Welcome :) Please complete your details." and contains fields for User Name, Email Address, Password, First Name, Last Name, and Contact No. Below these fields is a gender selection section with radio buttons for Male, Female, and Other. A "Sign Up" button is located at the bottom of this section. A note at the bottom states: "By clicking "Sign Up" you indicate that you agree with our [Terms, Conditions & Privacy Policy](#)". The footer of the page includes a copyright notice: "Copyright © 2018-2018 GadTo".

**Figure: Gadget Review page & Sign Up page respectively.**

The screenshot shows the "About Us" page of the GadTo website. At the top, there is a navigation bar with links for Home, Sign In, Sign Up, About Us (which is highlighted in blue), FAQ, Help, and Feedback. To the right of the navigation bar is a search bar with a magnifying glass icon and the placeholder text "Search...". The main content area has a light blue header with the text "About Us". Below this, a section titled "About GadTo:" contains a brief description: "An aggregated platform where user can see specifications of products, prices(price comparison) of gadgets and also can write or read opinions of gadgets or e-commerce companies from one place." Another section, "Why GadTo is different and special?", states: "There is no website (a single website doesn't exist) in Bangladesh like GadTo. GadTo is the most unique and first site in Bangladesh to deliver this kind of service related to gadget's information." At the bottom of the page, a teal footer bar displays the copyright notice "Copyright © 2018-2018 GadTo".

The screenshot shows the "FAQ" page of the GadTo website. At the top, there is a navigation bar with links for Home, Sign In, Sign Up, About Us (highlighted in blue), FAQ (highlighted in blue), Help, and Feedback. To the right of the navigation bar is a search bar with a magnifying glass icon and the placeholder text "Search...". The main content area has a light blue header with the text "FAQ". Below this, a numbered list of questions is provided:

- 1. What kind of site GadTo is?**  
Answer: The site (GadTo) helps to know about a gadget from highest possible angles. From this site you can know the specifications, prices and reviews of a gadget.
- 2. Is this website is gadget buy-sell site?**  
Answer: No. This site is only helps you to know information about a gadget. This is the one & only purpose of this site.
- 3. The information of gadget(s) are correct or not?**  
Answer: Yes. This site store the most correct information about gadget(s) and update frequently based on real time.
- 4. Guest user what can do?**  
Answer: Guest user can see the specifications, prices & reviews of a gadget.
- 5. Registered user what can do?**  
Answer: Registered user can see the specifications, prices & reviews. Besides, can write review about a gadget. Last but not least, can post an ad!
- 6. For posting an ad what have to do & how?**  
Answer: Simple. You don't have to do lot's of things. Just simply by creating an account you'll be able to promote your ad. The "Post Ad" feature is inside the account.

At the bottom of the page, a teal footer bar displays the copyright notice "Copyright © 2018-2018 GadTo".

**Figure: Website About Us & FAQ page respectively.**

GadTo

Home Sign In Sign Up About Us FAQ Help Feedback Search..

### How Can We Help You?

Enter your email  
Write here what kind of help do you need?

Submit

Copyright © 2018-2018 GadTo

GadTo

Home Sign In Sign Up About Us FAQ Help Feedback Search..

### Feedback Us

Enter your email  
Give feedback to improve our system that we can give you better experience?

Submit

Copyright © 2018-2018 GadTo

**Figure: Website Help & Users Feedback page respectively.**

*Following UI design is the common things which is for all users (except guest user):*

The figure displays two screenshots of a website's sign-in and password recovery pages.

**User Sign-In Page:**

- The top navigation bar includes links for Home, Sign In (highlighted in blue), Sign Up, About Us, FAQ, Help, Feedback, and a search bar.
- The main form is titled "User Sign-In" with a central vertical arrow icon.
- It contains two input fields: "Username" and "Password".
- A "Forgot Password?" link is located below the password field.
- A "Sign In >>>" button is at the bottom.

**Forgot Password Page:**

- The page title is "Forgot Password".
- A "Reset your password" section contains the text: "You can reset your password by your e-mail. We'll send a link to reset your password."
- An "Email address" input field is present.
- A green "Reset my password" button is at the bottom.

**Figure: Website Sign In and Recover Password page for all registered user respectively.**

---

[Close](#)



First Name  
Its \_\_\_\_\_

Last Name  
Me \_\_\_\_\_

Username  
itsme \_\_\_\_\_

Mobile Number  
01712345678 \_\_\_\_\_

Password  
\*\*\*\*\* \_\_\_\_\_

E-mail  
itsme@yahoo.com \_\_\_\_\_

[Update](#)

---

Logout

Home   Profile Home   Profile Info   Post Ad   Ad Info   **Notification**

1 Your requested ad is now promoting [A172]

2 Your requested ad is now promoting [A218]

3 Your requested ad is now promoting [A172]

4 Your requested ad is now promoting [A172]

5 Your requested ad is now promoting [A72]

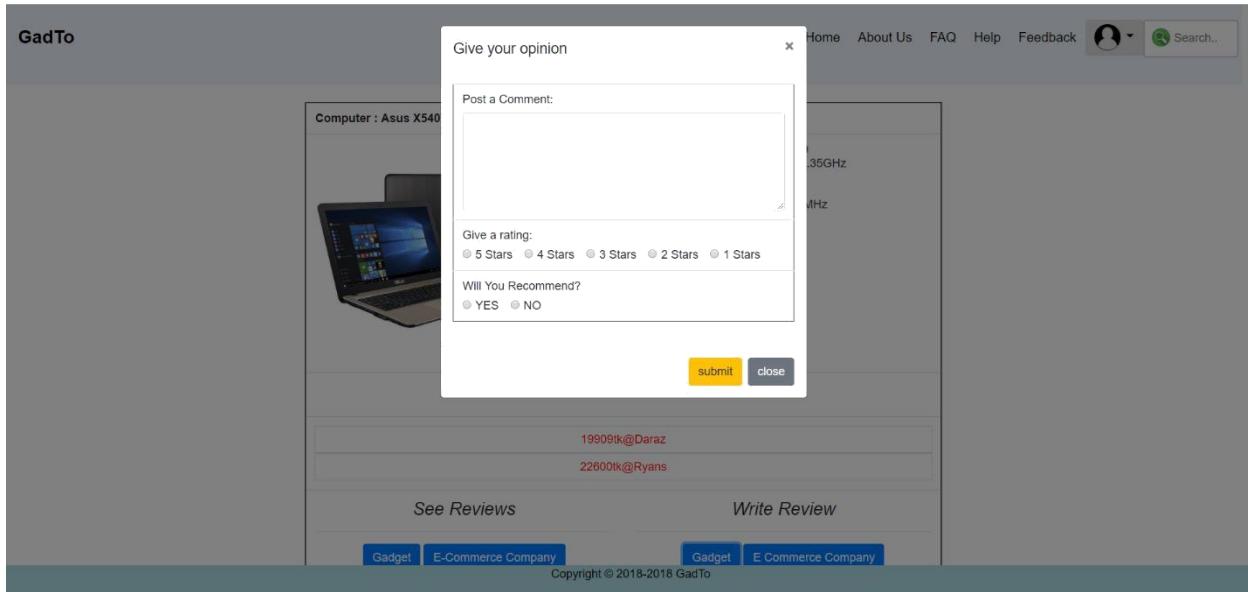
6 Your requested ad is now promoting [A172]

7 Your requested ad is now promoting [A172]

8 Your requested ad is now promoting [A172]

10 Your requested ad is now promoting [A987]

**Figure: Website registered user's information update page & notification page respectively.**



**Figure: Users comment page.**

*Following UI design is for reg. normal user:*

Welcome itsme  
You logged in at:14:09 - 12/18/18

Activity log	
2018-08-02	you posted a review about <a href="#">HP 14-BW077AU</a>
2018-08-12	you posted a review about <a href="#">iPhone X</a>
2018-09-22	you posted a review about <a href="#">Asus X540YA</a>
2018-09-23	you posted a review about <a href="#">iPhone X</a>

**Figure: Registered normal user profile home page.**

### Complete Ad Details

Choose A Package

- Premium | 1 Week | \$100
- Premium | 1 Month | \$200
- Standard | 1 Week | \$50
- Standard | 1 Month | \$100

share about your add

No file chosen

Add Link

N.B: The file will be used as an Ad.The link is used to reach people to your product.  
All the information you can change in file.

### Complete Ad Details

Choose Payment Method



Cardholders Name  
Rashed Rahat

Card Number  
1234567890

Expiry Date  
18 - Dec - 2018

CVC/CVC\*  
357

**Figure: Registered normal users Post Ad page.**

**Successfully Posted Ad**



Great

Your ad will be shown publicly on GadTo

The requested add is under processing

Finish

*Posted Ad Information*

ID	Status	Details	Action
16	active	Cost: 100 Duration: 1 week Intensity: high Link: itsme.com  file:	<input type="button" value="Remove"/>
27	active	Cost: 100 Duration: 1 week Intensity: high Link: itsme.com  file:	<input type="button" value="Remove"/>
28	pending	Cost: 100 Duration: 1 week Intensity: high Link: itsme.in  file:	<input type="button" value="Remove"/>
29	pending	Cost: 100 Duration: 1 week Intensity: high Link: itsme.com  file:	<input type="button" value="Remove"/>

**Figure: All Ads information page.**

*Following UI design is for reg. super admin users:*

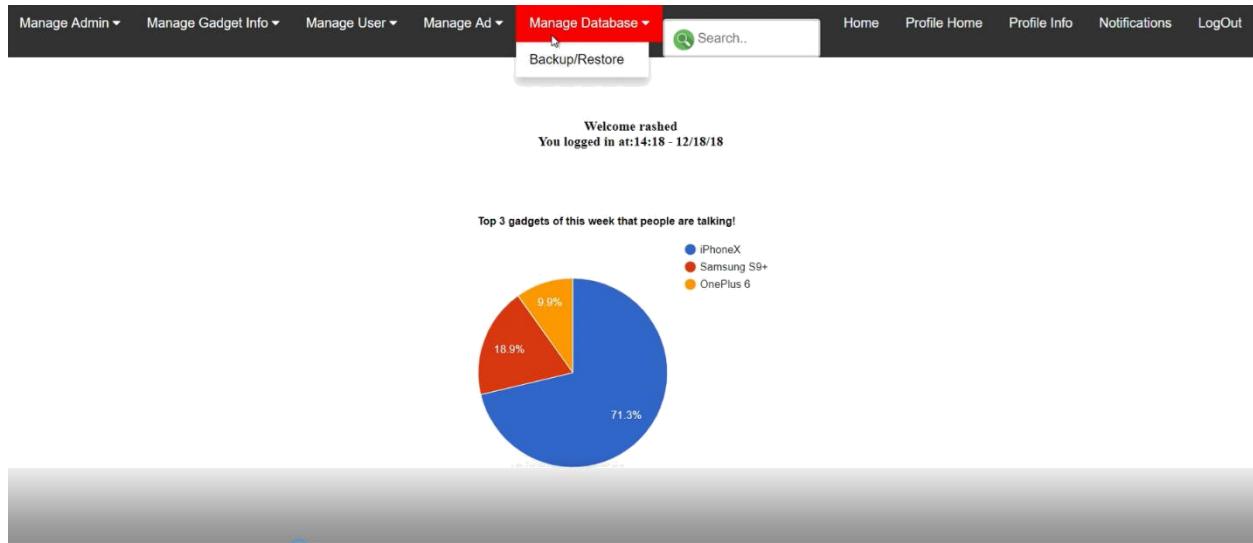
The screenshot shows a top navigation bar with links: Manage Admin, Manage Gadget Info, Manage User, Manage Ad, Manage Database, Search, Home, Profile Home, Profile Info, Notifications, and LogOut. Below the navigation is a welcome message: "Welcome rashed" and "You logged in at:14:18 - 12/18/18". A pie chart titled "Top 3 gadgets of this week that people are talking!" displays the following data:

Gadget	Percentage
iPhoneX	71.3%
Samsung S9+	18.9%
OnePlus 6	9.9%

A copyright notice at the bottom reads "Copyright © 2018-2018 GadTo".

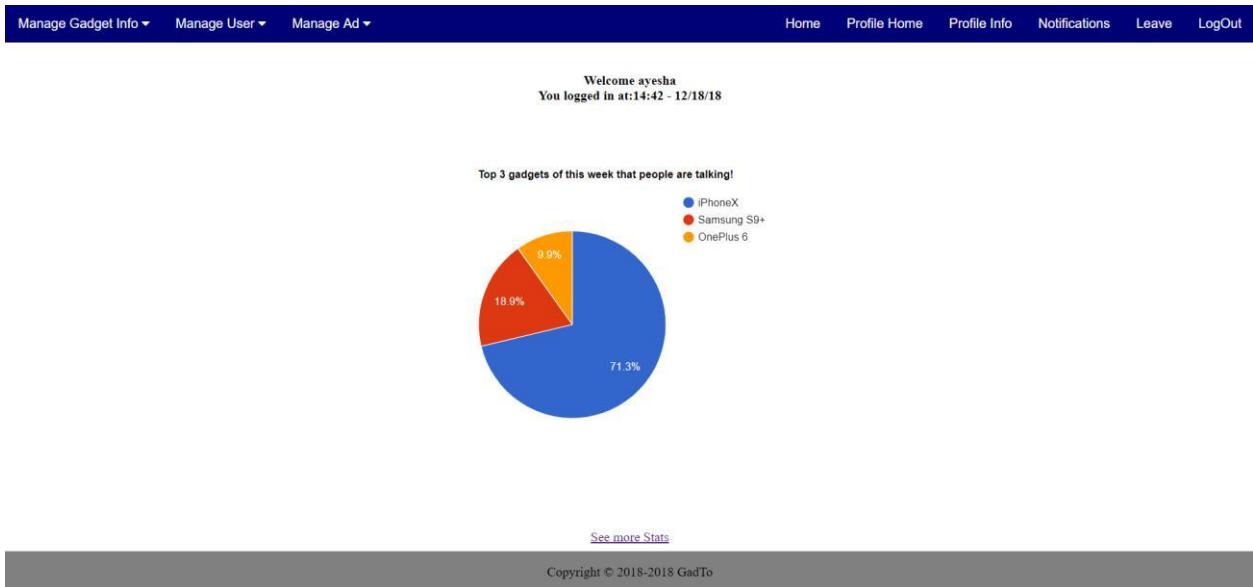
This screenshot is identical to the one above, but the "Manage Admin" link in the top navigation bar is highlighted with a red box, and its dropdown menu is visible, showing options: Create Admin, Make an Admin, and Manage Exist.

**Figure: Super Admin Home page**



**Figure: Super Admin database manage page**

*Following UI design is for reg. normal admin users:*



**Figure: Normal Admin Home page**

***Apply for leave***

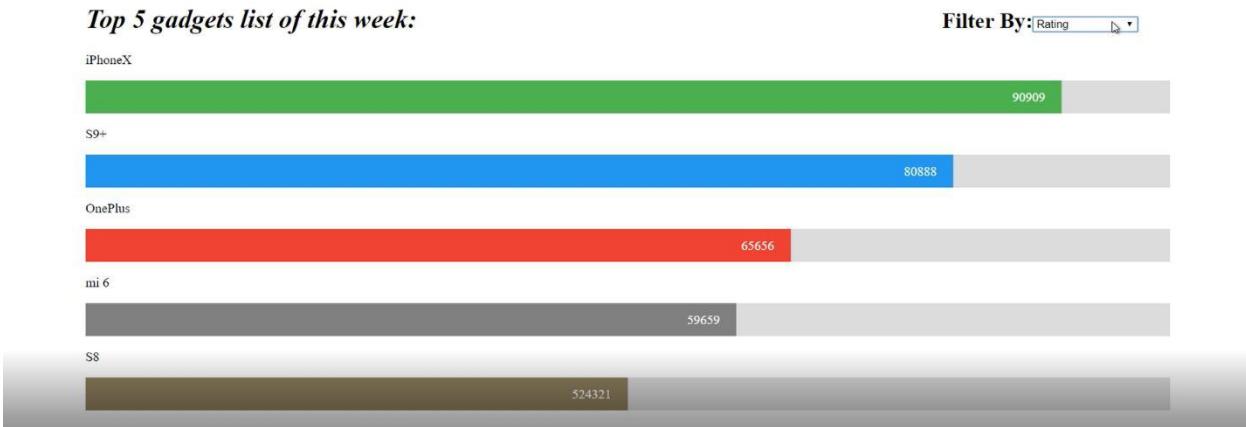
Note: If you click on submit button by choosing "Yes (permanently)" then you will not be able anymore to use this system. So, think again.  
 Are you sure that you want to leave?  
 Yes (temporary)  Yes (permanently)

Write your reason of leaving.

[Close?](#)

**Figure: Normal Admin Apply for leave page**

*Following UI design is the common things which is for reg. super & normal admin users:*



Manage Gadget Info ▾ Manage User ▾ Manage Ad ▾

Home Profile Home Profile Info Notifications Leave LogOut

- Gadget Categories
- Brand Categories
- Specifications Categories
- Specifications Info Type
- Company Info
- Reviews

Welcome ayesha  
You logged in at:14:26 - 12/18/18

Top 3 gadgets of this week that people are talking!

Gadget	Percentage
iPhoneX	71.3%
Samsung S9+	18.9%
OnePlus 6	9.9%

Manage Gadget Info ▾ Manage User ▾ Manage Ad ▾

Home Profile Home Profile Info Notifications Leave LogOut

- Requested User
- Blocked User
- Registered User

Welcome ayesha  
You logged in at:14:26 - 12/18/18

Top 3 gadgets of this week that people are talking!

Gadget	Percentage
iPhoneX	71.3%
Samsung S9+	18.9%
OnePlus 6	9.9%

Manage Gadget Info ▾ Manage User ▾ Manage Ad ▾

Home Profile Home Profile Info Notifications Leave LogOut

- Requested Ad
- Activated Ad
- Expired Ad

Welcome ayesha  
You logged in at:14:26 - 12/18/18

Top 3 gadgets of this week that people are talking!

Gadget	Percentage
iPhoneX	71.3%
Samsung S9+	18.9%
OnePlus 6	9.9%

**Figure: Common things are same page for Super Admin and Normal Admin.**

## **9.2 Software, Hardware& Communication Interface:**

The Server side will require a high-speed Internet connection to deal with multiple users visiting the website simultaneously and the presence of two external service systems necessary for processing a user's requests. The Windows 10 operating systems will be required for our website to run efficiently. On the Client side there is no connection speed or operating system restrictions, but they will need to be running Internet Explorer 10 or above, Google Chrome etc. That's all about the software, hardware and also server & client relationship at the request & response.

## **References:**

⊕ This project showed some statistics which are taken from the following links:

1. <http://www.worldometers.info/world-population/bangladesh-population/>
2. <https://www.thedailystar.net/rise-of-youth-51048>

⊕ This project testing concept which is following us are taken from the following links:

1. <https://www.softwaretestinghelp.com/ecommerce-testing/>

⊕ This project used some resources and tools to make all the diagrams from the following links:

1. [https://www.tutorialspoint.com/sdlc/sdlc\\_agile\\_model.htm](https://www.tutorialspoint.com/sdlc/sdlc_agile_model.htm)
2. <https://www.lucidchart.com/>
3. <https://erdplus.com/#/>
4. <https://www.draw.io/>
5. <https://creately.com/>

The End