Cairo University

Faculty of Computers and Artificial Intelligence

CS251

Intro. to Software Engineering

Project Name

Software Requirements Specifications

Version 1.0

Team Names and Emails and Phone of Team Leader

Month & Year

CS251: Phase 1 – Team Name
Project: <Project Name>

Software Requirements Specifications

Contents

Software Requirements Specifications

Team

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Document Purpose and Audience

Purpose

The purpose of this document is to clarify software requirements that are agreed upon by the stakeholders by specifying the needed functionalities of the software to minimize development time and cost by making the requirements clear.

Audience

- Software Development Team
- Stakeholders

Introduction

Software Purpose

The purpose of Toffee is to sell sweets and candy online whether it's by kilo or a package and Link between seller and buyer.

Software Scope

- The major feature of this system is to sell candy and sweets online whether it's by kilo or a package.
- It's also had an admin to control the amount of candy left or adding a new amount and control prices of candy and so on.

Software Requirements Specifications

Definitions, acronyms, and abbreviations

Phrase	Definition
Smart Wallets	An electronic device, online service, or software program that allows one party to make electronic transactions with another party bartering digital currency units for goods and services.
OTP	**One Time Password** it's a temporary, secure PIN-code sent to you via SMS or e-mail that is valid only for one session used to verify an email or phone number.
shopping cart	Is a place where you put the things you want to buy in.
sealed items	sealed item means an unbroken or unopened item which cannot be opened without damaging the container.
Loose items	free or released from confinement or restraint not in a package.
gift voucher	Is a card or piece of paper that you buy at a shop and give to someone, which entitles the person to exchange it for goods worth the same amount
gift voucher code	Is a unique code and can be redeemed once when making an order to reduce the total price by the value of the voucher.
Loyalty points	Is points give to a customer after buying something only give by admin and the customer can redeem it with candy and sweets.
catalog	It's like a main page that contain all goods.
"re-corder" button	makes the same exact order with the same exact conditions.
Maintainability	The ease with which a software system or component can be modified to correct faults, improve performance or other attributes, or adapt to a changed environment."
Scalability	The ability of the software to support a growing number of users while offering good performance.
Usability	The degree to which a software can be used by specified consumers to achieve quantified objectives with effectiveness, efficiency, and satisfaction in a quantified context of use.
Portability	Portability defines how a system, or its element can be launched on one environment or another.
Availability	Availability measures the ability of a piece of equipment to be operated if needed.
Reliability	reliability measures the ability of a piece of equipment to perform its intended function for a specific interval without failure

Software Requirements Specifications

Requirements

Functional Requirements

Requirement ID	Requirement Statement
FR01	The application should have a login/sign-up system and screen and make a login or sign up. - check if the user is signed up make them go to the next page if not make him sign up and then login. - Registration requires secure password guidelines. Registration is completed by sending an OTP to the email used
FR02	After the login the next screen should display the goods with its price.
FR03	The user has the option to buy by packet or kilo.
FR04	The user can put the items he wants to buy in shopping cart.
FR05	The user can pay in different ways. - eWallet (smart wallets) - credit card - in delivery
FR06	A system admin can update catalog with new items, cancel items or update item info.
FR07	The user can buy sealed items or Loose items.
FR08	Admin can view all orders, set loyalty points scheme, suspend a user, and view statistics. - Statistics provide store owners with a view of how the store is doing. This may include daily and monthly sales, sales of each item in a period among other statistics.
FR09	user can re-order a previous order
FR10	Upon making an order, shoppers must specify the shipping address; if it is the same address registered on their profile or another address.

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Software Requirements Specifications

Non Functional Requirements

| Measure	Details
Performance	- The Sign-in/sign-up screen should take about 7 seconds to load. - Every panel in the system should take less than 10 seconds to load. - Confirmation code must be sent within 2 minutes. - Reserving or canceling a order must take 20 seconds. - The system should be able to manage a high volume of requests and transactions with minimal delays or performance concerns.
Scalability	The system should be able to scale up or down to meet changing demand.
Security	The system should protect sensitive client data and maintain the security of all transactions like storing the RNR encrypted and storing the way that the passenger pays encrypted (credit card, PayPal account,……….).
Maintainability	The system should be simple to maintain and update, with low downtime. The system should have a 90% chance of maintainability for 1 day. Which means that if a component in the system had a critical issue, there is a 95% chance that this component will be fixed in 2 days.
Reliability and availability	The system should be active 93% of the day. The system should be always available, with as little downtime as possible for maintenance or updates.
Usability	The system should be simple to use for both customers and staff, with a simple and straightforward interface.

Software Requirements Specifications

System Models

Use Case Model
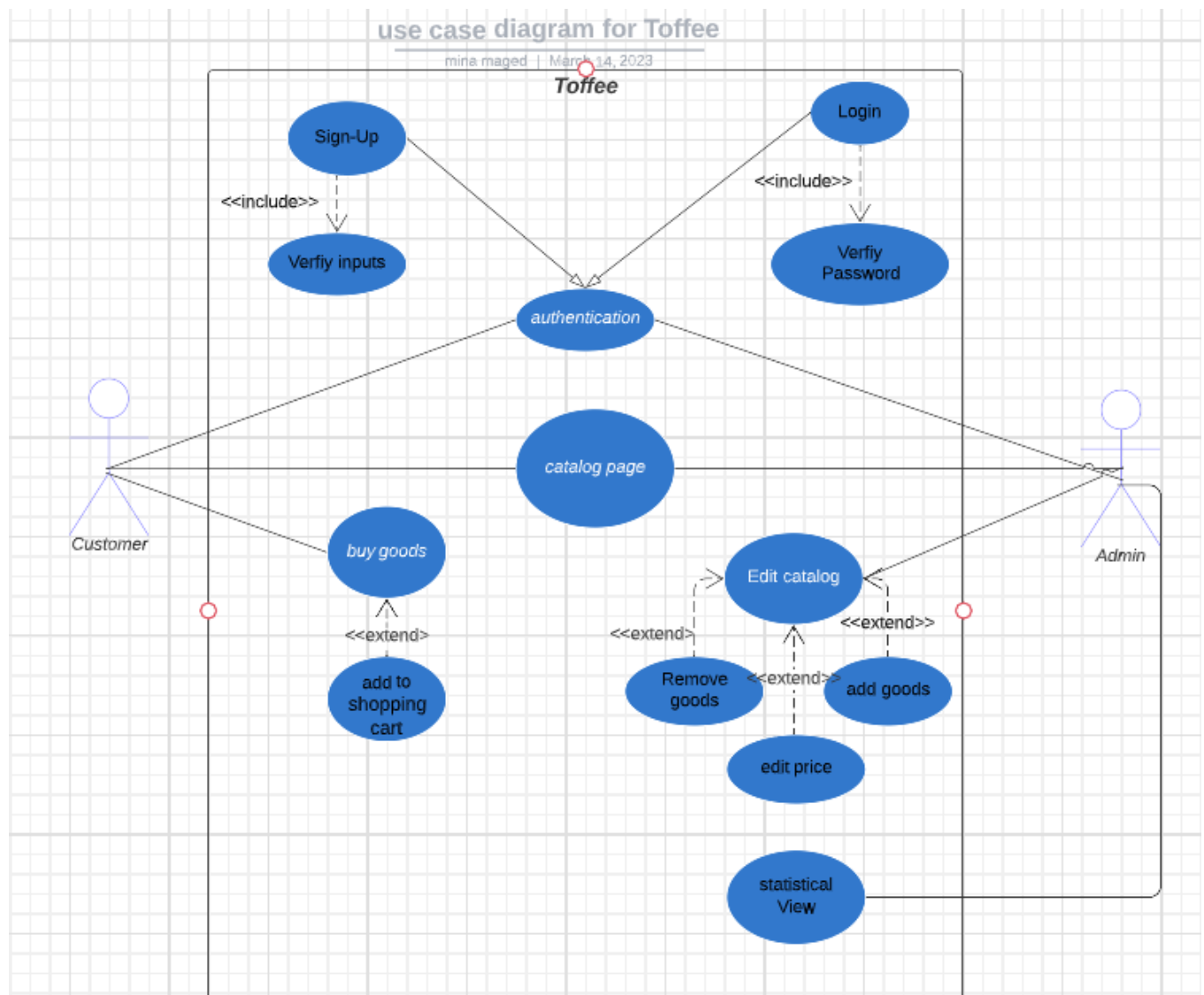
Software Requirements Specifications

Enriched User Stories

- **User Story #1**

User Story ID	US #1
User Story Name	Log in
Actors	customer or employee
Description	**As** a customer or employee **I like** to be able to log in **So I can use the app**
Per condition	
Post condition	
Acceptance Criteria	**Given** a logged-out system user and I'm on the Sign-In page **When** I fill in the "Username" and "Password" fields with my authentication credentials and I click the Log-In button **Then** the system signs me in

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- User clicks on log in	
	2- System displays log in page 3- System display boxes to input username and password
4 - User fills in the boxes	
	5 - System verifies the user information
6- - System accesses user to app functionalities	

Exceptional Scenario

Actor Action	System Response

Software Requirements Specifications

1- User clicks on log in	
	2- System displays log in page 3- System display boxes to input username and password
4 - User fills in the boxes	
	5- - System finds input information invalid 6- - System displays "Please enter valid username/password." message

- **Screen Design**

Software Requirements Specifications
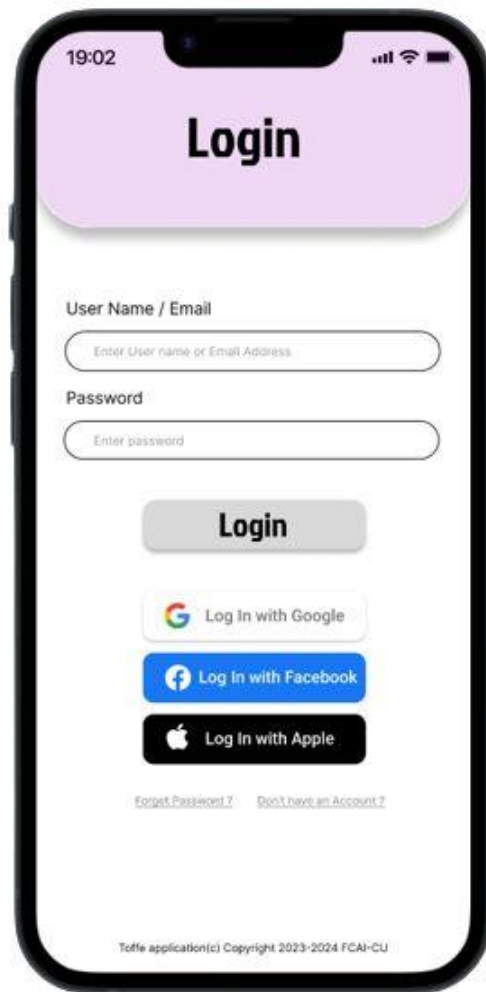
- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Username field	Text <100 Characters	Structured Text
Password field	Text <100 Characters	Structured Text

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Software Requirements Specifications

- **User Story #2**

User Story ID	US #2
User Story Name	Sign-up
Actors	customer
Description	**As** a customer or employee **I like** to be able to lo sign-up **So I can use the app**
Per condition	
Post condition	
Acceptance Criteria	**Given** I'm a logged-out system user and I'm on the Sign-up page **When** I fill in the sign up information fields with my credentials and I click sign up **Then** the system signs me up

Scenarios

Normal Scenario

Actor Action	System Response
1- User clicks on sign-up	
	2- System displays sign-up page 3-System display boxes to input sign up information
4 - User fills the boxes	
	5 - System verifies the user information
	6- System saves user information in the database

Exceptional Scenario

Actor Action	System Response
1- User clicks on sign-up	
	2- System displays sign-up page 3- -System display boxes to input sign up information

Software Requirements Specifications

4 - User fills in the boxes	
	5- - System finds input information invalid 6- System displays "Please enter valid information." message

- **Screen Design**

Software Requirements Specifications

- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Username field	Text <100 Characters	Structured Text
Email	Text <100 Characters	Email must contain '@' sign and '.com' at the end and must be valid email send a confirmation message to it
Phone Number	Alphanumeric < 100 Characters	Integer > 0 and confirm via text message
Password	Text <100 Characters	Password confirmation and must include an uppercase letter, numbers and/or special characters
Confirm Password	Text <100 Characters	It must be matched with the password

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- **User Story #3**

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User Story ID	US #3
User Story Name	Search
Actors	customer
Description	**As** a customer **I like** to be able to search for things I like. **So I save time**
Per condition	
Post condition	
Acceptance Criteria	**Given** a Search bar **When** I search **Then** the search for me

Software Requirements Specifications

- **Scenarios**

Normal Scenario

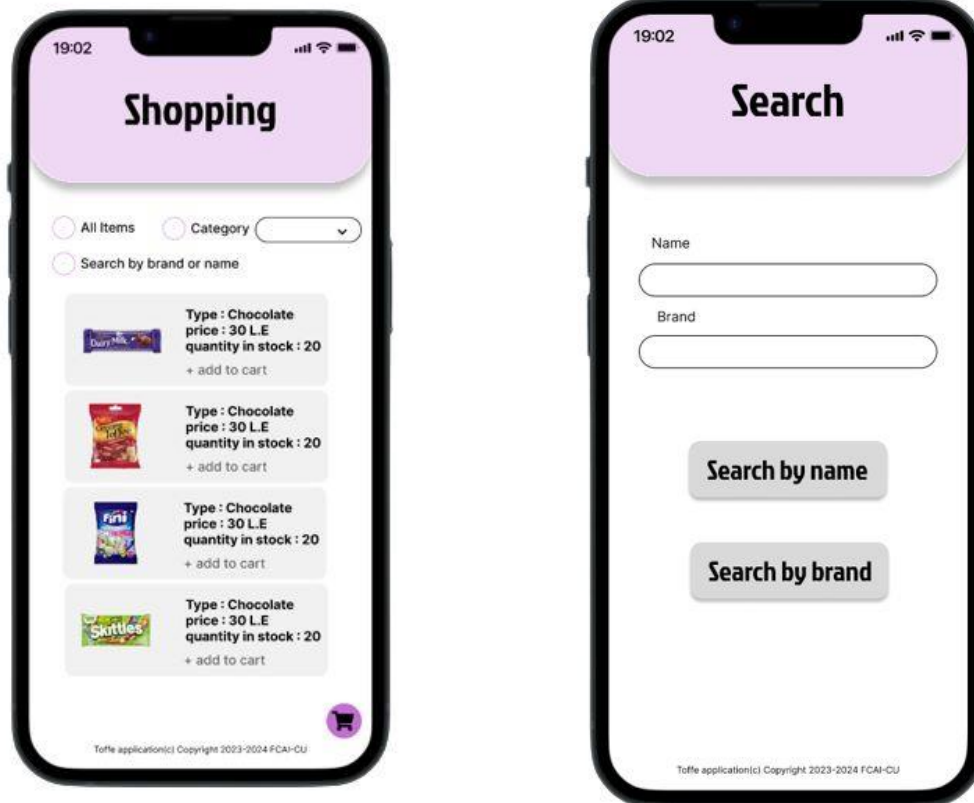| Actor Action	System Response
1- User clicks on search	
	2- System displays the item.
4 - User press to the item	
	5 - System takes him to the item page he wants

Exceptional Scenario

Actor Action	System Response
1- User clicks on search	
	2- System displays the item does not found

Software Requirements Specifications

- **Screen Design**

- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Search field	Text <100 Characters	Structured Text
Description field	Text <500 Characters	Structured Text

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- **User Story #4**

User Story ID	US #4
User Story Name	Add to shopping list

Software Requirements Specifications

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Actors	customer
Description	**As** a customer **I like** to be able to add to shopping list and continuo shopping. **So I don't forget the buy the things I like**
Per condition	
Post condition	
Acceptance Criteria	**Given** a Shopping list **When** I add items to shopping list **Then it add to my shopping list**

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- User clicks on add to shipping list	
	2- System Add item to shopping list
4 - User go back and continuo shopping	
	5 - System takes him to the main page

No Exceptional Scenario for this Case

Software Requirements Specifications

- **Screen Design**

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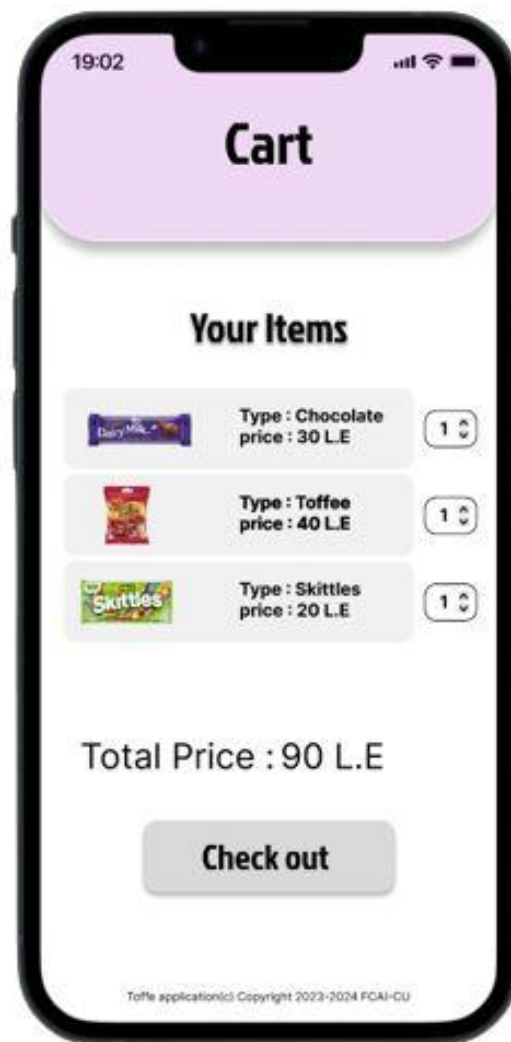
Software Requirements Specifications

- **User Story #5**

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User Story ID	US #5
User Story Name	Payment
Actors	customer
Description	**As** a customer **I like** to be able to Pay easily and in different ways. **So I became satisfied**
Per condition	
Post condition	
Acceptance Criteria	**Given** a payment method. **When** I pay **Then** the System Displays many options.

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- User clicks on pay	
	2- System displays payment methods
3 - User choose to payment method	
	4 - System saves payment method 5- System send OTP message to phone number.

Exceptional Scenario

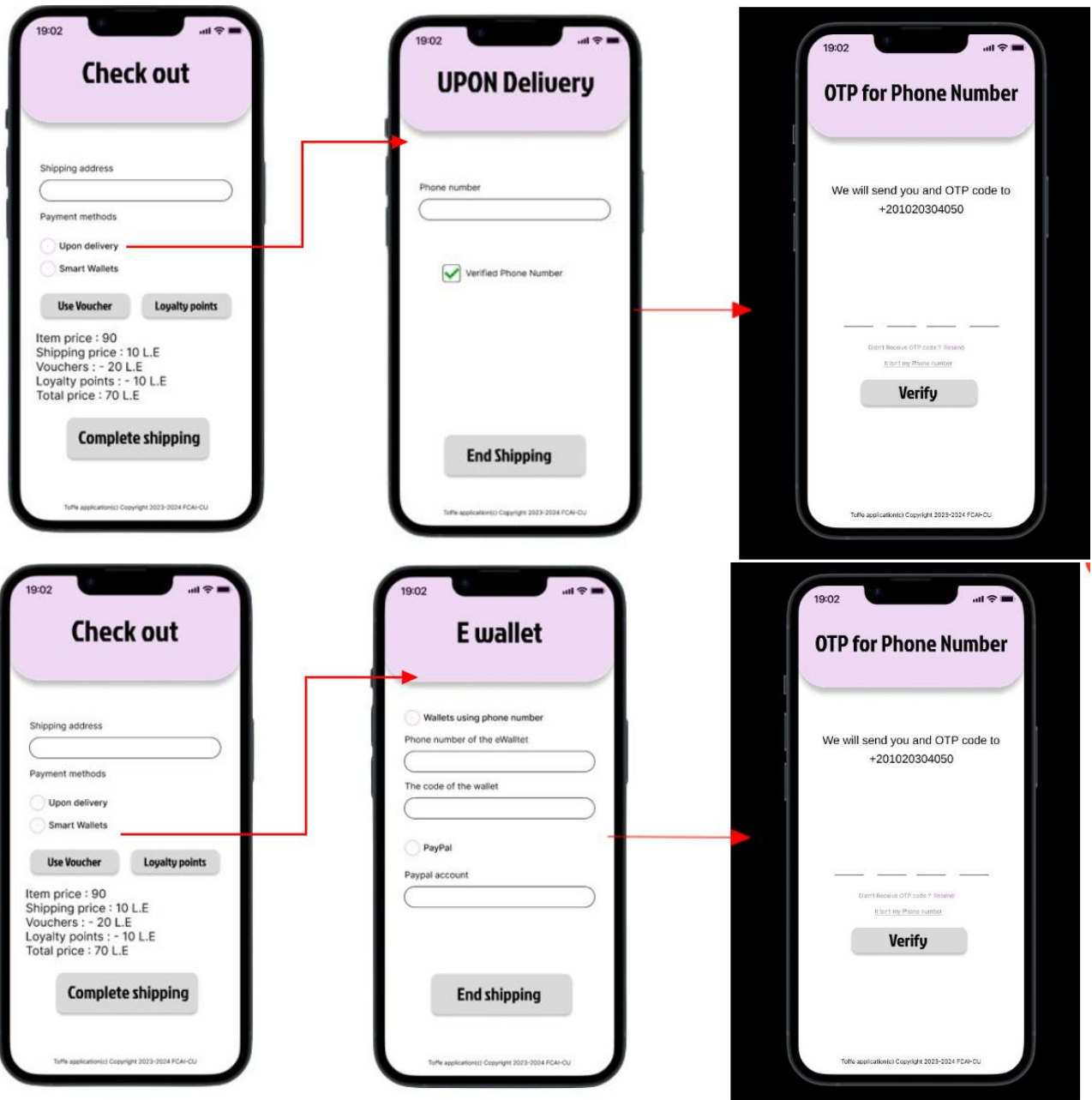| Actor Action	System Response
1- User clicks on pay	
	2- System displays payment methods
3 - User choose to payment method	
	4- If user chooses to pay in any online method And there is not enough money system displays sorry not enough money.

Software Requirements Specifications

- **Screen Design**

Software Requirements Specifications

- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Shipping address	Text <100 Characters	Structured Text
Phone Number	Alphanumeric < 100 Characters	Integer > 0 and confirm via text message
Code of Wallet	Alphanumeric < 100 Characters	Don't save the order until you make sure it's a valid wallet

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- **User Story #6**

User Story ID	US #6
User Story Name	Voucher and Loyalty Points
Actors	customer
Description	**As** a customer **I like** to be able to have some Vouchers and loyalty points. **So I have some Price reductions.**
Per condition	
Post condition	
Acceptance Criteria	**Given** a Voucher and Loyalty Points. **When** buying **Then** the System Displays Voucher and Loyalty Points and reduce item price.

- **Scenarios**

Normal Scenario

| Actor Action	System Response
1- User clicks on Voucher or Loyalty Points	
	2- System displays Voucher or Loyalty Points Pages
3 - User input boxes	

Software Requirements Specifications

| | 4 - System makes the Correct price reduction. |
| | 5- System Displays the new price. |

Exceptional Scenario

Actor Action	System Response
1- User clicks on Voucher or Loyalty Points	
	2- System displays Voucher or Loyalty Points Pages
3 - User input boxes	
	4- System Response sorry invalid code

- **Screen Design**
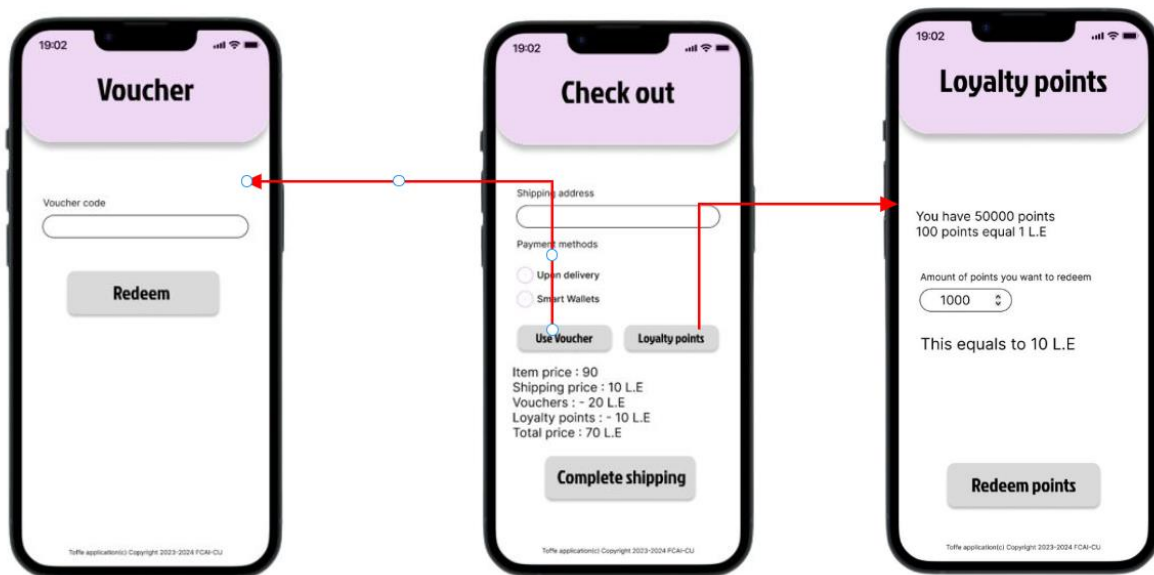
- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Voucher Code	Text <100 Characters	Structured Text and check if it still valid or not.

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Software Requirements Specifications

- **User Story #7**

User Story ID	US #7
User Story Name	Add Items
Actors	Admin
Description	**As** an Admin **I like** to be able to Update the catalog by adding items. **So I modify the main page.**
Per condition	
Post condition	
Acceptance Criteria	**Given** a page to admin. **When** updating the catalog by adding. **Then** the System Add to Catalog.

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- Admin After choosing Add.	
	2- System displays add page.
3 – Admin input boxes	
	4 - System Add the item.

NO Exceptional Scenario for this Case

Software Requirements Specifications

- **Screen Design**
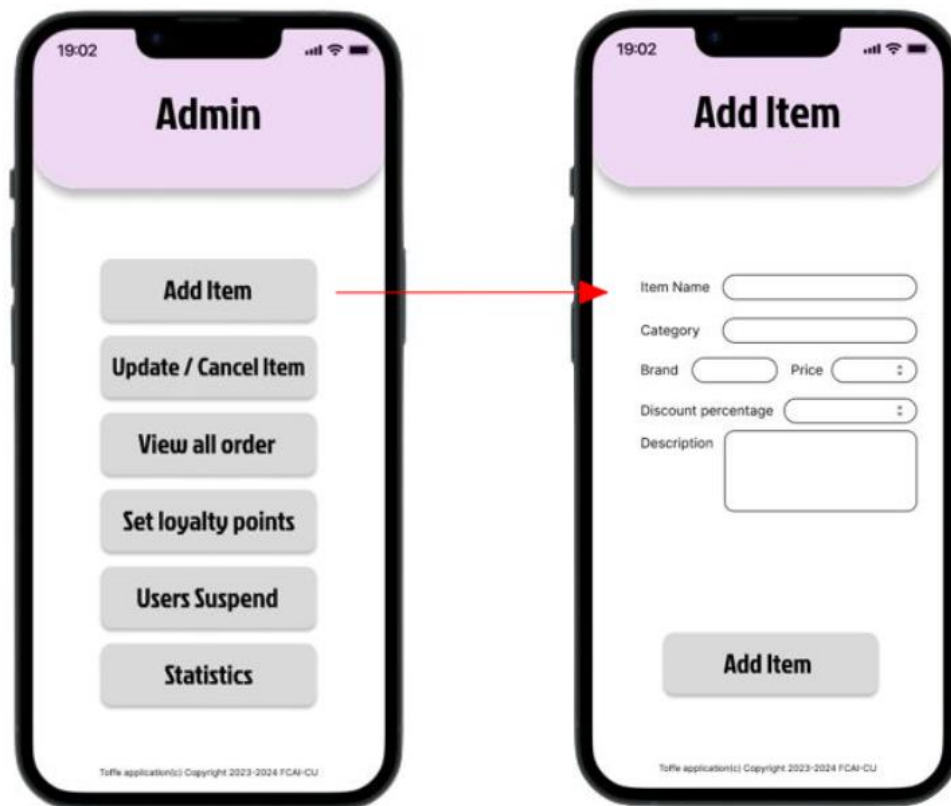
- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Item Name	Text <100 Characters	Structured Text
Category	Text <100 Characters	Structured Text
Discount percentage	Numeric	Only numbers
Price	Numeric	Only numbers
Description	Text <100 Characters	Structured Text

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- **User Story #8**

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User Story ID	US #8
User Story Name	Update/Cancel Catalog
Actors	Admin
Description	**As** an Admin **I like** to be able to Update and Delete items in the catalog. **So I modify the main page.**
Per condition	
Post condition	
Acceptance Criteria	**Given** an Update/Cancel Page. **When** Update/Cancel the catalog. **Then** the System Update/Cancel Catalog.

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- Admin After choosing Update/Cancel catalog.	
	2- System displays Update/Cancel catalog.
3 – Admin input boxes	
	4 - System Update/Cancel the item.

Exceptional Scenario

Actor Action	System Response
1- Admin After choosing Update/Cancel catalog.	
	2- System displays Update/Cancel catalog.
3 – Admin input boxes	
	4- System Response sorry invalid inputs.

Software Requirements Specifications

- **Screen Design**

- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Item Name	Text <100 Characters	Structured Text
Category	Text <100 Characters	Structured Text
Discount percentage	Numeric	Only numbers
Price	Numeric	Only numbers
Description	Text <100 Characters	Structured Text

Software Requirements Specifications

- **User Story #9**

User Story ID	US #9
User Story Name	View Orders
Actors	Admin
Description	**As** an Admin **I like** to be able to View Orders. **So I can inform the delivery Guy.**
Per condition	
Post condition	
Acceptance Criteria	**Given** a View Orders Page. **When** View Orders. **Then** the System Displays the Orders .

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- Admin After choosing View Orders.	
	2- System displays Orders.

NO Exceptional Scenario For this Case.

Software Requirements Specifications

- **Screen Design**
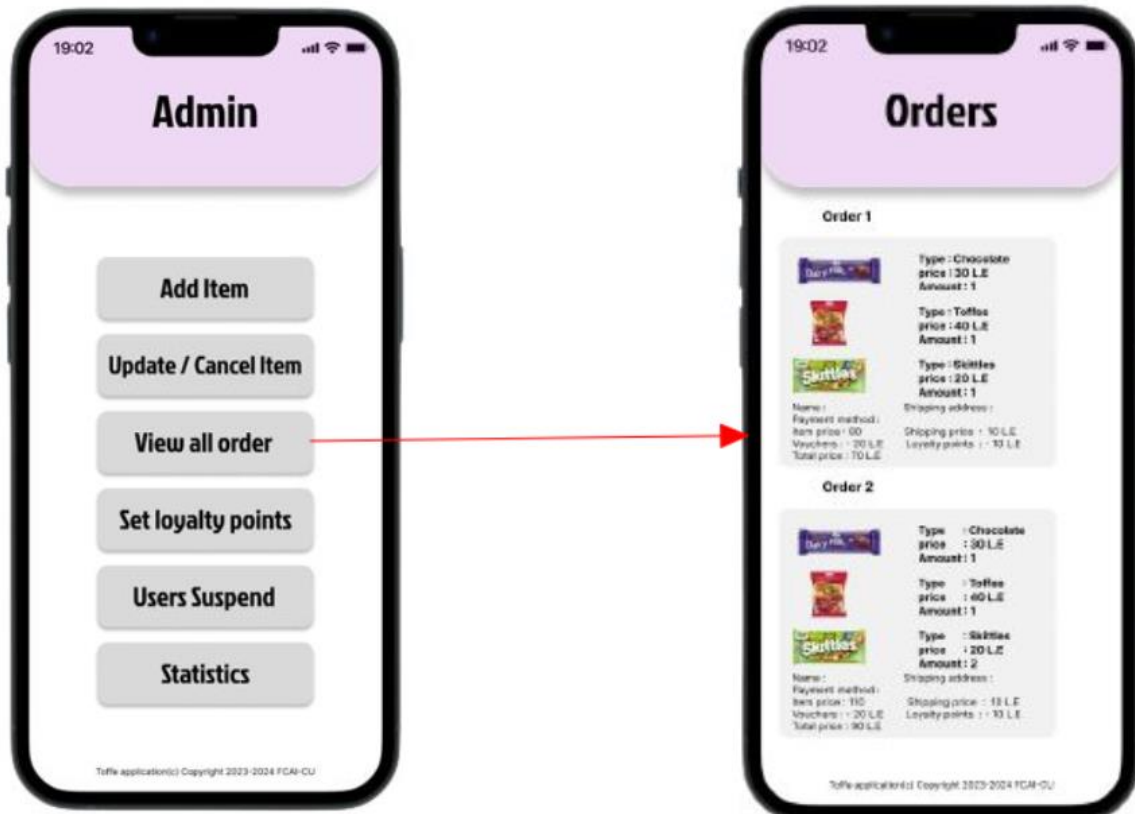
Software Requirements Specifications

- **User Story #10**

User Story ID	US #10
User Story Name	Set Loyalty points
Actors	Admin
Description	**As** an Admin **I like** to be able to Set Loyalty points. **So customer can have a price reduction.**
Per condition	
Post condition	
Acceptance Criteria	**Given** a Set Loyalty points page. **When** Setting Loyalty points. **Then** the System Set Loyalty points to the items and then give the loyalty points to the customer.

- **Scenarios**

Normal Scenario

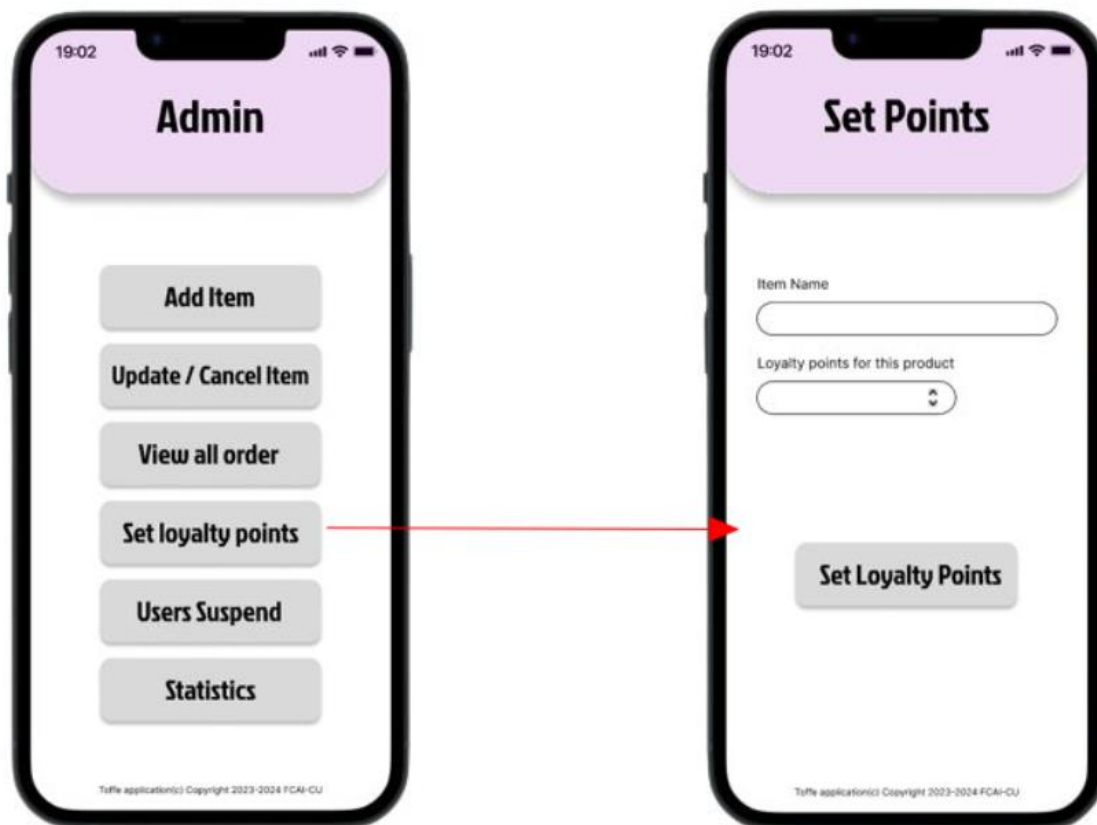| Actor Action	System Response
1- Admin After choosing Set Loyalty points.	
	2- System displays Set Loyalty points page.
3 – Admin input boxes	
	4 - System Add the Loyalty points to the Items.

NO Exceptional Scenario for this Case

Software Requirements Specifications

- **Screen Design**

- **Data Dictionary:**

Element Label	Type/Length	Data Validation / Business Rule
Item Name	Text <100 Characters	Structured Text
Loyalty Points	Numbers	Numbers only

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Software Requirements Specifications

- **User Story #11**

User Story ID	US #11
User Story Name	User Suspend
Actors	Admin
Description	**As** an Admin **I like** to be able to see User Suspend.
Per condition	
Post condition	
Acceptance Criteria	**Given** a User Suspend page. **When** Seeing the User Suspend page. **Then** the System Displays the User Suspend page.

- **Scenarios**

Normal Scenario

Actor Action	System Response
1- Admin After choosing User Suspend page.	
	2- System displays User Suspend page.

NO Exceptional Scenario for this Case

Software Requirements Specifications

- **Screen Design**

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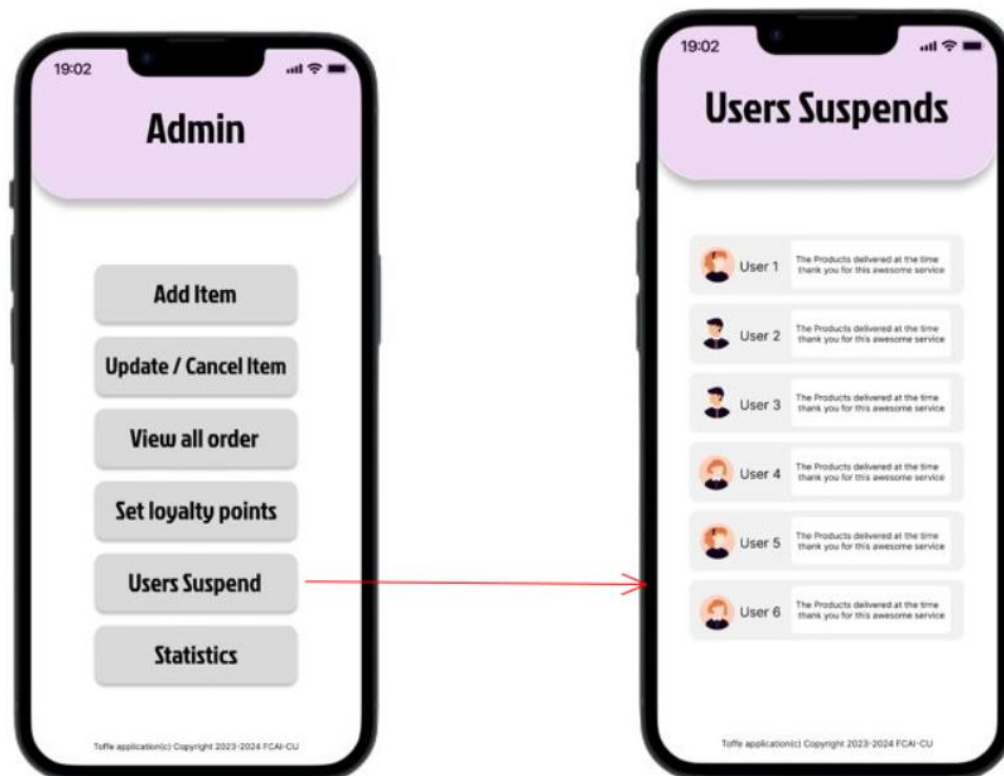
- **User Story #12**

User Story ID	US #12
User Story Name	Statistics
Actors	Admin
Description	**As** an Admin
	I like to be able to see Statistics.
	So I can know which item sold the most and other things related to marketing and decision support.
Per condition	

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Post condition	
Acceptance Criteria	**Given** a Statistics page. **When** seeing the Statistics page. **Then** the System Displays which Statistics I want.

- **Scenarios**

  Normal Scenario

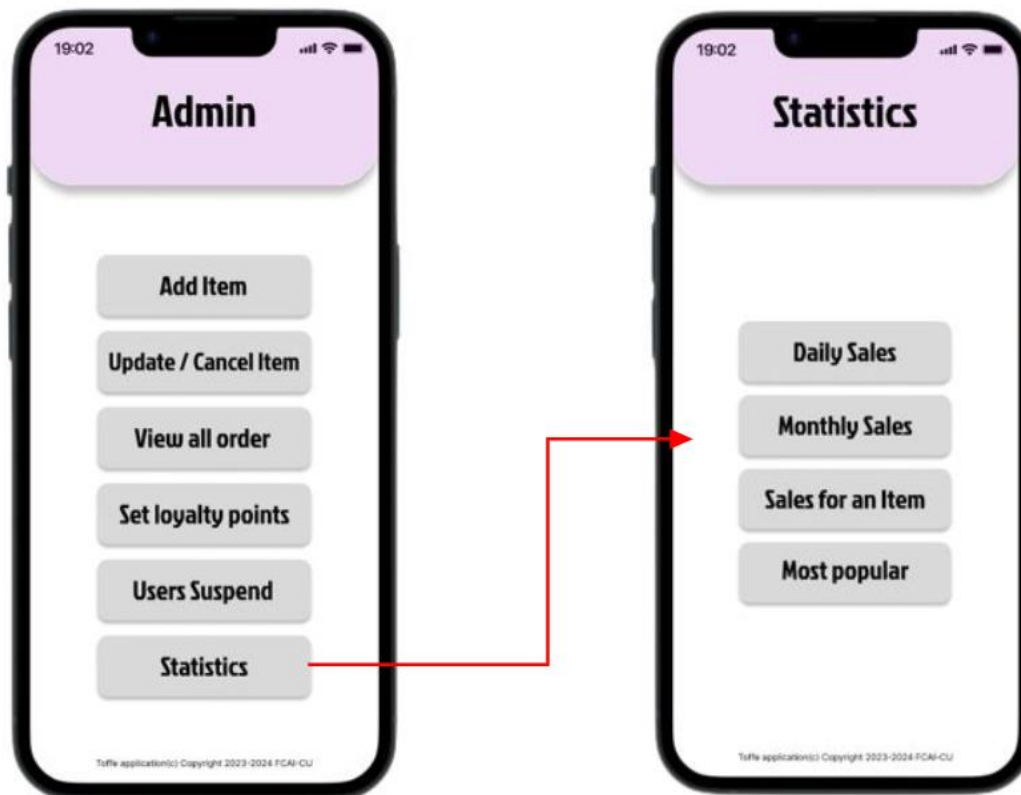 | Actor Action | System Response |
  |---|---|
  | 1- Admin After choosing Statistics page. | |
  | | 2- System displays User Suspend page. |
  | 3-Admin chooses which type of statistics he wants | |
  | | 4-System Displays type of statistics |

  NO Exceptional Scenario for this Case

Software Requirements Specifications

- **Screen Design**

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Software Requirements Specifications

System Navigation Map
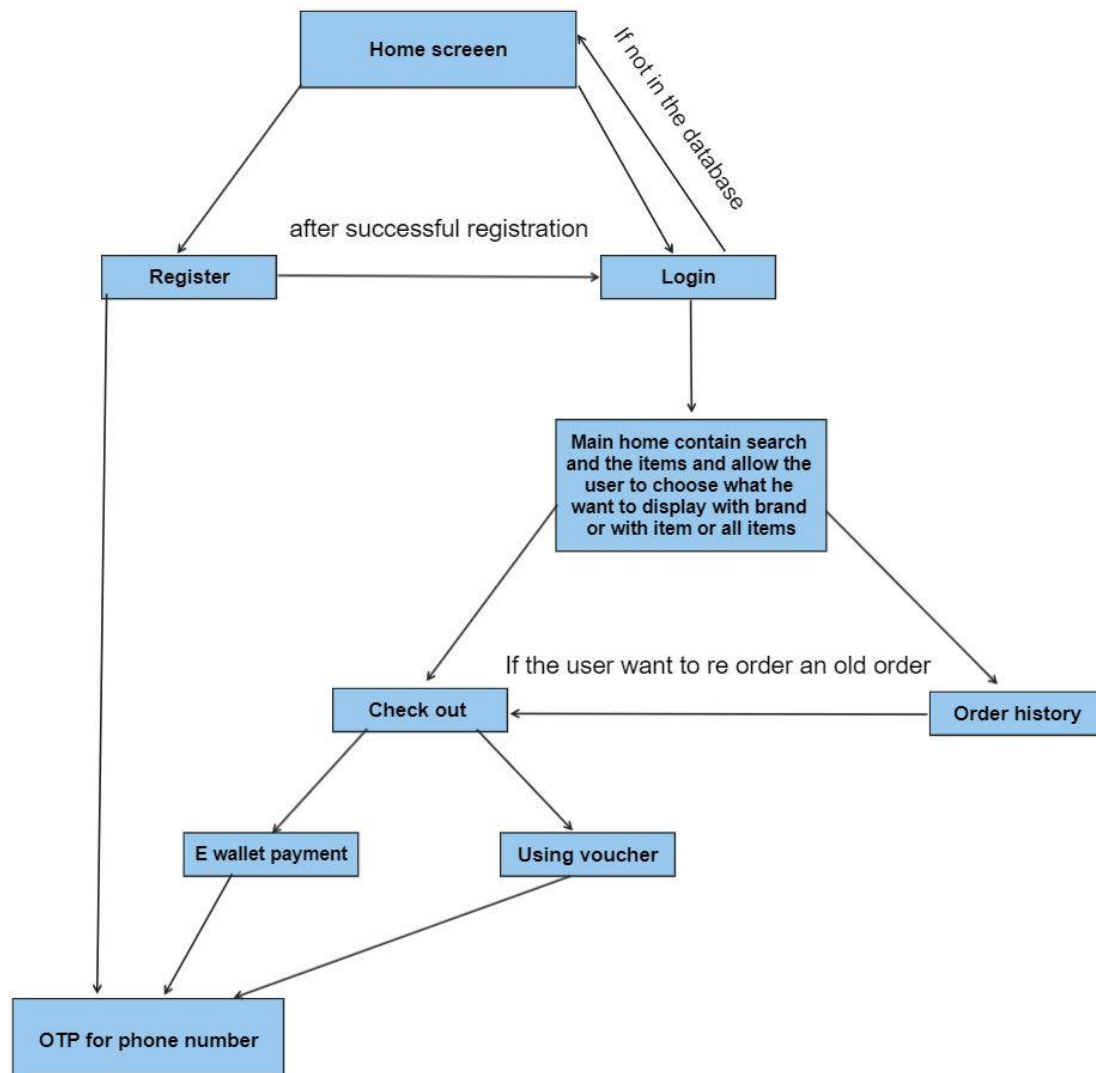
Tools

- Lucid chart
- www.mockflow.com for System Navigation Map
- wireframepro.mockflow.com
- Figma UI

Software Requirements Specifications

Ownership Report

Student	Items he created
Mina Maged Faris	**Use Case Model, Functional Requirements, Document Purpose and Audience, Introduction And Some Definitions.**
Eslam Sayed	**Non-Functional Requirements, some definitions System Navigation Map and tools**