



**A Project Report On  
“Market Analysis Tool”**

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This Project report has been submitted in fulfillment of the requirements for the Degree of Bachelor of Science in Software Engineering.

### **Approval**

This project titled “**Market Analysis Tool**”, submitted by **Tawhidur Noor Badhan (Student ID: 181-35-2374)** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

### Declaration

I hereby declare that I have completed this project under the supervision of Md Shohel Arman, Senior Lecturer, Department of Software Engineering, Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for the award of any degree.

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### **Acknowledgment**

First of all, I'd like to express my gratitude to Allah, the Almighty. I have put in effort in my project. It would not have been possible without the generous support and cooperation of many people. I'd like to express my heartfelt gratitude to each and every one of them.

I really oblige and desire my deep accountability to Md Shohel Arman, Lecturer (Senior Scale), Department of Software Engineering, Daffodil International University for his proper guidance, cooperation, and support, without which this entire work would not be complete.

Finally, I owe a tremendous debt of gratitude to my parents for their unwavering support. They have always valued my input and have motivated me.

Tawhidur Noor Badhan

## **Abstract**

The Market Analysis Tool is a software platform that helps marketers understand the health of their marketing campaigns. One can track a variety of key metrics such as product sell, top sold product category, Stat for a particular product, and so on to help marketers know which efforts are working and why they aren't. This tool is specialized for the Bangladeshi market. Most of the time our marketers use tools created by international developers and those are not developed considering the market of Bangladesh. One of the main features of this project is, this project is accessible for all kinds of stakeholders related to the market like marketers, market analysis specialists, investors, and so on. Even small shop owners can use this application to get information about any particular product so that they can decide whether to stock a product or not.

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**Chapter 1**  
**Introduction**

## 1.1 Project Overview

When it comes to launching a product or boosting existing results, market analysis is critical. Furthermore, it keeps you ahead of the competition. Similarly, it offers customers the necessary information to make informed business decisions. Company research is the process of gathering information in order to determine whether or not a product will be successful on the market. Finding useful insights into customer trends, demographics, and characteristics is the goal of research.

Data collection is an ongoing activity for a business owner to be successful. Furthermore, market conditions vary from time to time. Before proceeding with market analysis, it is critical to review all of the points and strategies.

The Market Analysis Tool is the solution for solving these problems considering Bangladesh's Market. One can track a variety of key metrics such as product sell, top sold product category, Stat for a particular product, and so on to help marketers know which efforts are working and why they aren't. This tool is specialized for the Bangladeshi market. This project is accessible for all kinds of stakeholders related to the market like marketers, market analysis specialists, investors, and so on. Even small shop owners can use this application to get information about any particular product so that they can decide whether to stock a product or not. Ultimately this system helps finding useful insights into customer trends, demographics, and characteristics which is the goal of Market Analysis.

## 1.2 Project Purpose

Market analysis is a strategy for gathering a full profile of a potential customer for business. It can assist in determining the size of a company's market. It will also assist in gathering information about their location, product choice, and market trend, which can be used to create targeted marketing campaigns.

So I wanted to find a proper solution for this, where every possible stakeholder like marketers, market analysis specialists, investors, small shop owners, and so on. The result of this approach is this project.

### 1.2.1 Benefits and Beneficiaries

- Providing useful insights into customer trends.
- Providing useful insights into market related demographics.
- Providing the characteristics of a particular market.

- Finding useful insights into customer trends.
- Finding Market Risks.
- Getting Market Trends.

### **1.3 Stakeholders**

The Project Management Institute says, “Individuals and organizations who are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or successful project completion.”

I have three stakeholders in total. Below is a brief discussion of stakeholders.

#### **1.3.1 System Admin**

An Admin is the main system administrator. Admin has the most amount of access to the system. Main work of the admin is to manage the Users, Product, and Analysis data. An Admin is responsible for assigning the particular role for a particular user. There can be more than one Admin.

#### **1.3.2 User**

User is the main target customer. In this system users are marketers, market analysis specialists, investors, small shop owners, and so on.

#### **1.3.3 Data Collectors**

Data Collectors are the people who are responsible for collecting the data from market and input them to the system.

### **1.4 Modules of this System**

- Registration: Used for User Registration.
- Login: Used for User Authentication.
- Market Trend: Used for Show Current Market Trend
- Analysis Data: Used to get analyzed data based on user input.
- Product Category: Used to manage product category.
- Product Subcategory: Used to manage product subcategory under a particular category.
- Product: Used to manage all Products.
- Sale: Used to manage sales and related stuff.
- User Role: Used to manage user roles and permission.
- User: Used to manage all Users.

#### **1.4.1 Focused Module**

- Login: Only after providing the system the correct login information, all stakeholders can log into the system.

- Analysis Data: It is the main function of this system. This is used to get analyzed data based on user input.
- Sale: This is the entry point for all sale data. This module is the most sensitive module.

### **1.5 Objectives**

- Getting useful insights into customer trends.
- Getting useful insights into market related demographics.
- Getting the characteristics of a particular market.
- Getting useful insights into customer trends.
- Getting Market Risks.
- Getting Market Trends.

**Chapter 2**  
**Requirements Engineering**

## 2.1 Functional Requirements

### 2.1.1 Login

<b>FR-01</b>	<b>Login</b>
<b>Description</b>	All the stakeholders must login in order to access the main system
<b>Stakeholders</b>	User, System Admin, Data Collector

### 2.1.2 Registration

<b>FR-02</b>	<b>Registration</b>
<b>Description</b>	Only users will have to register by themselves in order to access the main system.
<b>Stakeholders</b>	User

### 2.1.3 View Market Trend

<b>FR-03</b>	<b>View Market Trend</b>
<b>Description</b>	Users will be able to view the market trend of locations, products and categories. This is a very general report of the Market based on collected data. Admins will also have access to this module.
<b>Stakeholders</b>	User, System Admin

### 2.1.4 Analysis Market Data

<b>FR-04</b>	<b>Analysis Market Data</b>
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<b>Description</b>	Users will be able to analyze the market data based on location, product category, product subcategory and particular product. This will also give a report about market trends based on input data. Admins will also have access to this module.
<b>Stakeholders</b>	User, System Admin

### 2.1.5 Add Product Category

<b>FR-05</b>	<b>Add Product Category</b>
<b>Description</b>	From this module Product Managers and Admins will be able to add a Product Category.
<b>Stakeholders</b>	System Admin

### 2.1.6 Edit Product Category

<b>FR-06</b>	<b>Edit Product Category</b>
<b>Description</b>	From this module Product Managers and Admins will be able to edit a Product Category.
<b>Stakeholders</b>	System Admin

### 2.1.7 Delete Product Category

<b>FR-07</b>	<b>Delete Product Category</b>
<b>Description</b>	From this module Product Managers and Admins will be able to delete a Product Category.
<b>Stakeholders</b>	System Admin

### 2.1.8 Add Product Subcategory

<b>FR-08</b>	<b>Add Product Subcategory</b>
<b>Description</b>	From this module Product Managers and Admins will be able to add a Product Subcategory.



<b>Stakeholders</b>	System Admin
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### 2.1.9 Edit Product Subcategory

<b>FR-09</b>	<b>Edit Product Subcategory</b>
<b>Description</b>	From this module Product Managers and Admins will be able to edit a Product Subcategory.
<b>Stakeholders</b>	System Admin

### 2.1.10 Delete Product Subcategory

<b>FR-10</b>	<b>Delete Product Subcategory</b>
<b>Description</b>	From this module Product Managers and Admins will be able to delete a Product Subcategory.
<b>Stakeholders</b>	System Admin

### 2.1.11 Add User

<b>FR-11</b>	<b>Add User</b>
<b>Description</b>	From this module, Admins will be able to add a User and Assign Roles to that user.
<b>Stakeholders</b>	System Admin

### 2.1.12 Edit User

<b>FR-12</b>	<b>Edit User</b>
<b>Description</b>	From this module, Admins will be able to edit a User and reassign Roles to the user.
<b>Stakeholders</b>	System Admin

### 2.1.13 Delete User

<b>FR-13</b>	<b>Delete User</b>
<b>Description</b>	From this module Product Managers and Admins will be able to delete a User..
<b>Stakeholders</b>	System Admin

### 2.1.14 Add User Role

<b>FR-14</b>	<b>Add User Role</b>
<b>Description</b>	From this module, Admins will be able to add a User Role and assign permissions.
<b>Stakeholders</b>	System Admin

### 2.1.15 Edit User Role

<b>FR-15</b>	<b>Edit User Role</b>
<b>Description</b>	From this module Product Admins will be able to edit Sale data.
<b>Stakeholders</b>	System Admin

### 2.1.16 Delete User Role

<b>FR-16</b>	<b>Delete User Role</b>
<b>Description</b>	From this module Admins will be able to delete a User Role.
<b>Stakeholders</b>	System Admin

### 2.1.17 Add Sale

<b>FR-17</b>	<b>Add Sale</b>
<b>Description</b>	From this module, Sale Managers will be able to add a Sale for a product and area.
<b>Stakeholders</b>	Data Collector

### 2.1.18 Edit Sale

<b>FR-18</b>	<b>Edit Sale</b>
<b>Description</b>	From this module, Sale Managers will be able to edit a Sale for a product and area..
<b>Stakeholders</b>	Data Collector

### 2.1.19 Delete Sale

<b>FR-19</b>	<b>Delete Sale</b>
<b>Description</b>	From this module, Sale Managers will be able to delete a Sale for a product and area.
<b>Stakeholders</b>	Data Collector

## 2.2 Non-Functional Requirements

### 2.2.1 Data Requirements

#### 2.2.1.1 Divisions of Bangladesh

<b>NFR-01</b>	<b>Divisions of Bangladesh</b>
<b>Description</b>	List of all the Divisions of Bangladesh is needed.
<b>Stakeholders</b>	User, System Admin, Data Collector

### 2.2.1.2 Districts of Bangladesh

<b>NFR-02</b>	<b>Districts of Bangladesh</b>
<b>Description</b>	List of all the Districts of Bangladesh is needed with relevant Division.
<b>Stakeholders</b>	User, System Admin, Data Collector

### 2.2.1.3 Cities of Bangladesh

<b>NFR-03</b>	<b>Cities of Bangladesh</b>
<b>Description</b>	List of all the Cities of Bangladesh is needed with relevant Districts.
<b>Stakeholders</b>	User, System Admin, Data Collector

### 2.2.2 Compatibility

<b>NFR-04</b>	<b>Compatibility</b>
<b>Description</b>	The design of this application should be as, so that any device can run this without any responsiveness problem.
<b>Stakeholders</b>	User, System Admin, Data Collector

### 2.2.3 Data Integrity

<b>NFR-05</b>	<b>Data Integrity</b>
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<b>Description</b>	Overall accuracy, completeness, and consistency of data should be very high as the system is totally dependent on data.
<b>Stakeholders</b>	User, System Admin, Data Collector

#### 2.2.4 Fast Web Services

<b>NFR-06</b>	<b>Fast Web Services</b>
<b>Description</b>	At times the system may process a huge amount of data. So the web service should be very fast.
<b>Stakeholders</b>	User, System Admin, Data Collector

#### 2.2.5 Interoperability

<b>NFR-07</b>	<b>Interoperability</b>
<b>Description</b>	The system should be able to exchange and make use of information properly.
<b>Stakeholders</b>	User, System Admin, Data Collector

#### 2.2.6 Regulatory

<b>NFR-08</b>	<b>Regulatory</b>
<b>Description</b>	The system should ensure the highest possible quality of the final product.
<b>Stakeholders</b>	User, System Admin, Data Collector

#### 2.2.7 Scalability and Performance

<b>NFR-09</b>	<b>Scalability and Performance</b>
<b>Description</b>	The system should ensure the highest possible Scalability and Performance.

<b>Stakeholders</b>	User, System Admin, Data Collector
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### 2.2.8 Security

<b>NFR-10</b>	<b>Security</b>
<b>Description</b>	As we are dealing with sensible data, the system should maintain the highest possible security.
<b>Stakeholders</b>	User, System Admin, Data Collector

### 2.2.8 Usability and Human Integrity Requirements:

#### 2.2.8.1 Ease of Use Requirements:

This system is exceptionally simple for utilize conjointly understandable

#### 2.2.8.2 Understand-ability and Politeness Requirements:

This system is very easy to understand and also usable.

### 2.2.9 Accessibility Requirements:

There are no access requirements besides those that have been outlined in below:

<b>AR-1</b>	Log in as an User
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<b>AR-2</b>	Log in as an System Admin
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<b>AR-3</b>	Log in as an Data Collector
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**Chapter 3**  
**System Analysis, Design and Specification**

### 3.1 Development Model

Because this is a progressive application, I went with the Agile Model because of its flexibility. This model assists me in identifying and resolving flaws and issues. My system was built with flexibility in mind, so it can be upgraded quickly without affecting a large amount of my project. Every stage of the development process was tested to assure the efficiency of my system. Because of the Agile Model, I was able to test every piece of the system while it was still in development. In addition, the Agile methodology allows us to construct a system that can be readily changed, has frequent testing for efficiency, a high-quality product, and a short development period.

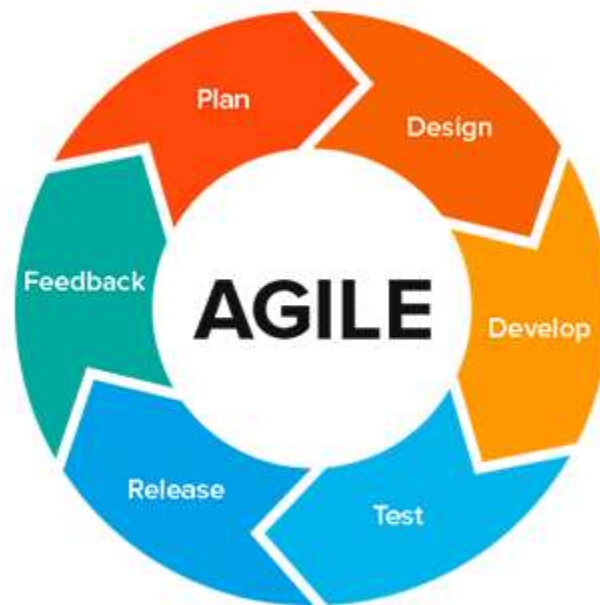


Figure 3.1: Agile Model



### 3.2 Uses case Diagram

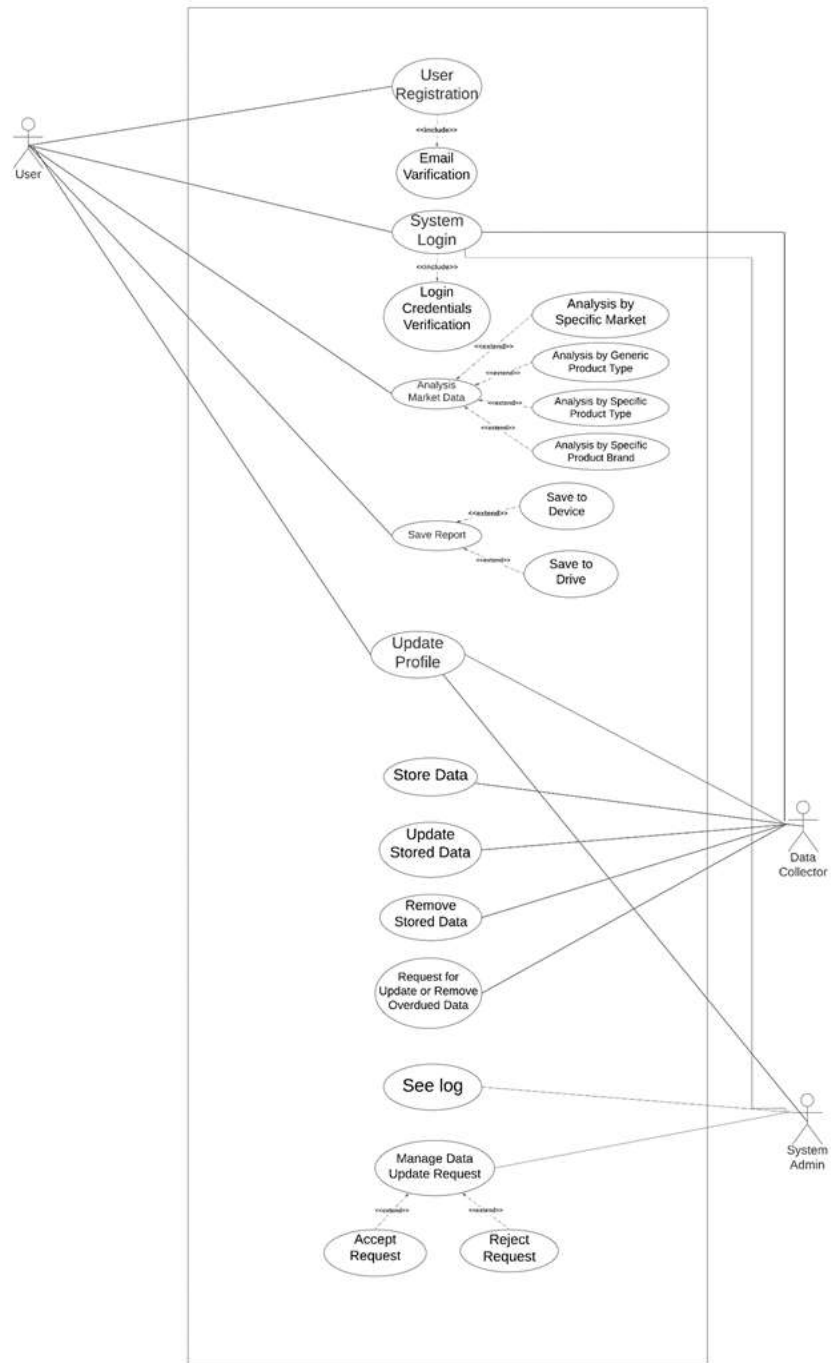


Figure 3.2: Use Case Diagram

### 3.2.1 Use Case Description: User Registration

Use Case - 01	User Registration	
Goal	User Registration is required to get access to the main system, where are the main functions of the system.	
Preconditions	N/A	
Success End Condition	Registered successfully and accessed the system.	
Failed End Condition	Can't enter into the system.	
Actors	User	
Trigger	Registration to the system.	
Description	Step	Action
	1.	Click Registration Button
	1.1 1.3	Put Email Put Password
	2	Click Complete Registration Button
Alternative Flows	N/A	
Quality Requirements	Don't provide the admin username/manager username/ employee username and password to others.	

### 3.2.2 Use Case Description: Email Verification

Use Case - 02	Email Verification
Goal	Email Verification is required to verify the email while registering.
Preconditions	Register to the system
Success End Condition	Update email verified status to Yes
Failed End Condition	Update email verified status to No
Actors	User
Trigger	Verify the email.
Description	N/A
Alternative Flows	N/A
Quality Requirements	Confirm Email Duplication.

### 3.2.3 Use Case Description: Login

Use Case - 03	Login	
Goal	Login is required to get access to the main system for all the stakeholders, where are the main functions of the system,	
Preconditions	Need to Register and put the accurate admin email and password for the user. And for other stakeholders except Admin, the account should be created by Admin. Admin account will be created while setuping the system.	
Success End Condition	Go to the authorised dashboard for each stakeholder.	
Failed End Condition	Return to the Login Page with an error message.	
Actors	User System Admin Data Collector	
Trigger	Login to the system.	
Description	Step	Action
	1.	Click Login Button
	1.1 1.2	Put Email Put Password
	2.	Give the correct email and password for Login.
	3.	Press Login Button
Alternative Flows	N/A	
Quality Requirements	Don't provide the username and password to others.	

### 3.2.4 Use Case Description: Analysis Market Data

Use Case - 04	Analysis Market Data	
Goal	Get users the analyzed data based on the input.	
Preconditions	Need to Login with a valid email and password	
Success End Condition	Show users the analyzed data based on the input.	
Failed End Condition	Return to the previous with a relevant error message.	
Actors	User System Admin	
Trigger	Login to the system.	
Description	Step	Action
	1.	Click Analysis Market Data
	2.	Give Input
	3.	Click on the Analysis button
Alternative Flows	N/A	
Quality Requirements	N/A	

### 3.2.5 Use Case Description: Save report

Use Case - 05	Save report	
Goal	Save the analyzed data which is made based on the input provided by the user.	
Preconditions	Need to analyze data first.	
Success End Condition	Show users saved confirmation	
Failed End Condition	Return to the previous with a relevant error message.	
Actors	User Admin	
Trigger	Save the relevant report.	
Description	Step	Action
	1.	Click Save report
	2.	Choose Method
	3.	Click Close
Alternative Flows	N/A	
Quality Requirements	Do not manipulate the report.	

### 3.2.6 Use Case Description: Store Data

Use Case - 06	Store Data	
Goal	Store sale data.	
Preconditions	Login with a valid Data Collector account	
Success End Condition	Show users saved confirmation	
Failed End Condition	Return to the previous with a relevant error message.	
Actors	Data Collector	
Trigger	Store sale data.	
Description	Step	Action
	1.	Go to Sale Page
	1.1 1.2	Click on Add button Give Input
	2.	Click Save Button
Alternative Flows	N/A	
Quality Requirements	N/A	

### 3.2.7 Use Case Description: Update Store Data

Use Case - 07	Update Store Data	
Goal	Update sale data.	
Preconditions	Add sale data.	
Success End Condition	Show sale saved confirmation	
Failed End Condition	Return to the previous with a relevant error message.	
Actors	Data Collector	
Trigger	Store sale data.	
Description	Step	Action
	1.	Go to Sale Page
	1.1 1.2	Click on Edit button Give Input
	2.	Click Save Button
Alternative Flows	N/A	
Quality Requirements	N/A	



### 3.2.8 Use Case Description: Remove Store Data

Use Case - 08	Remove Store Data	
Goal	Remove sales data.	
Preconditions	Add sale data.	
Success End Condition	Show sale saved confirmation	
Failed End Condition	Return to the previous with a relevant error message.	
Actors	Data Collector	
Trigger	Store sale data.	
Description	Step	Action
	1.	Go to Sale Page
	1.1 1.2	Click on Delete button Confirm
	2.	Click Delete Button
Alternative Flows	N/A	
Quality Requirements	N/A	

### 3.3 Activity Diagram

#### 3.3.1 Activity Diagram: Analysis Data



Figure 3.3.1: Activity Diagram - Analysis Data

### 3.3.2 Activity Diagram : Save report

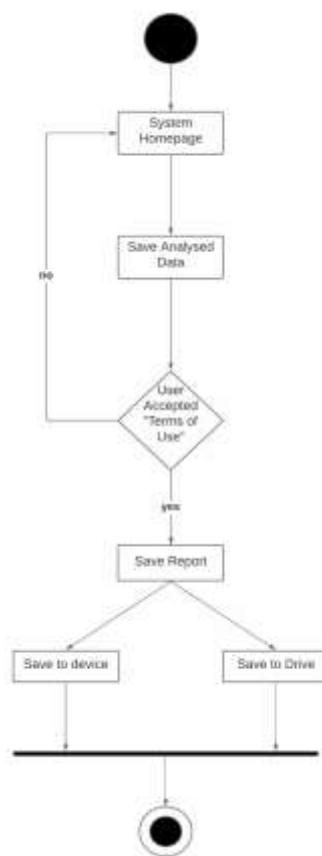


Figure 3.3.2: Activity Diagram - Save report

### 3.3.3 Activity Diagram : Store Data



Figure 3.3.3: Activity Diagram - Store Data

### 3.3.4 Activity Diagram : Update Data

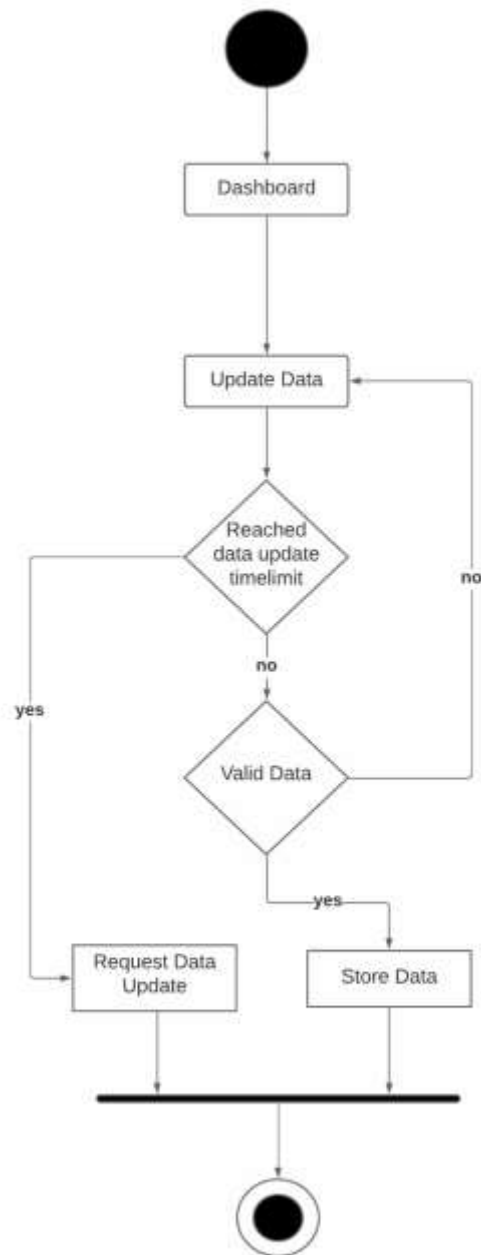


Figure 3.3.4: Activity Diagram - Update Data

### 3.3.5 Activity Diagram : Delete Data

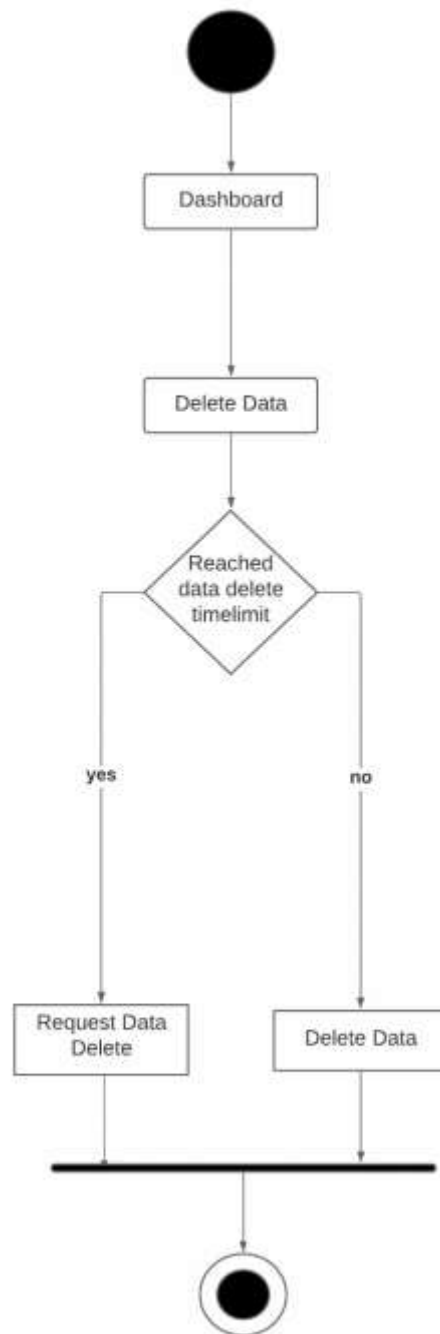


Figure 3.3.5: Activity Diagram - Delete Data

### 3.3.6 Activity Diagram : Accept Data Update Request

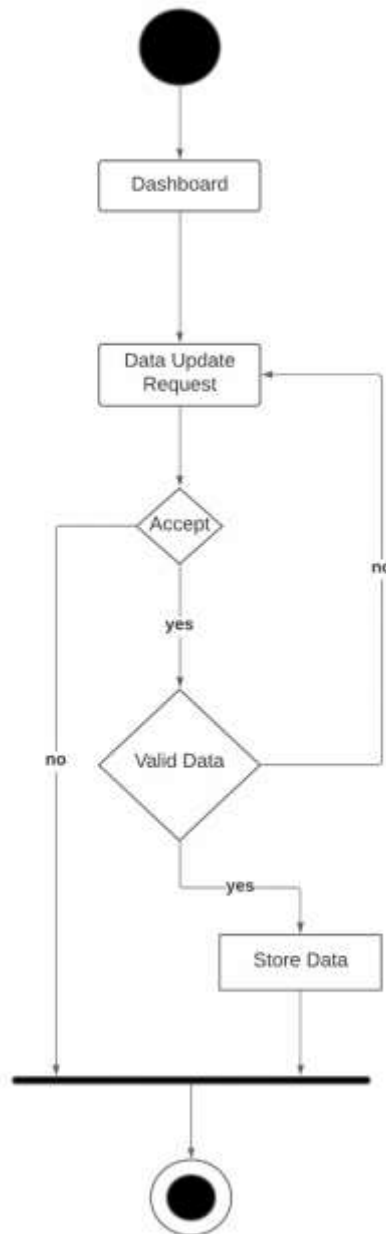


Figure 3.3.6: Activity Diagram - Accept Data Update Request

### 3.3.7 Activity Diagram : Accept Data Delete Request

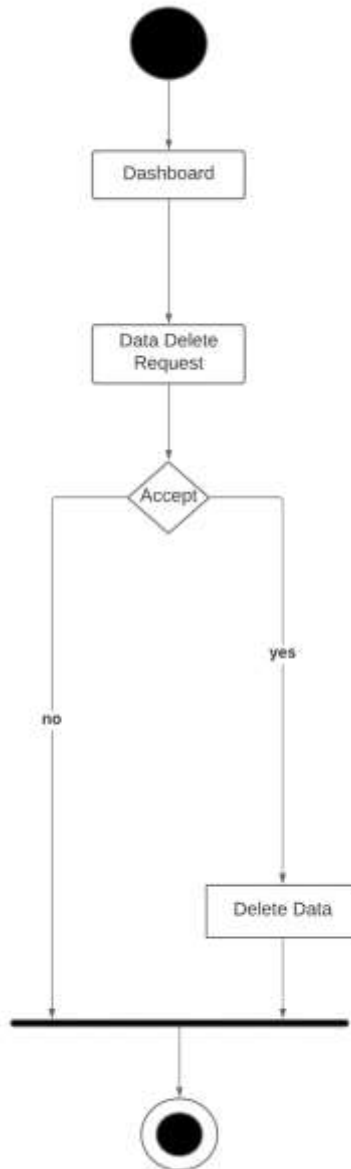


Figure 3.3.7: Activity Diagram - Accept Data Delete Request



### 3.3.8 Activity Diagram : View Log

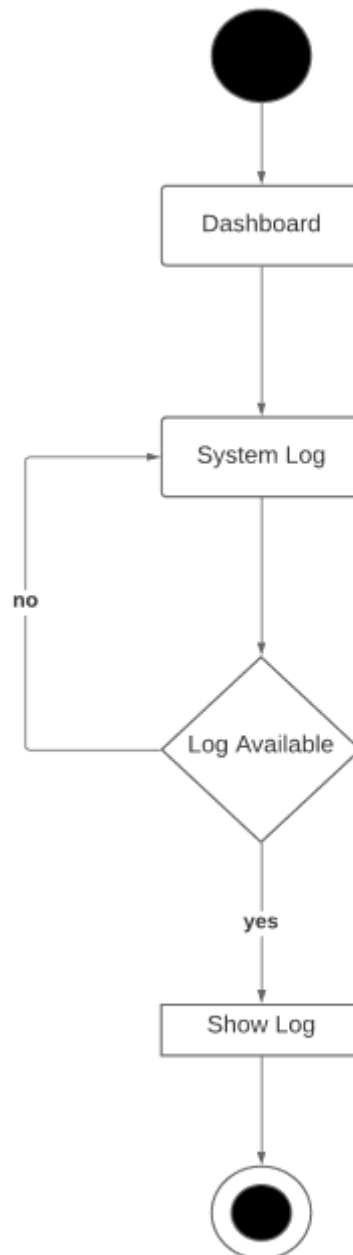


Figure 3.3.8: Activity Diagram - View Log

### 3.4 Sequence Diagram

#### 3.4.1 Sequence Diagram : Analysis Data

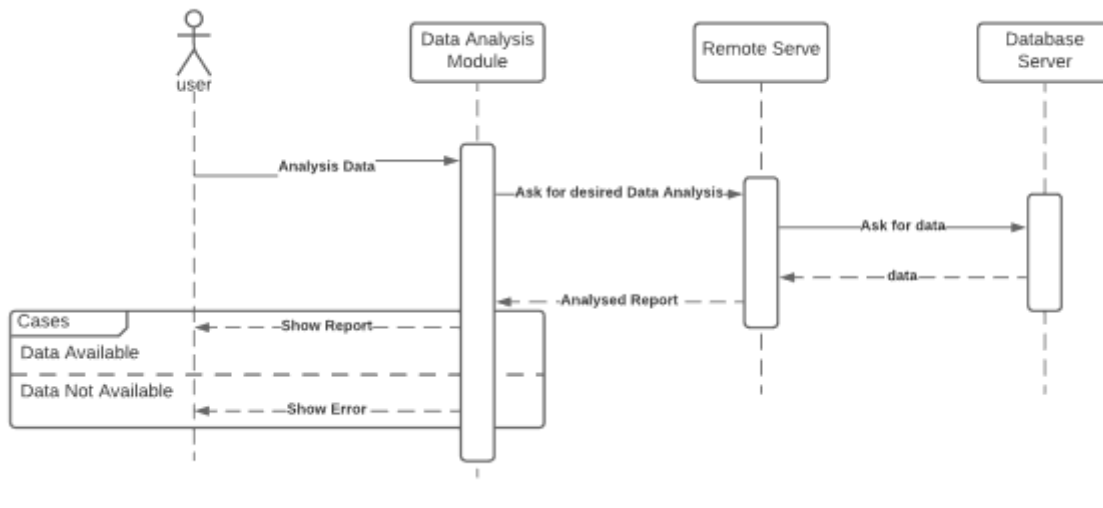


Figure 3.4.1: Sequence Diagram - Analysis Data

#### 3.4.2 Sequence Diagram : Save Data

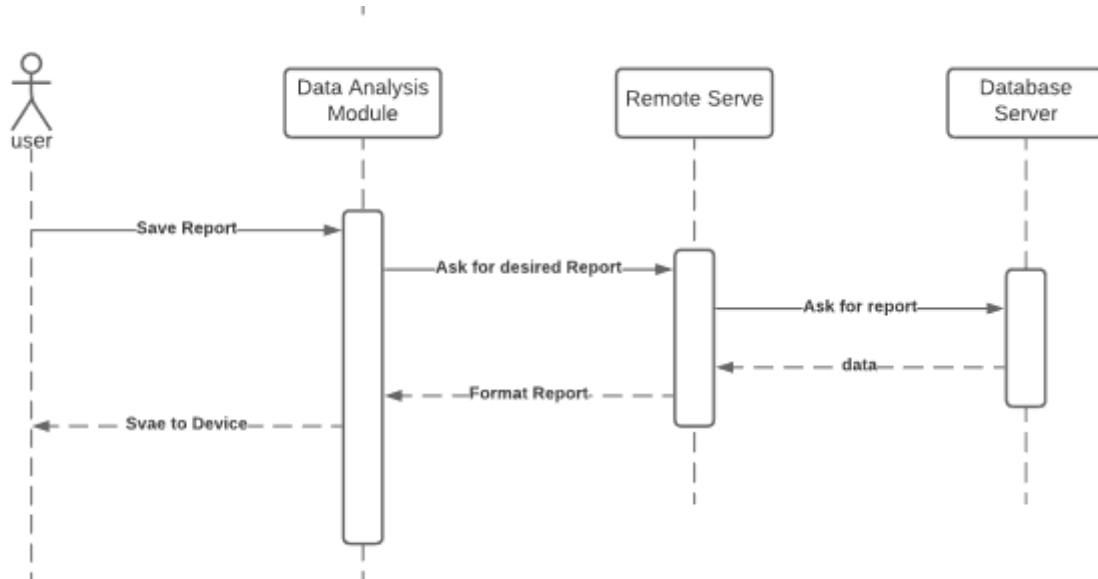


Figure 3.4.2: Sequence Diagram - Save Data

### 3.4.3 Sequence Diagram : Store Data

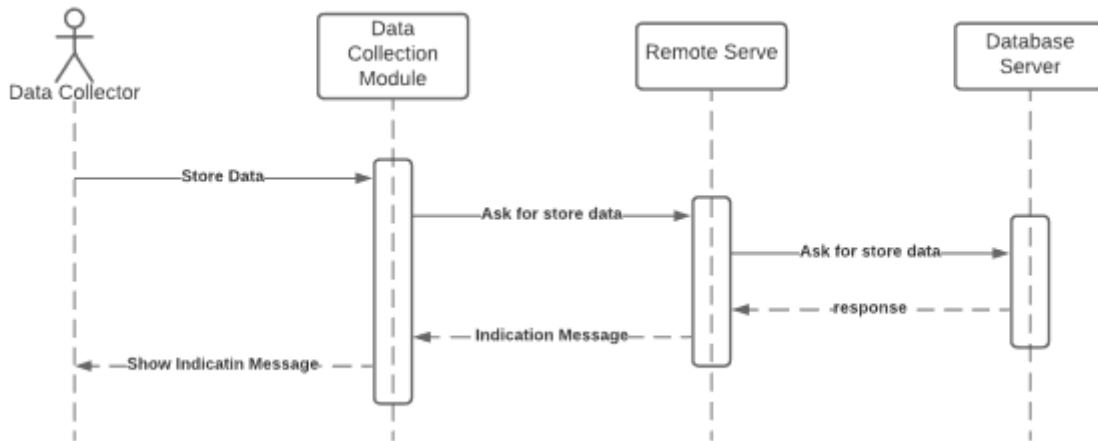


Figure 3.4.3: Sequence Diagram - Store Data

### 3.4.4 Sequence Diagram : Update Data

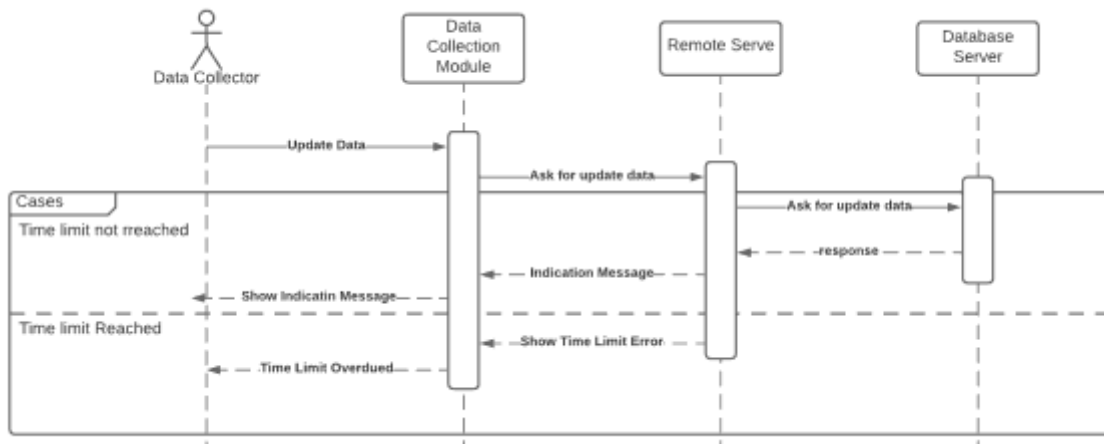


Figure 3.4.4: Sequence Diagram - Update Data

### 3.4.5 Sequence Diagram : Delete Data

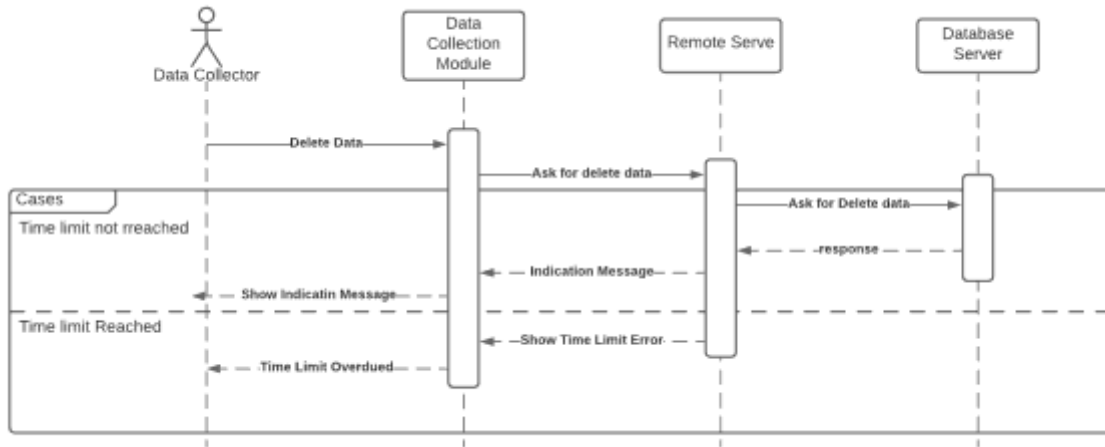


Figure 3.4.5: Sequence Diagram - Delete Data

### 3.4.6 Sequence Diagram : Action With Requested data Update

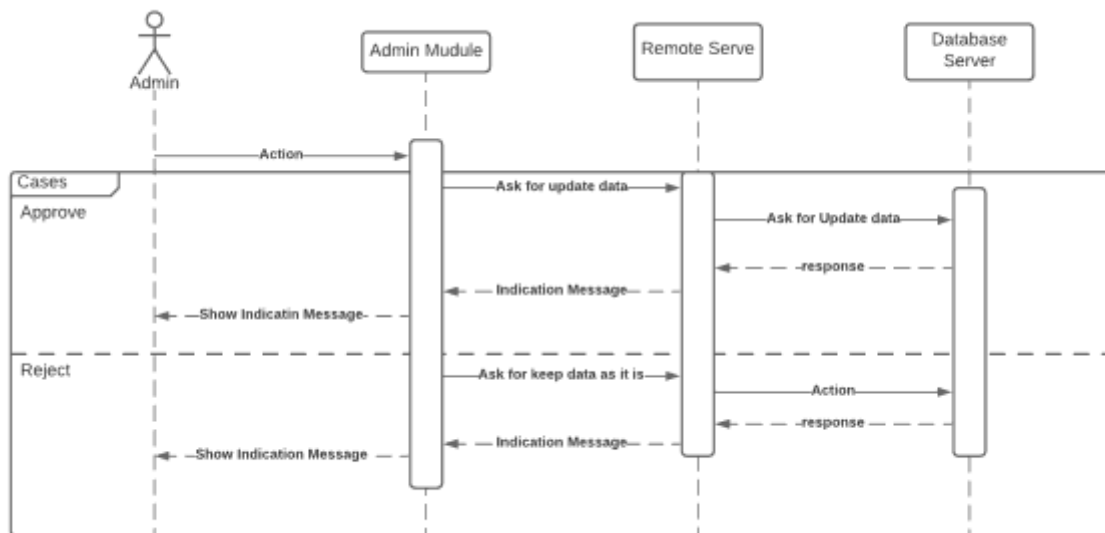


Figure 3.4.6: Sequence Diagram - Action With Requested data Update

### 3.4.7 Sequence Diagram : Action with requested Data Delete

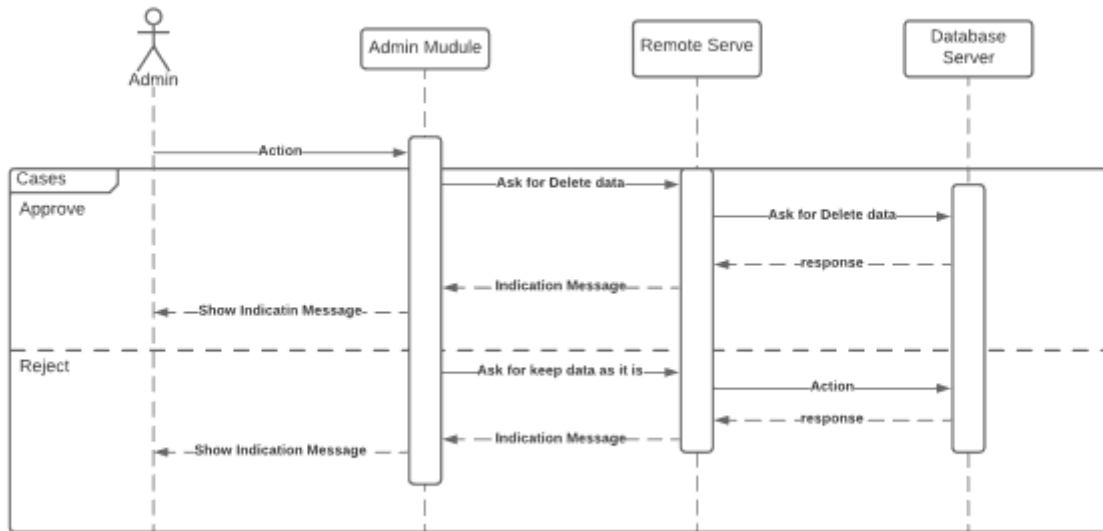


Figure 3.4.7: Sequence Diagram - Action with requested Data Delete

### 3.5 Entity Relationship Diagram

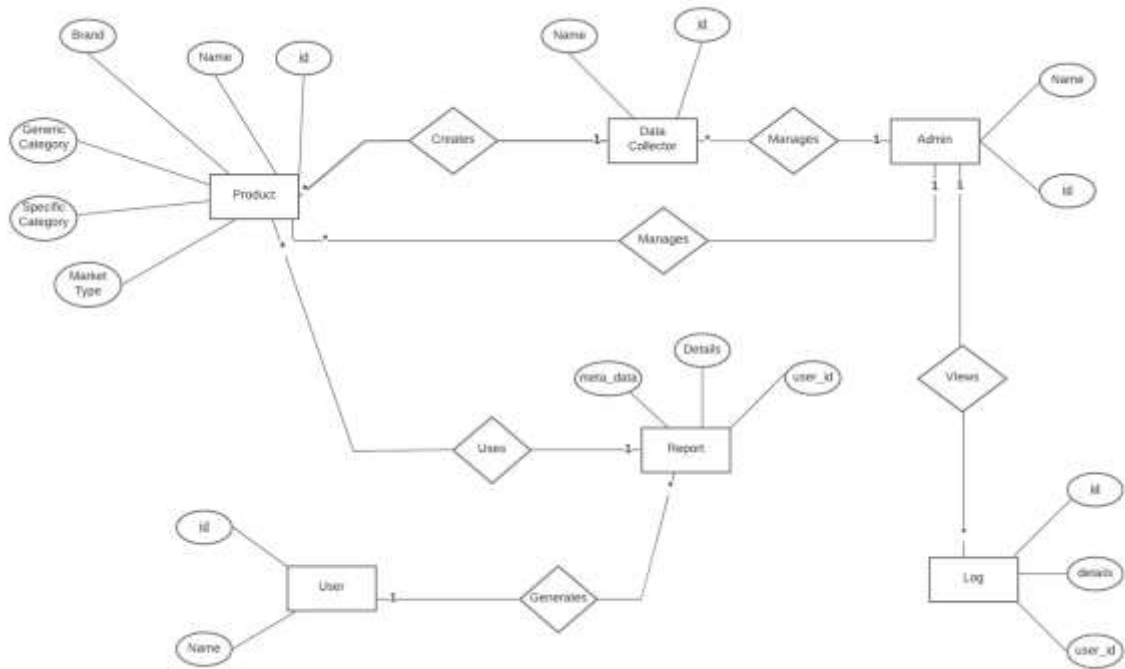


Figure 3.5: Entity Relationship Diagram

**Chapter 4**  
**System Testing**

## 4.1 Feature Testing

### 4.1.1 Tested Feature

Feature	Priority	Description
Login	1	Users must be authenticated by login.
Analysis Market Data	1	Authorised Users must be able to analysis Market Data.
Add Sale Data	1	Authorised Users must be able to add Sale Data.

Table 4.1.1 Tested Table

**Here,**

1= High Priority

2= Medium Priority

3= Low Priority



## 4.2 Testing Strategies

### 4.2.1 Test Approach

For ensuring the quality of my project, I would like to use two different tests,

1. Black box testing
2. White box testing.

They basically focused on functional testing and structural testing.

**Black box testing:** It is a software testing method in which the functionalities of software applications are tested without having knowledge of internal code structure, implementation details and internal paths.

**White Box Testing:** It is software testing technique in which internal structure, design and coding of software are tested to verify flow of input-output and to improve design, usability and security.

### 4.2.2 Pass / Fail Criteria

For testing, there are 2 types of criteria - pass and fail. Pass / fail criteria are prepared based on which output is correct and which output is incorrect. Following two points will also be considered.

1. System crash is considered a case of failure
2. If a criterion passes the test 100%, it will be considered as a pass criterion only.

### 4.2.3 Testing Schedule

Test Phase	Time
Testing plan create	1 week
Unit testing	During Development of the System
Component testing	During Development of the System
Integration testing	1 week
Testing user interface	1 week
Load testing	1 week
Performance testing	1 week
Accessibility testing	1 week

Table 4.2.3 : Testing Schedule

### 4.2.4 Traceability Matrix

Project Manager			Business analyst Lead	
QA leader			Target implementation date	
TM	Functionality Activity	Requirement Description	Test Case Reference	Comments
TM-01	Functional	Login	TEST CASE 4.4.1	

TM-02	Functional	Analysis Market Data	TEST CASE 4.4.2	
TM-03	Functional	Add Sale Data	TEST CASE 4.4.3	

Table 4.2.4: Traceability Matrix

### 4.3 Testing Environment

The test environment is created with the combination of hardware and software so that the examiner can perform what the test means. There are several test areas for the test environment that I used for testing my project.

- Test data
- Web Server
- Database Server
- Frontend running environment
- Backend running environment
- Network
- Browser

### 4.4 Test Cases

#### 4.4.1 Login

<b>Test Case:</b> 01	<b>Test Case Name:</b> Login
----------------------	------------------------------

<b>System:</b>			<b>Sub-System:</b>			
<b>Designed by:</b> Tawhidur Noor Badhan			<b>Designed date:</b>			
<b>Executed by:</b>			<b>Executed date:</b>			
<b>Short Description:</b> User can access in to the system by login						
<b>Pre-condition:</b>						
<ul style="list-style-type: none"> <li>Users must be registered to the system first.</li> </ul>						
Serial	Email	password	Expected Result	Pass / Fail	Actual Result	Comment
1		ooooo	Email field is required	Fail	Pass	
2	tawhidurnoor	ooooo	Invalid email	Fail	Pass	
3			Email and Password field is required	Fail	Pass	
4	tawhidbadhan@gmail.com	12345678	Successfully logged in	Pass	Pass	
<b>Post-Condition:</b> User can log in						

#### 4.4.2 Analysis Market Data

<b>Test Case:</b> 02		<b>Test Case Name:</b> Analysis Market Data								
<b>System:</b>		<b>Sub-System:</b>								
<b>Designed by:</b> Tawhidur Noor Badhan		<b>Designed date:</b>								
<b>Executed by:</b>		<b>Executed date:</b>								
<b>Short Description:</b> User can analysis Market Data										
<b>Pre-condition:</b>										
<ul style="list-style-type: none"> <li>Users must be logged in to the system first.</li> </ul>										
Serial	Division	District	City	Product category	Product Subcategory	Product	Expected Result	Pass / Fail	Actual Result	Comment
1							Market Trend	Pass	Pass	

2	Dhaka						Market trend of Dhaka Division	Pass	Pass	
3		Barisal			Carbonated Soft Drinks		Analysed Market data of Carbonated Soft Drinks at Barisal District	Pass	Pass	
4			Dhaka			Coca-Cola 600 ml	Sale report of Coca-Cola 600 ml in Dhaka City	Pass	Pass	
<b>Post-Condition:</b> User can view the report										

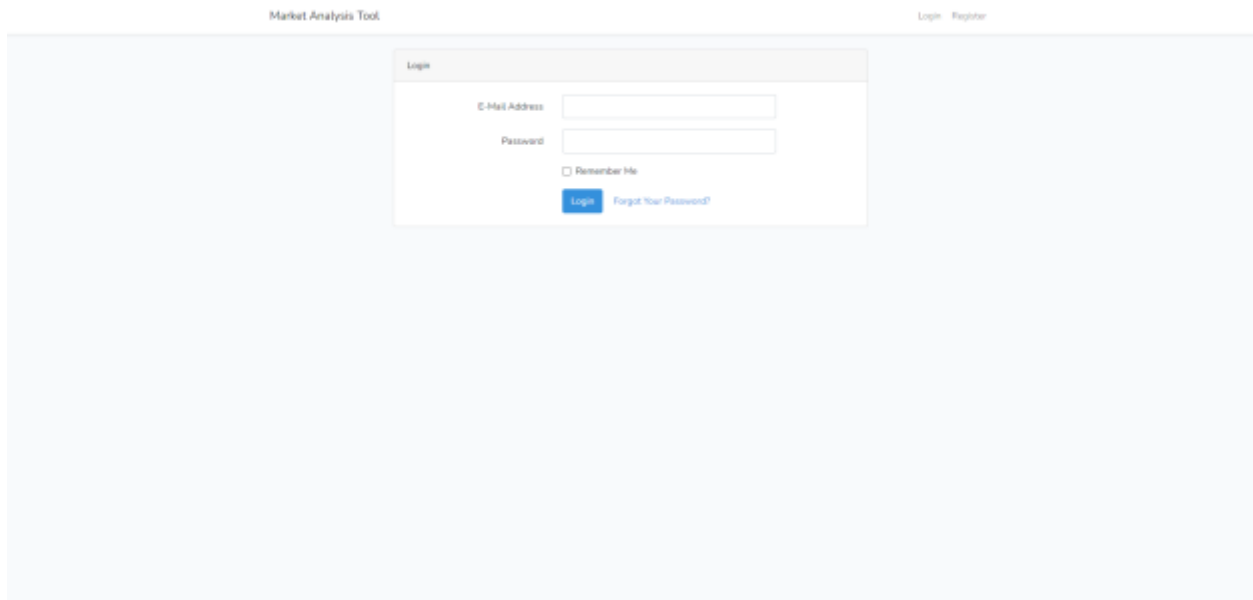
### 4.4.3 Add Sale Data

<b>Test Case:</b> 03		<b>Test Case Name:</b> Add Sale Data					
<b>System:</b>		<b>Sub-System:</b>					
<b>Designed by:</b> Tawhidur Noor Badhan		<b>Designed date:</b>					
<b>Executed by:</b>		<b>Executed date:</b>					
<b>Short Description:</b> Data Collectors can add a sale							
<b>Pre-condition:</b>							
<ul style="list-style-type: none"> <li>Users must be registered to the system first and authorised for this action.</li> </ul>							
<b>Serial</b>	<b>City</b>	<b>Product Subcategory</b>	<b>Product</b>	<b>Expected Result</b>	<b>Pass / Fail</b>	<b>Actual Result</b>	<b>Comment</b>
1				All fields are required.	Fail	Pass	
2	Dhaka			All fields are required.	Fail	Pass	
3		Carbonated Beverage		All fields are required.	Fail	Pass	
4	Dhaka	Carbonated Beverage	Coca-Cola 600 ml	Successfully added	Pass	Pass	
<b>Post-Condition:</b> Users can view added data.							

**Chapter 5**  
**User Manual**



## 5.1 Login

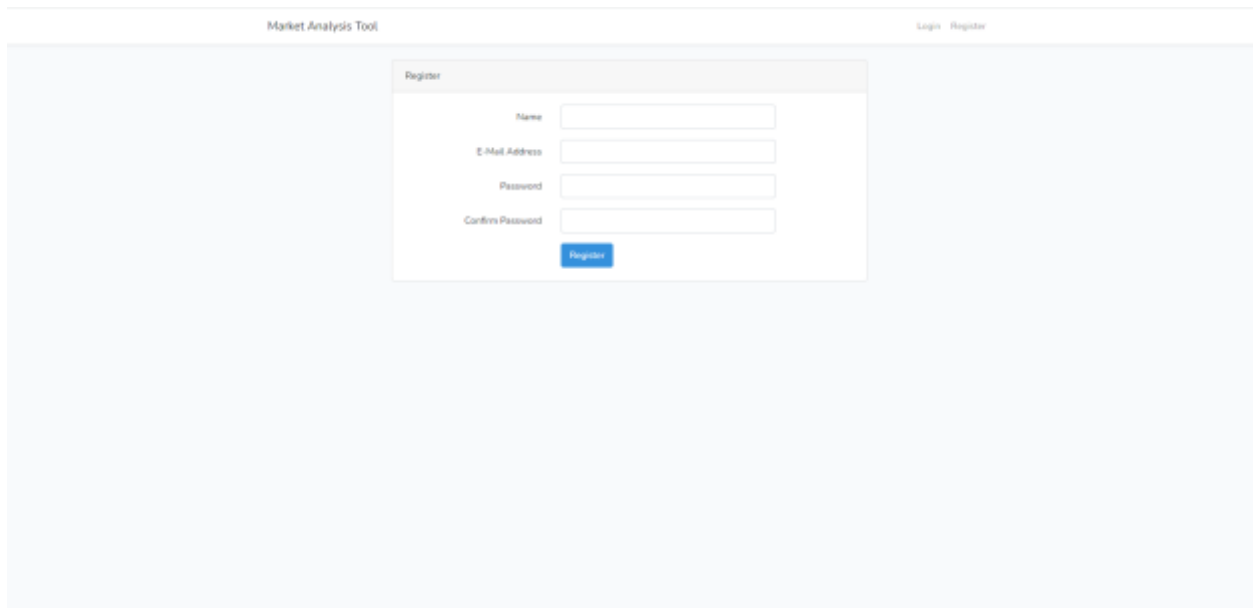


The screenshot shows the login interface for the Market Analysis Tool. At the top left, the text "Market Analysis Tool" is displayed. At the top right, there are links for "Login" and "Register". The main content area features a "Login" form with the following elements:

- A header "Login" in a light gray box.
- An "E-Mail Address" input field.
- A "Password" input field.
- A checkbox labeled "Remember Me".
- A blue "Login" button.
- A link "Forgot Your Password?" next to the login button.

Figure 5.1 : Login

## 5.2 Registration



The screenshot shows the registration interface for the Market Analysis Tool. At the top left, the text "Market Analysis Tool" is displayed. At the top right, there are links for "Login" and "Register". The main content area features a "Register" form with the following elements:

- A header "Register" in a light gray box.
- A "Name" input field.
- An "E-Mail Address" input field.
- A "Password" input field.
- A "Confirm Password" input field.
- A blue "Register" button.

Figure 5.2 : Registration

## 5.3 Trending Right Now

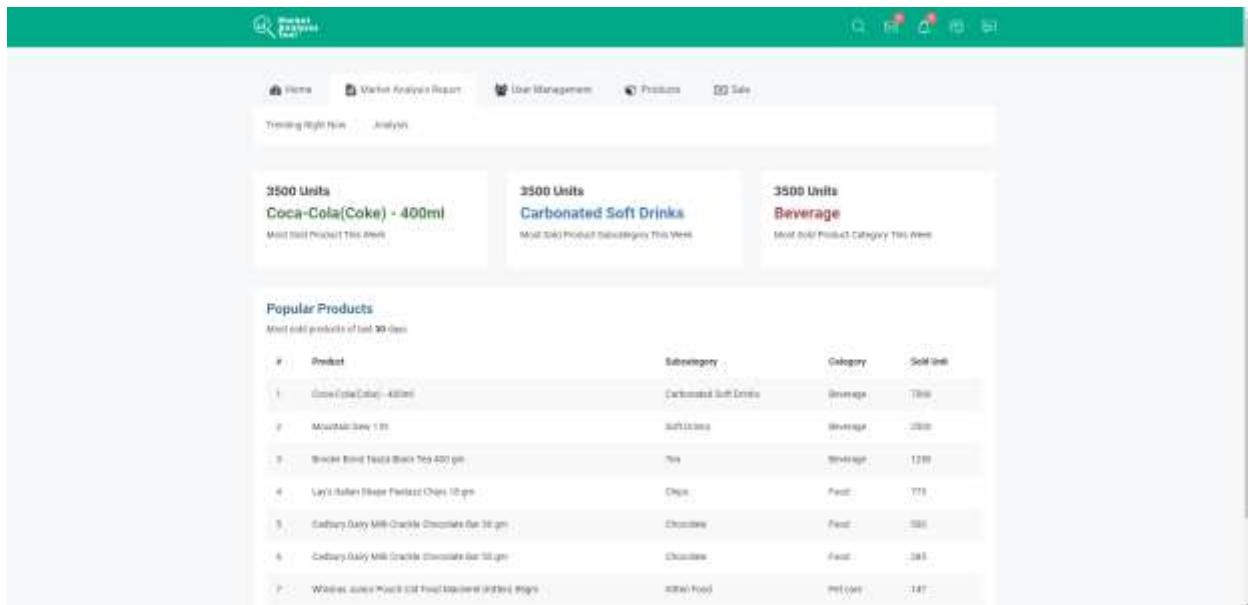


Figure 5.3 : Trending Right Now

## 5.4 Analysis

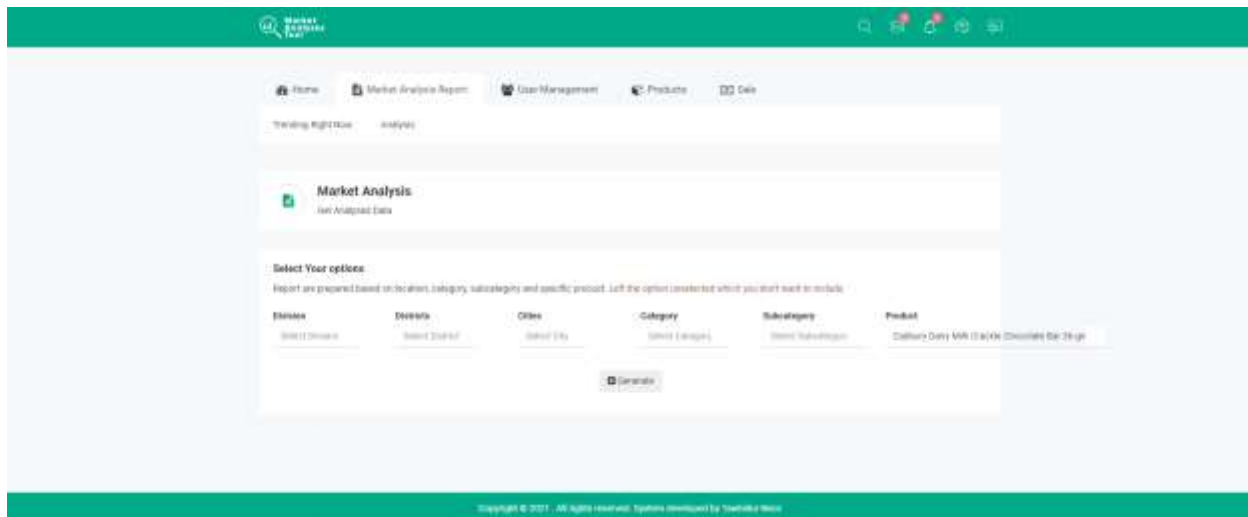


Figure 5.4 : Analysis

### 5.5 Analysis Report

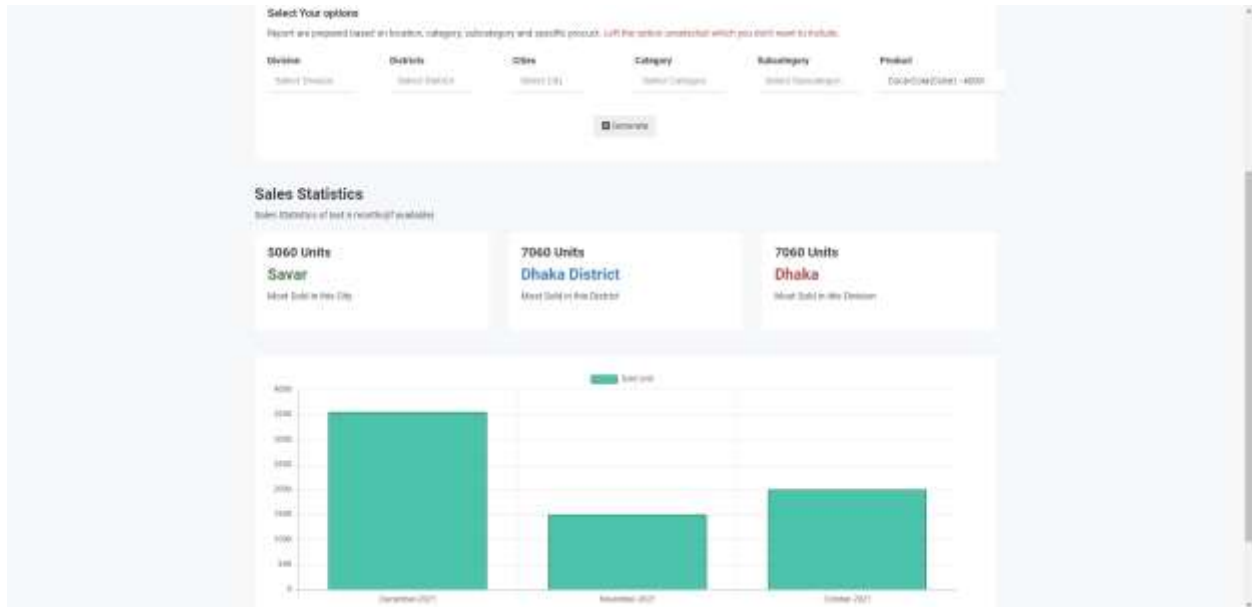


Figure 5.5 : Analysis Report

### 5.6 Users

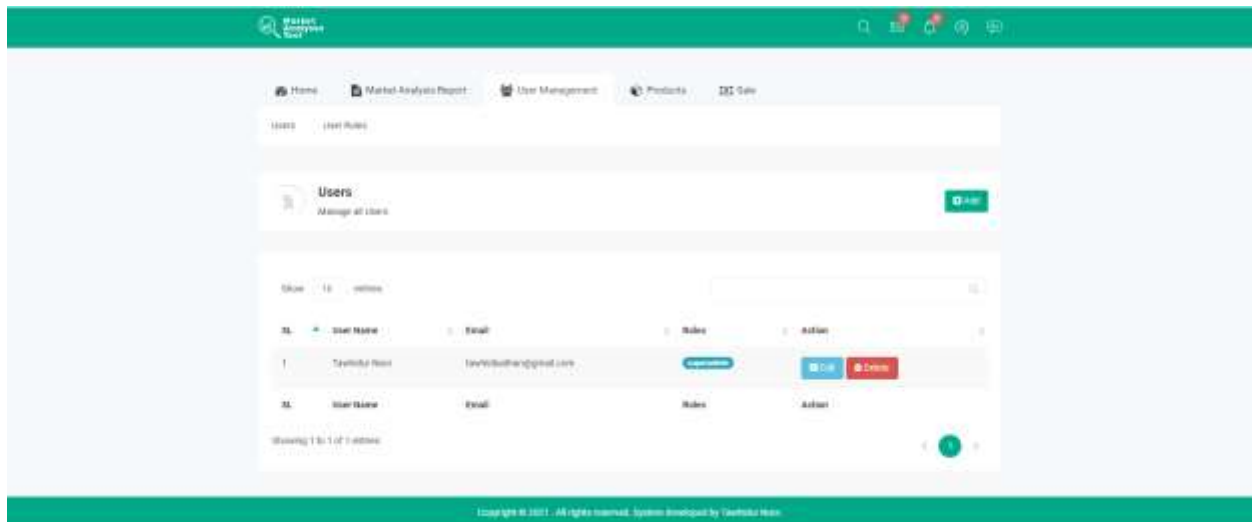


Figure 5.6 : Users

## 5.7 Edit User

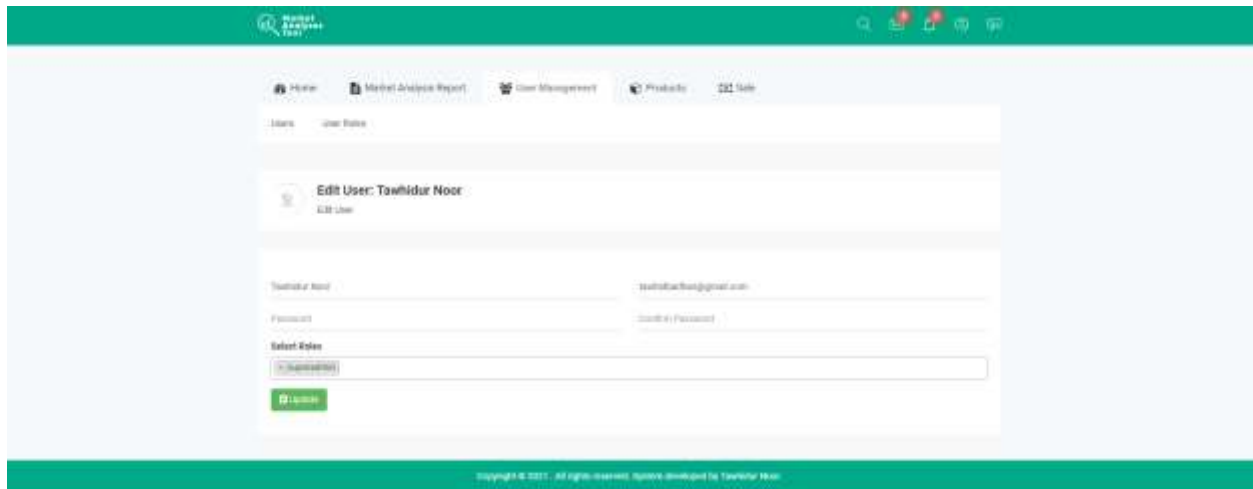


Figure 5.7 : Edit User

## 5.8 User Roles

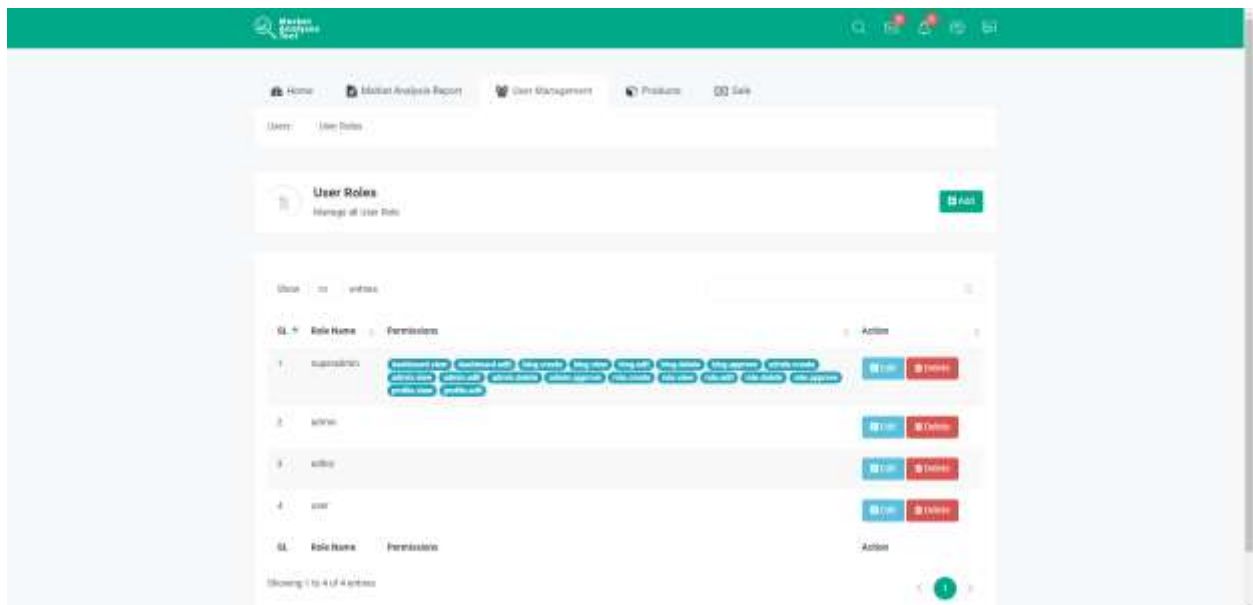


Figure 5.8 : User Roles

## 5.9 Edit User Role

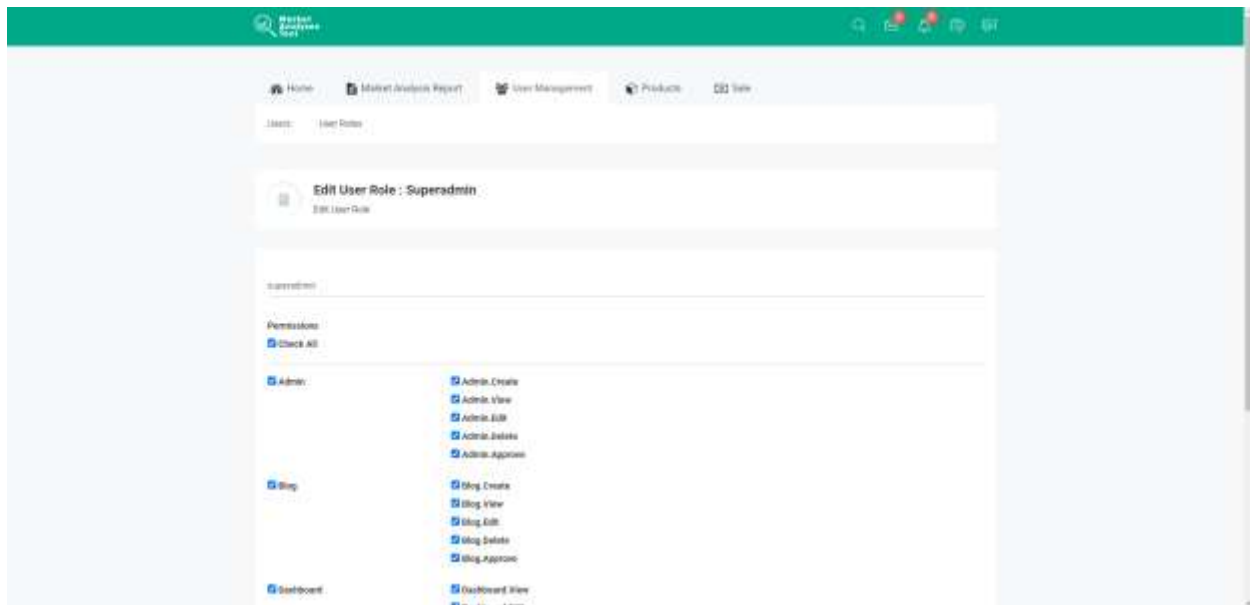


Figure 5.9 : Edit User Role

## 5.10 Product Categories

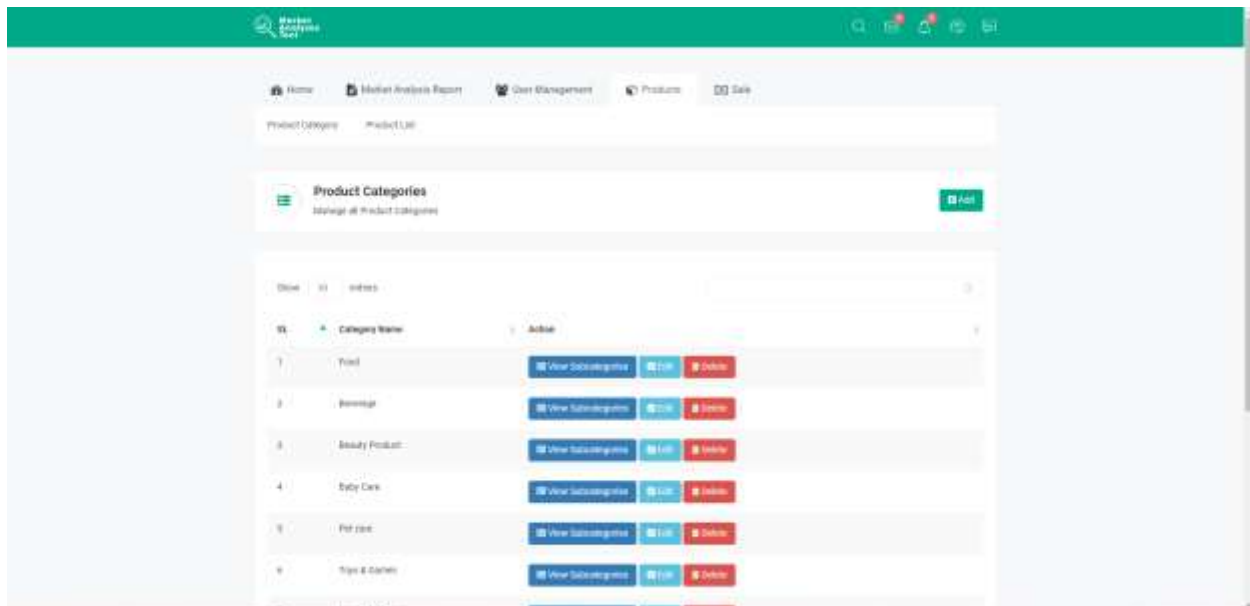


Figure 5.10 : Product Categories

## 5.11 Product Subcategories

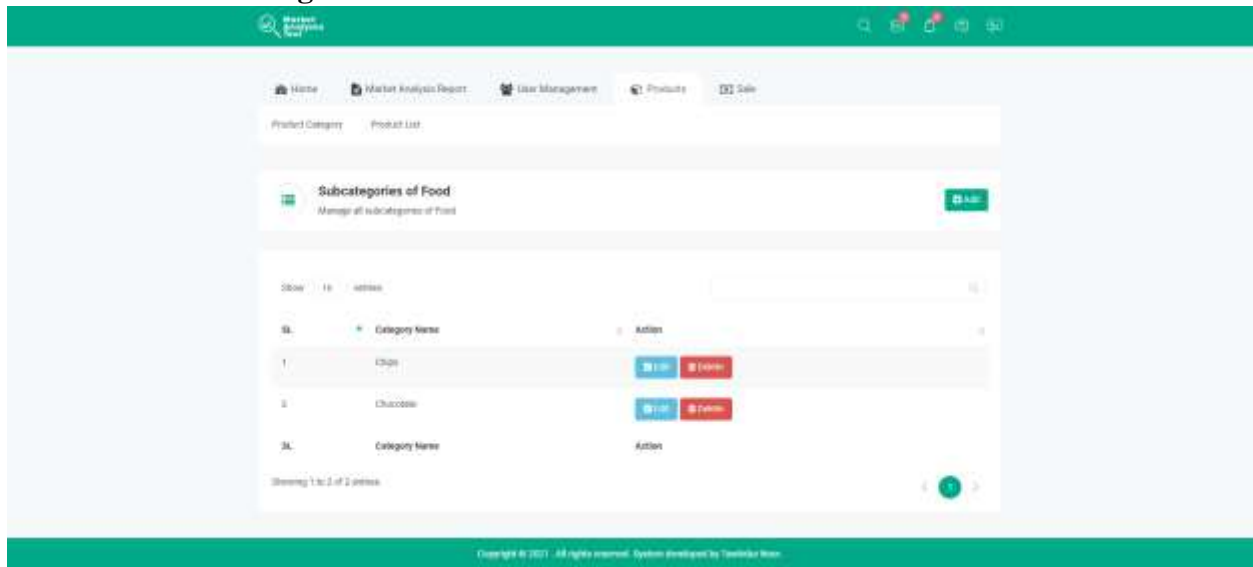


Figure 5.11 : Product Subcategories

## 5.12 Sale Manager

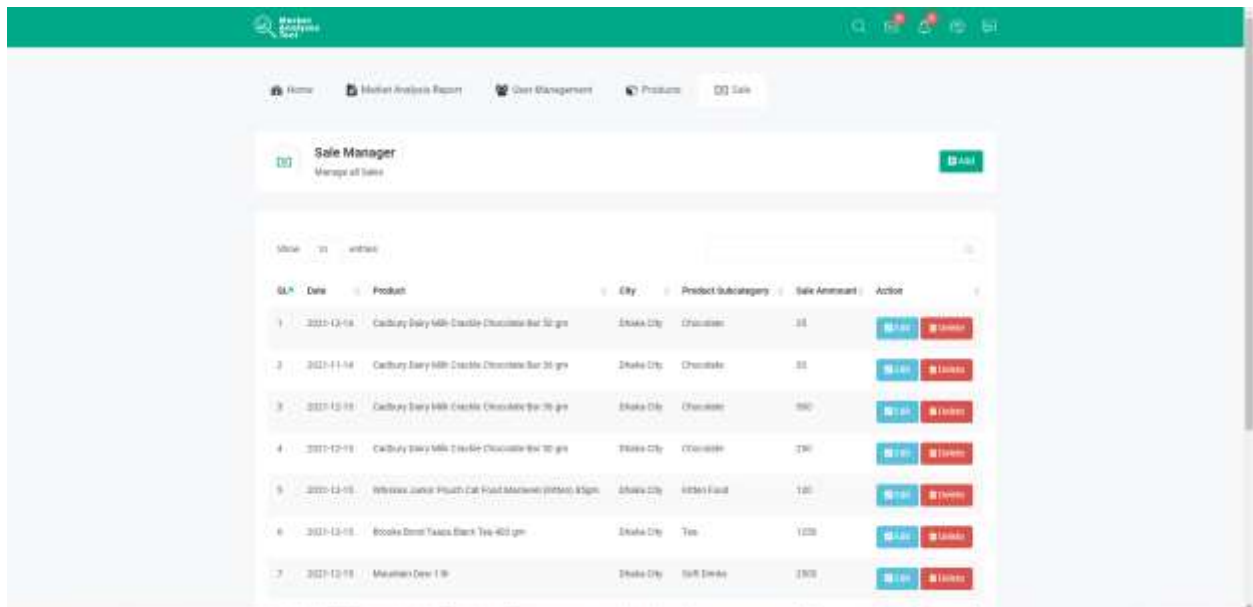


Figure 5.12 : Sale Manager

### 5.13 Add Sale

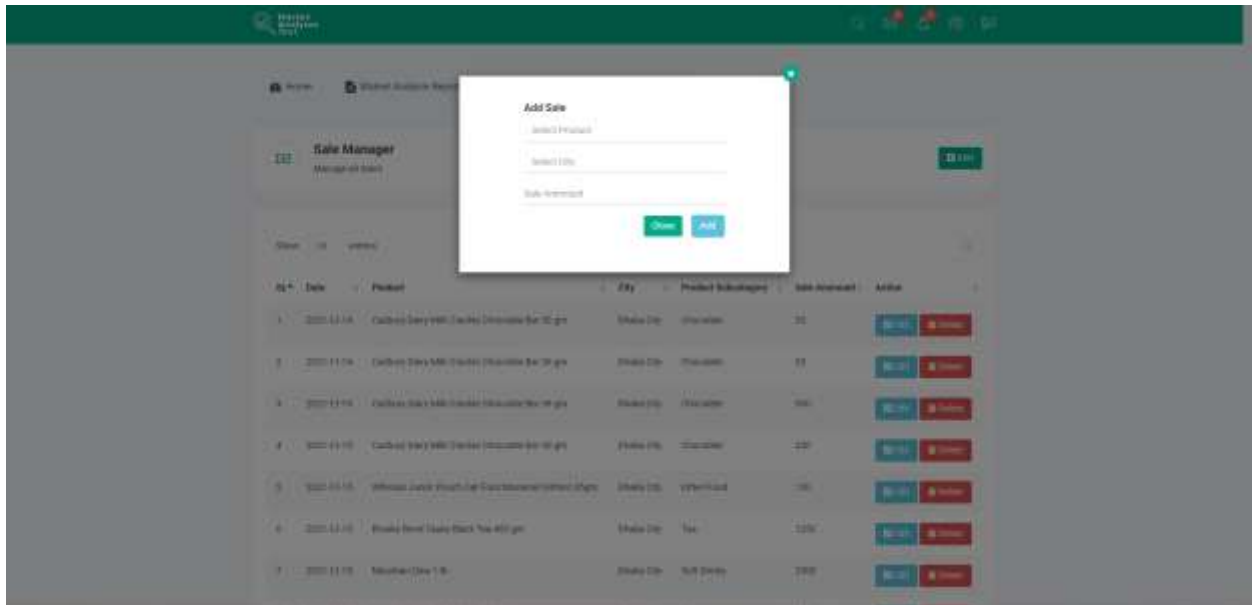


Figure 5.13 : Add sale

### 5.14 Edit Sale

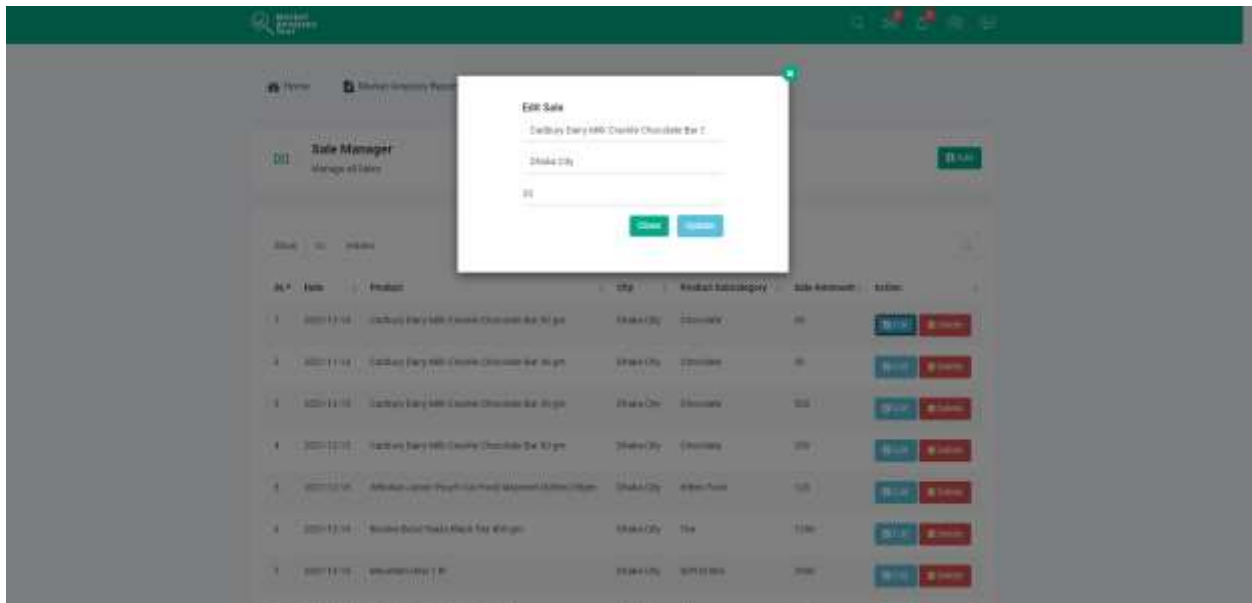


Figure 5.14 : Edit Sale

## 5.15 Delete Sale

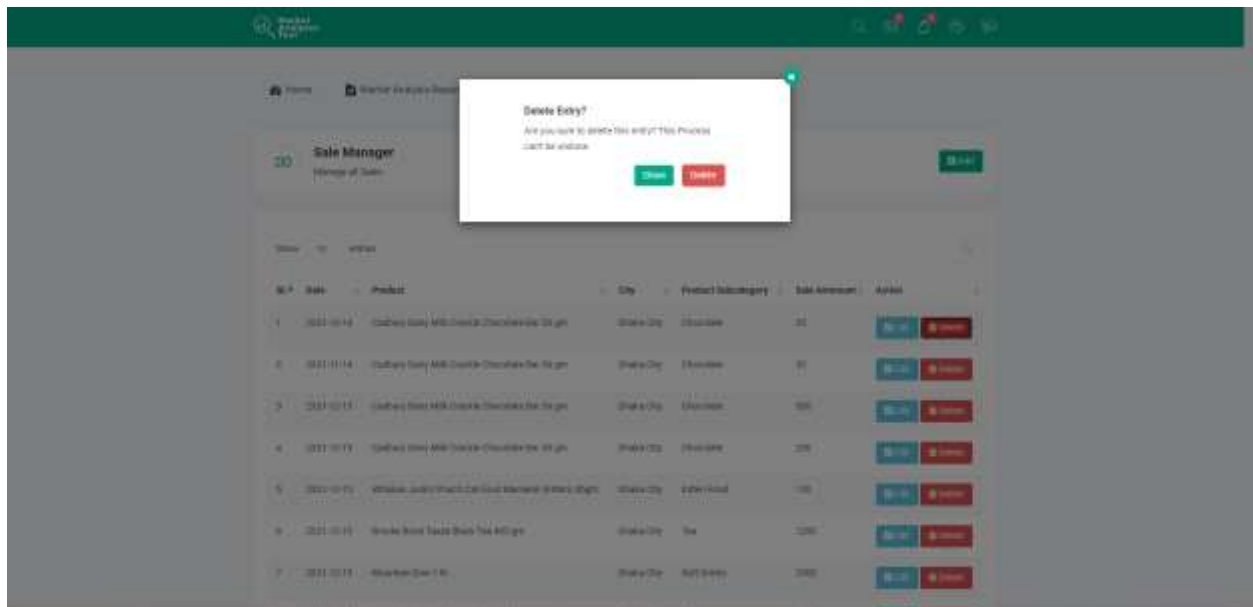


Figure 5.15 : Delete Sale



**Chapter 6**  
**Conclusion**

## **6.1 Project Summary**

The Market Analysis Tool is the solution for solving these problems considering Bangladesh's Market. One can track a variety of key metrics such as product sell, top sold product category, Stat for a particular product, and so on to help marketers know which efforts are working and why they aren't. This tool is specialized for the Bangladeshi market. This project is accessible for all kinds of stakeholders related to the market like marketers, market analysis specialists, investors, and so on. Even small shop owners can use this application to get information about any particular product so that they can decide whether to stock a product or not. Ultimately this system helps finding useful insights into customer trends, demographics, and characteristics which is the goal of Market Analysis.

## **6.2 Limitation**

- Data Accuracy is still not confirmed over 90%
- Not Fully secure

## **6.3 Obstacles and Achievement**

As humans, we experience problems at every stage of our lives, but as the greatest creation, we also have the power to adapt to changing circumstances and overcome obstacles. From the beginning to the end, I encountered numerous obstacles in order to complete my job. This was my first time working with a data analysis approach.

## **6.4 Future Scope**

- A more accurate system with Machine Learning at the back can be achieved.