Software Requirements Specification Document (CS360)

Kahanian

Group Number: 15

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Course: Software Engineering CS360

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Contents

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1 Introduction

This Software Requirements Specification document is a basis of our project and lays a framework that our team will follow while developing this software. It describes what the software will do and how it will be expected to perform. This will help us to make decisions about the products lifecycle. It also contains the functional requirements that are required for the product which fulfils the user and customer needs. All the sections are clearly mentioned in the contents page and are categorized to explain the document in a clear manner.

1.1 Document Purpose

Kahanian is an ecommerce website where people can purchase clothing products that are produced by Kahanian, a clothing brand. The purpose of the document is to provide a detailed description of the requirements of the Web-Application and the reasons which led to those requirements with respect to the customer and the user. It will illustrate the purpose and complete declaration of the system. It will also consist of system constraints, functional requirements, non-functional requirements, external requirements, user stories, constraints, and system requirements.

This document will primarily provide an outline for the entire description of Kahanian and the processes which will lead to development, testing and deployment of the first version of Kahanian. The web-application will have 2 sides; admin and user, which will be used by team Kahanian and their customers respectively. The document also mentions the functions that both the admin and users can perform on the web-application.

1.2 Product Scope

Kahanian's Web-Application will allow team Kahanian to display and conduct sales of their clothing collections, and their users to conduct purchases of their collections. This Web-Application will be accessible to everyone who has an internet and a browser, but the brand itself is based to sell its products to people only living in Pakistan. The basic goal of the product is to provide a system that unifies the brand("Kahanian") with its users. This will help increase their reach to people all around Pakistan, since it was only based on Instagram before. This system will also be more efficient and will provide team Kahanian an automated process to sell their products and manage orders.

The system, on the user side, will allow the users to browse clothing items, ask queries and purchase one or more available products. It will also use their personal information including their house address for billing purposes. The admin side will allow the admins to add, delete and edit products/collections, view order/sales details, and ship products using a third-party application. Order and User details will be used by the admins in order to provide discount coupons.

1.3 Intended Audience and Document Overview

This document is organized in four sections and each section has its own subsections. There are four appendices at the end of the document. The basic organization is as follows:

1. *Introduction*: This section includes the purpose of the SRS document, description of the software to be developed, the intended audience of the document, definitions needed to interpret the SRS and references.
2. *Overall Description:* This section includes the product perspective, functionality, the users and their characteristics and the assumptions made by the documentation writers.
3. *Specific Requirements*: This section has all the functional requirements of the software to be developed including details about external interface and use case view.
4. *Other non-functional requirements:* This section includes the performance, safety, and security requirements of the software as well as software quality attributes.
5. *Appendices:*
   - Appendix A: Description of key features as told by the perspective of users.
   - Appendix B: Architectural Spike
   - Appendix C: Group Meeting Logs (In-group meetings and TA meetings)
   - Appendix D: Contribution statements of the five team members.

This document is intended for the following readers:

1. Developers
   Names: *Ahmed Ateeq, Umme Ammara, Hania Rafique, Mominah Anwar, Maryam Saadat*
   The developers are the five people from the development team responsible for the application's documentation and development. This document will lay out the basic framework and description of the software that will be developed. Therefore, this document is a guide for the developers for the later phases of the project. Since the developers also constitute documentation writers, the entire document is essential for them. However, the reading order recommended below will be useful for the team during the development phase. Reading the functional and non-functional requirements first will firmly establish what the developers have to include in the software (Section 3 and 4). Skimming through the assumptions, dependencies, and product functionality will form a good refresher of what the requirements were when the developers were writing the SRS document. Finally, the developers should read the rest of the document.

   - Section 3 (3.1, 3.2, 3.3)
   - Section 4 (4.1, 4.2, 4.3)
   - Section 2 (2.2, 2.4)
   - Section 1 and rest of Section 2

2. Client
   Names: *Kashaf Batool and Hania Rafique*
   The clients are the two co-founders of the start-up who require the web application. After interviewing the clients, their needs and specific requirements have been documented. The clients are essential readers of this document as this document forms a binding contract between them and the development team. The client might propose changes to the requirements in later phases; hence, the client must read this documentation before development starts. Before starting to read the document, the client must read the definitions, acronyms, and abbreviations used to better understand the document. They should then read the product functionality, giving them an overview of the software's features. The client can then read the functional and non-functional requirements in detail to see if their goals align with the documentation correctly.

- Section 1.4
- Section 2.2
- Section 3 (3.1,3.2,3.3)
- Section 4 (4.1,4.2,4.3)

3.   Instructor
     Name: *Dr. Suleman Shahid*
     The instructor, Dr. Suleman Shahid, is teaching software engineering to the development team. He is the project supervisor of Kahanian and will be overlooking the progress and guiding the team through each phase of the project. This document is crucial for him to access the group's progress and provide feedback. The instructor can read the document in any order according to his own preference.

4.   Teaching Assistants
     Name: *Mehreen Masood (Primary) and Minhal Aftab (Secondary)*
     The two teaching assistants will also overlook the project's progress and form a guide to the team. There will be weekly meetings with the primary teaching assistant, and she will be answering the team's queries and confusions. Hence, they are essential readers of the document since they will check the document's correctness, note the group's progress, and provide feedback. The entire document is relevant to the teaching assistants however, it might be useful to read Appendix C and D first to access the group's combined and individual contributions. They can then read the document in the same order as the original structure of the document.
     - Appendix C and D
     - Section 1
     - Section 2
     - Section 3
     - Section 4

1.4 Definitions, Acronyms and Abbreviations

Terms	Definitions
Actor	An Actor models a type of role played by an entity that interacts with the subject (e.g., by exchanging signals and data), but which is external to the subject.
Admin	The person managing the Web-Application.
Backend	The part of the website that contains the database where data is stored. It also refers to the server.
Database	An organized collection of data stored in tables on a computer system
Developer	A coder/programmer that creates computer software.
E-commerce	Commercial transactions conducted electronically on the internet.
External Interface	External interfaces are typically a product's lifeline to the outside world.
Figma	It's a collaborative interface design tool.
Frontend	The frontend of the website is the part of the website that the user interacts with.
GUI	Graphical User Interface - It is a type of user interface that displays objects that convey information and represent actions that can be

	taken by the user. The objects change color, size, or visibility when the user interacts with them
Heuristic	A heuristic is a fast and practical way to solve problems or make decisions.
IP Networking	Communication network that uses Internet Protocol (IP) to send and receive messages between one or more computers
SRS	Software Requirements Specification.
User	The person that will use the Web-Application.
Web Application	A web application is application software that runs on a web server.

1.5 References and Acknowledgments

- https://www.figma.com

2 Overall Description

2.1 Product Perspective

Kahanian is a web-application based on a clothing brand start-up. After it gained a significant following and the number of orders rose to considerable numbers in 2020, the need for automation became apparent. The system will be a self-contained product, not dependent on any previous versions.

The goal of Kahanian is twofold: ease the ordering and browsing experience for the customers and guests and automating the client information handling and managing the details of the clothing collections for the admin users. There are two kinds of actors namely admin and customers.
Customers include the guest users who are not registered on the website.
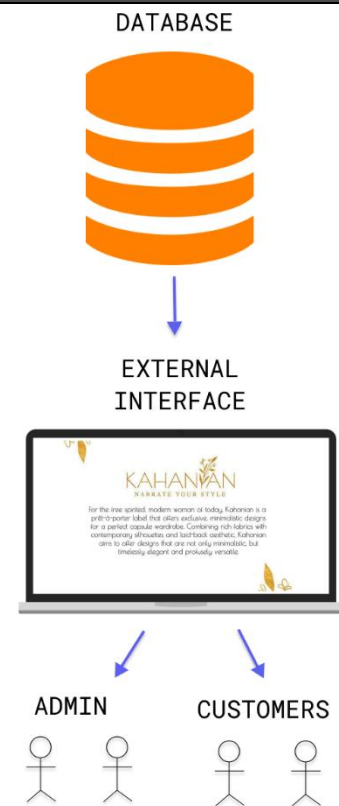
2.2 Product Functionality

Login/Signup:
- The product provides login. On entering details, the admin will be redirected to the admin page while the customer will be redirected to the customer page.
- The system also provides signup. A visitor can make an account by adding personal information on the website.
- An account is not required to use the functionalities of a customer.

User: Administrator
Functions:

- The admin is the super user (our client) and will have a control over the functionality of the product.
- The admin will be able to view customer data, add new collections and remove any out of stock or existing collections.
- The admin will also be able to cater to queries by customers.
- Admin can also add new tags on the homepage (Free shipping, Sale, New Launch coming, Delivery above 2000 is free)
- Different reports such as customer demographic can also be generated by the admin.

User: Customer/Guests
Functions:
- The customer/ guest can browse through collections, view size charts, and ask questions using a query box.
- The customer can add items to the shopping cart and view, edit the shopping cart.
- The customer will have the option to checkout as a guest or sign up if they don't have an account.
- The customer will also be able to track orders, add requests for return and exchange and view any previous orders.
- They can also modify their personal information (such as phone number and shipping address) stored by the client (in case they have an account).
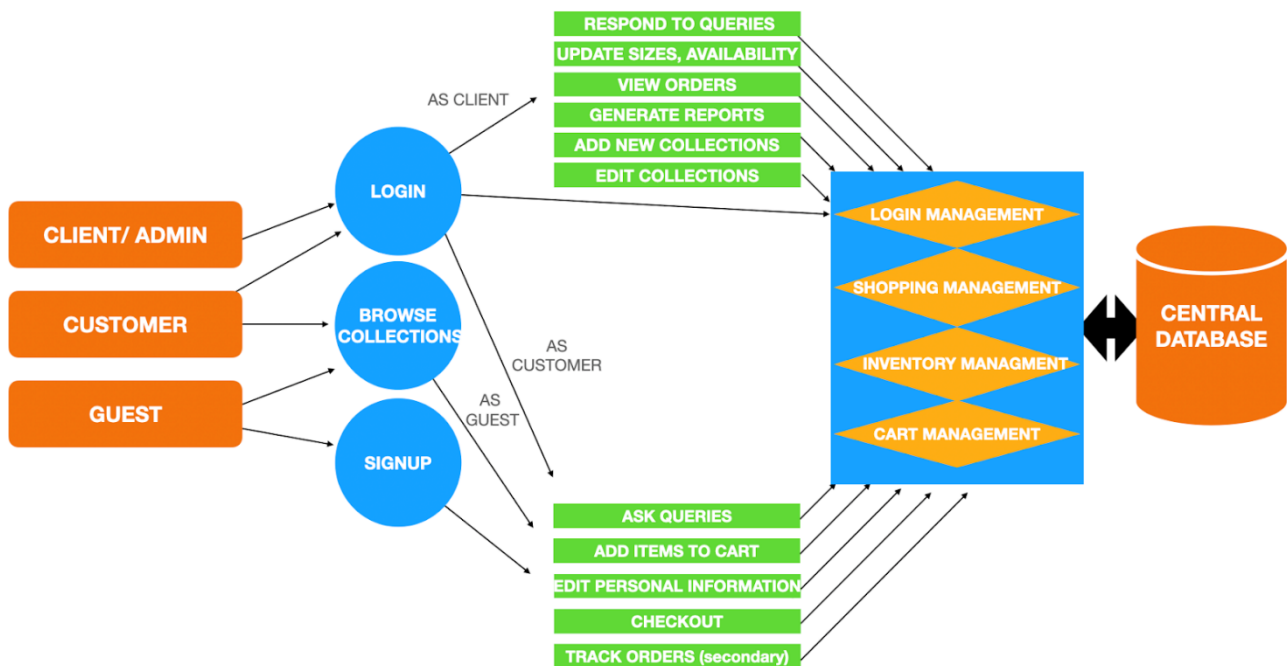
2.3 Users and Characteristics

Primary Users: These users will be the primary users of the website as they will frequent the website most often. The two actors in this group would be:
- *Admin*: The admin will include the owner of the business, who will need to use the website as the main means to conduct their business. The website will provide an automated way of

processing orders for the admin. The usage of the admin will majorly be limited to the admin functionalities, where they will add/update items or collections, view their sales, view customers queries and so on.
- *Customers*: The demographics of the customers would mostly be 16+ aged women, who would use the website to place orders for items they would wish to buy from Kahanian. The usage of the customers will be limited as they would not have access to update or edit any information of the web application. The major functionalities that the customers will avail would be signing up, placing orders, giving reviews.

Secondary Users: These users would be those who would not be likely to use the website, but may find the need to do so occasionally, depending on their needs. Potential actors in this group could include:
- Potential Investors: this user group may visit the website to assess the business as this may help them with their decision in investing in the business.
- Various actors involved in the production process: Designers, Photographers, Models, Makeup artists, etc. These actors may need to assess the company's existing products or merchandise to enhance their own work for the company.

2.4 Assumptions and Dependencies

- The user must have a working internet connection and a browser.
- The user must have basic knowledge of operating a web-application.
- The user must be able to understand English since it is the language being used in our web-application.
- The client will be providing us with the customer data and required information for the database. Apart from the usage of data, no existing customer software will be incorporated in the project; however, we might need to take a look at client's Excel sheets containing Kahanian's customer information.
- Due to time constraints during the semester, our team may not be able to fully develop all the features mentioned in user requirements. That is why we have classified some low priority user requirements into the secondary user requirements category, and they may not be developed during the period of this project.
- The team has available resources in terms of the content to be included in the system: this includes the brand logo, design and photographed images of the released collections, and sales history.

3 Specific Requirements

3.1 Functional Requirements

3.1.1 Inventory Management

RQ 1.	Add Collection
Description	System will allow the Actor to add a new clothing collection on the website.
Input	Click on the "Add Collection" button in the admin dashboard.
Processing	Clicking on the "Add Collection" button will cause the admin to add a new collection with a description on the website.

Output	A new collection will be made, and the users will be able to see its tab on the home page or the view collections tab.

RQ 2.	Add Product.
Description	System will allow the Admin to add new clothing products under a specific clothing collection.
Input	Click on the "Add Product" button in the admin dashboard.
Processing	Clicking on the "Add Product" button will cause the admin to add new products by entering their description, quantity, sizes available, price and pictures.
Output	A new product is added to a specific collection. The users will be able to see that product under its collection tab.

RQ 3.	Update Product Information
Description	The system will allow the admin to update the information of any article in any of the collections. This information includes the price, description, chart size, quantity per size and the images of that article.
Input	Click on "Update Product Information" on the admin dashboard.
Processing	This will prompt the admin user to select and change/edit either of the 5 things: price, description, quantity per size, chart size or the images of the article. The user will select according to their preference and proceed to make the changes.
Output	The information will be updated on reload and these changes will be visible to the admin and the customers/guest viewing the website.

RQ 4.	Delete Product.
Description	System will allow the Admin to delete clothing products under a specific clothing collection.
Input	Click on the "Delete Product" button in the admin dashboard.
Processing	Clicking on the "Delete Product" button will cause the admin to delete a specific product, which they selected, from the website.
Output	That product will be deleted from the website and the users will not be able to see it anymore.

RQ 5.	Add/Edit Discounts
Description	The admin will be able to add or edit percentage discounts on different items/collections.
Input	The admin will select the option to edit the information regarding an item or collection, and from there be able to add/edit the discount.
Processing	The backend will update the discount stored on the item, and the item information visible on the webpage will get updates accordingly
Output	The information visible regarding an item/collection on the website will show the percentage discount available. In the case of items, the discount price will also be visible along with the original price. In the case when the discount is 0%, no discount option will show on the page

3.1.2 Online Purchase

RQ 6.	Filter product search - Customer

Description	The system will allow the user to browse through collections by adding filters. These filters may include sorting articles from highest to lowest prices, lowest to higher prices, featured items and so on.
Input	• A user will be able to click on a tab. • The tab will have several options for filters. • The user will click on the desired filters.
Processing	Clicking on the filters will reload the page.
Output	The reloaded page will feature items according to the filters applied by the user. For example, the collection will be featured from cheapest to most expensive items if the user applies the filter to sort from lowest to highest prices.

RQ 7.	Add to cart
Description	The system will have a virtual shopping cart on the website where customers will be able to add all the items they wish to buy
Input	Along each article shown, an "Add to cart button will be shown". User will have to select options such as size and quantity and then press this button
Processing	System will add this specific item in the customer's cart
Output	Users will be shown the updated cart status after they add something new to it.

RQ 8.	View Cart
Description	The system will allow the user who is currently logged in to view all the items currently present in his/her cart.
Input	Click the "View my cart" option
Processing	System will take the user to the page where all currently present items from the cart are fetched and shown
Output	A complete cart status including all the items and their quantities will be shown along with the current total bill without shipping charges

RQ 9.	Delete from Cart
Description	The system allows the user to remove items from the cart while shopping
Input	By clicking the "View my cart button" user will get the whole view of items present currently in the cart and along each item there will be a button given to "Remove this item"
Processing	Once clicked, system will show a pop-up box to confirm the deletion and will update the cart items
Output	User will be shown the updated cart status and new total bill

RQ 10.	Delivery charges according to city
Description	The system will calculate the shipping rate according to the customer's location.
Input	While placing an order, the customer will be asked the shipment address and the city. The user selects the appropriate city from a slide down bar consisting of the cities of Pakistan.
Processing	Once the customer selects the city, the shipping rates will be calculated according to the city.
Output	At checkout, the customer will be able view the delivery charges according to their location.

RQ 11.	Enter Voucher Code
Description	The system will allow the customers to avail the discount on their next purchase given that they have fulfilled a given criteria beforehand.
Input	The user will enter the 'Voucher Code' on checkout that they have received previously by email.
Processing	The discount will be applied to the final payment when the customer is about to checkout.
Output	The payment voucher with the applied discount will be displayed to the customer.

RQ 12.	Checkout from Shopping Cart.
Description	System will allow the customers to checkout from the shopping cart and purchase product(s).
Input	Click on the checkout button.
Processing	Clicking on the checkout button will trigger the backend to add the purchase details in the orders tab. The User will be shown a confirmation message.
Output	The user has purchased the product. On the website the number of those specific product(s) will decrease accordingly.

3.1.3 Accounts Management

RQ 13.	Signup
Description	The system will let a new customer to make his/ her account on the website
Input	User will be asked to enter name, email address, contact number, address, password etc.
Processing	All the data entered will be verified to make sure it's in the correct format
Output	System will show the login screen once the signup process is completed

RQ 14.	Login
Description	The system will allow the user to access their account
Input	User will enter his/her credentials i.e., username and password
Processing	The system will match the credentials given with existing accounts in the database
Output	If the credentials given are present in the database, user will be allowed access to his/her account. If the username is correct and password isn't, incorrect password message will be shown. If no such username exists in the database, user will be given option to Signup and then Login.

RQ 15.	Update Personal Information
Description	The system will allow the user to edit his/her personal information such as email address, contact number, address etc. if he/she is already logged in
Input	User will select the option to edit the personal information available on the My Profile page
Processing	The system will process the requirement underlying the option selected by the admin and will take the admin to an editable version of the webpage. Once the admin chooses to save the changes, once again the system will validate all the changes, and update the personal information of the user

Output	After submitting the changes, the Personal information shown on My Profile page will be updated.

RQ 16.	**Email Subscription**
Description	The system will give the customer the choice to subscribe to emails by the client. These emails will include any promo codes or coupons for the customers.
Input	The guest/customer can agree to an email subscription.
Processing	Upon agreeing to the subscription, the customer's/user's email will be added to the database in a table conformed to users who have agreed to email subscription.
Output	The customers that have subscribed, their emails will be visible to the admin. The admin can then decide which users to email the promotions and coupons.

3.1.4 Data Analysis

RQ 17.	**View Orders**
Description	The system will allow the admin to view the orders: these should be viewable by week and collections.
Input	The admin will click the 'View Orders' option in the admin dashboard.
Processing	The admin user will now be prompted to select filter settings to view the orders by collection, weeks or view all.
Output	According to the settings chosen by the admin, the order details will be displayed to the user.

RQ 18.	**Filter Order Details**
Description	The system will allow the admin to filter out order details for a specific date or a customer
Input	While viewing orders, there will be multiple filters that the admin can apply. These filters may include viewing orders for a specific customer, collection or viewing orders between specific dates.
Processing	According to the filters the data will be retrieved from the database.
Output	Once the page is reloaded, the admin will be able to see the desired filters for orders.

RQ 19.	**Export orders as excel file**
Description	The system will try to automate order processing for the client as one of the biggest issues for the client was having to manually add data to an excel file for orders and sizes.
Input	The customer places an order.
Processing	The order is added to the database.
Output	On the admin side, the list of all the orders is generated. The admin will have the ability to export this data as an excel file.

RQ 20.	**Generate Sales Reports**
Description	The Admin will be able to generate reports that will help them visualise and analyse their data by providing specific and relevant information
Input	The Admin will select the option to generate report, and will select relevant filters to filter out the information present in the report

Processing	The backend will filter out data as per as the filters selected by the admin and send only relevant data. The provided data will then be formatted into the report as per a given template for reports.
Output	The admin will be able to see the report

3.1.5 Customer Support

RQ 21.	**Sending a Message/Query.**
Description	System will allow the Actors to ask queries.
Input	Click on the "Ask Us" pop up on the website.
Processing	Clicking on the "Ask Us" button will open up a form in which the users will enter their query and personal information (name – email) and will toggle the "Ask Query" button.
Output	The query will be saved in the database and the admin will be able to see the query under the "View User Queries" option.

RQ 22.	**View FAQs**
Description	The system will allow the customers/guest to view commonly asked FAQs which have been answered previously by the admin.
Input	The user will click the "View FAQs" option on the homepage.
Processing	A new page will be reloaded which will be displaying the frequently asked questions and their answers. The user will be scrolling down to view them all.
Output	FAQs and their answers appear on another page.

RQ 23.	**View Contacts Page**
Description	The customer will be to collect relevant information from the page to contact the business owners.
Input	User will select the Contacts Page Tab from the homepage.
Processing	The system will follow the hyperlink attached to the button and lead the user to a new page which will contain the relevant information.
Output	The Contacts Page will be visible to the user.

RQ 24.	**View Terms and Conditions**
Description	The customer will be to collect relevant information from the page to understand the policies of the business attached with buying products.
Input	User will select the Terms and Conditions button from the homepage.
Processing	The system will follow the hyperlink attached to the button and lead the user to a new page which will contain the relevant information.
Output	The Terms and Conditions page will be visible to the user.

RQ 25.	**Give Ratings/Reviews**
Description	Customers will have the option to give a rating out of 5 stars as well as a review on different items.
Input	Select a number of stars for the ratings, add an optional review alongside and select the submit button.

Processing	Once submitted, the backend will be triggered into updating the reviews and ratings stored in the database, as well as into computing the new average rating for the item.
Output	The average item of the item will be updated, and the submitted rating and review will be viewable in the review's column.

3.1.6 Web Portal Management

RQ 26.	View Queries
Description	The system will allow the admin to view all the queries asked in the query box.
Input	The admin will click on "View Queries" on the admin dashboard.
Processing	The same page will be updated where all the queries will be visible along with the customers' name and emails inputted by them.
Output	All the queries asked by the customers will be viewable.

RQ 27.	Update/Edit FAQs
Description	The system will allow the admin to update/edit the FAQs and their answers which appear on the "View FAQs" page of the website. The admin will be able to add new FAQs, delete previous ones or modify the existing ones.
Input	The admin will click on the 'Edit FAQs' option on the admin dashboard.
Processing	The admin will then be prompted to a page where he/she will have the option of add, edit or delete FAQs.
Output	The modified FAQs page will be viewable to the admin and other users of the website.

RQ 28.	Update Contacts Page
Description	The admin will be able to edit the information displayed on the Contacts Page
Input	Admin will select the option to edit the information available on the page. (Underlying assumption: admin is logged into their account)
Processing	The system will process the requirement underlying the option selected by the admin and will take the admin to an editable version of the webpage. Once the admin chooses to save the changes, once again the system will process the change, and update the data stored regarding the webpage.
Output	After submitting the changes, the information of the Contacts Page will appear updated.

RQ 29.	Update Terms and Conditions
Description	The admin will be able to edit the terms and conditions displayed on the relevant webpage
Input	Admin will select the option to edit the information available on the Terms and Conditions page. (Underlying assumption: admin is logged into their account)
Processing	The system will process the requirement underlying the option selected by the admin and will take the admin to an editable version of the webpage. Once the admin chooses to save the changes, once again the system will process the change, and update the data stored regarding the webpage.
Output	After submitting the changes, the terms and conditions appearing on the webpage will appear updated.

RQ 30.	Add Voucher Code

Description	System will allow the admin to add a valid voucher/coupon code for discount purposes.
Input	Click on the "Add Voucher" button and type in the correct voucher code.
Processing	Clicking on the "Save Voucher code" button will cause the system to save the voucher code in the database.
Output	A confirmation message will be shown on the screen.

RQ 31.	View Voucher Code History
Description	System will allow the admin to view the voucher codes that were previously added by the admin.
Input	Click on the "Use Voucher" button, before checking out, by typing in the correct voucher code.
Processing	Clicking on the "View Vouchers" button will cause the system to fetch the voucher code history.
Output	A list of all the voucher codes added by the admin will be shown.

RQ 32.	Filter Voucher Codes
Description	System will allow the admin to filter voucher codes.
Input	Click on the "filter" tab while viewing the voucher code history and select one of the filters. The filters may include availed, to be availed and by date and so on.
Processing	Clicking on one of the filters will cause the system to fetch voucher codes with respect to that filter.
Output	A list of voucher codes will be visible according to the filter applied by the Admin.

3.1.7 Secondary Use Cases

RQ 33.	Online Payment
Description	System will allow the customers to purchase one or more products by paying online.
Input	Click on the "Pay through Card" button. Add your card details and toggle the "Pay and checkout" Button.
Processing	Clicking on the "Pay and Checkout" button will link user information to the bank followed by money being credited from their account and a confirmation message being shown on the screen.
Output	The user has paid for the products they purchased.

RQ 34.	View Related Products
Description	The user will be able to see the tab of 'view related articles' if they search for a particular article. For example, when searching through the DENZ collection, more articles from this collection will be visible through this option.
Input	The user clicks "View Related Articles" to view more articles from a particular collection that they are browsing.
Processing	The same page will be updated with related articles showing at the bottom, the images of the articles will be clickable, and the user can click on any of them to explore them further.
Output	Related articles from that collection will appear at the bottom of the page for further browsing.

RQ 35.	Order Tracking
Description	The system will allow the customer to track the status of their order.
Input	- The customer is logged in to their account. - The customer has an order placed. - Each order will have a specific tracking number. - The customer clicks on track my order option.
Processing	Upon clicking the track my order option, the customer will be redirected to the website for tracking orders.
Output	On this website, the customer can add their tracking order number to view the status of their order.

RQ 36.	Data Analysis
Description	System will allow the admin to view analytical statistics.
Input	Click on the "View Data Analysis" tab from the admin dashboard.
Processing	Clicking on the "View Data Analysis" tab will cause the system to fetch statistics according to the data available at the backend.
Output	Multiple graphs showing data statistics will be fetched and shown to the admin.

3.2 External Interface Requirements

3.2.1 User Interfaces

Kahanian will have a graphical user interface and since it is a web-based application, it will be fully available to use on any device provided it has an internet connection and a browser. The interface will be simple to use and will be totally in English language. The 3 main webpages will be the

1. Home Page
2. Admin Home Page
3. Customer Home Page (after login)

All the webpages will be consistent and will have a proper user dashboard consisting of tabs, and other icons to make the website simple for all types of users. Majority of the webpages will have high-definition pictures of the products available at the website. A pop-up note along with a picture will also be added to the home pages to alert the users about trending news and products. For the admin side, different graphs will also be added in the data analysis tab. To further make the user interface attractive and user-friendly, we will be designing the UI in such a way that the best UI design elements for a clothing store are present such as, call to action (CTA) buttons, user friendly navigation, smooth checkout and a well positioned search bar.

3.2.2 Hardware Interfaces

Since Kahanian is a web-based application, it will be available to use on any laptop, computer, tablet, and phone provided it has a browser and a working internet connection. The web-app will be hosted on a server, and the availability will depend on the server as-well.

3.2.3 Software Interfaces

Kahanian will be compatible with Windows, Linux and MacOS. The front-end will be built on ReactJS, and the database will be firebase. We will not be using a backend since we are using firebase. The front-end of the web application will be communicating with the database of the application to fetch and store details whenever a user performs an operation. However, after each operation or update of the database, the user shall see the updated information.

3.3 Use Case View

3.3.1   Use Case Table

Primary Actor		Associated Use cases
Both Admin and Customer	1	Login
	2	Update Personal Information
Customer	1	Add to Cart
	2	View Cart
	3	Delete from Cart
	4	Filter Product Search
	5	Enter Voucher Code
	6	Checkout
	7	Signup
	8	Email Subscription
	9	Send a Query
	10	View FAQS
	11	View Contacts Page
	12	View Terms and Conditions
	13	Give Ratings/Reviews
	14	Online Payment
	15	View Related Products
	16	Order Tracking
Admin	1	Delivery Charges Calculations
	2	View Orders
	3	Filter Order Details
	4	Export Orders as Excel File
	5	Generate Sales Report
	6	View Queries
	7	Update FAQS
	8	Update Contacts Page
	9	Update Terms and Conditions
	10	Add Voucher Code into system
	11	View Voucher Code History
	12	Filter Voucher Codes
	13	Data Analysis

3.3.2 Use Case Diagram

3.3.3 Use Case Description

Use Case ID	1
Use Case Name	Update Product Information
Actors	Admin
Description	The admin will be able to update the information of any article in any of the collections. This information includes the price, description, quantity per size, images of the article and chart size details. Although the quantities of the article will be automatically updated as soon as checkout from the shopping cart is done, this manual option is included for the ease of admin in case there are additional orders being made through Instagram. Hence, the website will allow those changes to be reflected to the users.
Pre-conditions	1. Admin is logged into the Kahanian website.

	2. Admin has clicked the option of "Update Product Information" on the admin dashboard.
Normal Flow	1. The admin will log in.
	2. The admin will click the 'Update Product Information' option.
	3. The admin will be prompted to select which of the 5 options she wants to update:
	Price
	Description
	Quantity per size
	Chart Size
	Images
	4. The admin will confirm the changes and these editions will now be visible to the admin and other users of the website.
Post-conditions	1. The changes made will be visible to both the admin and the customer side.
Alternative Flows	None
Exceptions	None
Priority	High

Use Case ID	2
Use Case Name	Add Product
Actors	Admin
Description	The Actor will be able to add products to any of the collections that are already present. For each product, its pictures, description, quantity according to sizes and price will be added.
Pre-conditions	The Actor wants to add a new product to one of the collections.
Normal Flow	1. The Actor clicks on the "Add product" button.
	2. The Actor fills in the required details for a specific product.
	3. The Actor presses the "Add" button.
Post-conditions	The product shall be added to a specific collection.
Alternate Flow	None
Exceptions	None
Priority	High

Use Case ID	3
Use Case Name	Checkout
Actors	Customer
Description	The Actor will be able to purchase products by checking out from the shopping cart.
Pre-conditions	The actors are purchasing a product and have added at least one product in the shopping cart.
Normal Flow	1. The Actors have added the product(s) in the shopping cart.
	2. The Actors will in the required details which are necessary to checkout.
	3. The Actors click on the "checkout" button.

Post- conditions	The product(s) shall be purchased by the Actor.
Alternate Flow	In case, a product within the actors shopping cart goes out of stock, then at checking out the actor will get an error message and the purchase will fail.
Exceptions	None
Priority	High

Use Case ID	4
Use Case Name	Add to Cart
Actors	Customer
Description	A customer who visits the website can add products he/she wants to
Pre-conditions	User has selected some valid product i.e., the product is in stock

Normal Flow	Add to cart
	    1. User visits the website
	    2. After choosing the product, user selects size and quantity of the product they want to add.
	    3. "Add to cart button" is clicked to confirm
	    4. The product is added into the cart and system shows the current cart status
	    5. Total bill of current items is shown beneath the cart items

Post-conditions	Item(s) have been added to the user's cart and current total bill is shown
Alternate Flow	None.

Exceptions	Size/Quantity not selected
	    1. User clicks the add to cart button but forgets to select the size/ quantity of the product they want to add
	    2. System shows an error message "Please select some product options before adding this product to your cart"
	    3. User can then select the options and try again

Priority	High

Use Case ID	5
Use Case Name	View Orders
Actors	Admin
Description	The admin will be able view all the orders placed by the customers. These orders may include shipped orders, orders that are being processed and orders that have been cancelled.
Pre-conditions	1. Admin is logged into the Kahanian website. 2. Admin has clicked the option of "View orders" on the admin dashboard.

Normal Flow	1. The admin will log in.
	2. The admin will click the 'View orders' option.
	3. The admin will be prompted to select which filters the admin wants to apply, these filters may include:
	    Sort by collection
	    Shipped orders

	Orders that are being processed
	Cancelled orders
	Orders on a specific day
	Orders placed by a specific customer
	4. The admin will add the desired filter and the orders will be placed according to that filter.
Post-conditions	1. The Admin will have a list of orders filtered either by their shipping status or by the order dates.
Alternative Flows	None
Exceptions	None
Priority	High

4 Other Non-functional Requirements

4.1 Performance Requirements

1. The response time to load a specific page should be kept minimal. The general advice on response time from Jakon Nielsen book on Usability is that 10 seconds is the limit to keeping a user's attention, any response time larger than that will result in the user preferring to perform other tasks. Our goal will be to keep the response time well within that limit.
2. The response time should not have too much variation. Different pages should load within the average response time so that the user does not lose interest which is very important for an online shopping platform.
3. The system should be able to cater to large traffic. This is because at the launch of new collections, the website will have a large incoming traffic so the system should not crash during this peak time.
4. In case the system does crash, the service downtime should not be more than a few hours.
5. The system should be easy to use. The usability can be assessed by how easily a user can accomplish a specific task. In a customer's case, the task is how easily the customer can checkout.
6. The system should work on different browsers (safari, Firefox, Chrome).
7. The system should be reliable. Since the client will have large amounts of data stored in the database, the database should be able to roll back in case of an update failure.
8. Any changes made by the admin, such as adding a new collection and removing old articles, should be visible to the customer as soon as the changes are made.

4.2 Safety and Security Requirements

1. A strong password policy should be implemented at the Signup page.
2. Accounts and information must be protected and secured, should not be hackable through the website.
3. All locally stored data must be encrypted and should not be allowed to be accessed by any other application.
4. IP Networking will be used with Https URL Connection to maintain secure connection for sensitive user data.
5. SSL will be used on login and online payment pages so that this encrypted data will be meaningless to any third party trying to intercept.
6. Database backup will be performed once a week.

7. Users will be informed that cookies are being used for their shopping cart and what kind of information is sent through the forms.

4.3 Software Quality Attributes

4.3.1 Reliability
The system developed will be reliable as it will be developed according to the specified performance requirements. In case the system (website) goes down, the user's shopping cart state will not be maintained, and a notice will appear on the website homepage displaying the error message.

4.3.2 Acceptability
The system should be acceptable not only to the customers but also the two clients. To ensure this, the user interface will be designed in a user-friendly manner and design heuristics will be followed. The team has been and will continue to be in close communication with the clients to ensure that the system is acceptable to them.

4.3.3 Availability
The system should be available at all times of the day and night such that customers can avail all the functionality given by the system at any time of the day (as mentioned by the client, Kashaf Batool in the interview). In case of any errors on the server side, the website will display an error message on the homepage, so the users are fully aware.

4.3.4 Maintainability
Once the system has been developed and tested, the system will become the property of the clients. The system will be designed and developed in such a way, that any minor errors and bugs are fixable. New and extended functionality and features can be added after deployment. As the start-up will grow, changes will need to be made to the system. This is an important quality attribute as it was mentioned by the clients in the interview as well.

4.3.5 Usability
Apart from the user-friendly interface, the users will have the additional option of asking for help/submit any queries through the chat window feature on the website. As per the client's guidelines, the customers will submit their email addresses and queries in the chat and they will be answered directly through email. Moreover, users can navigate through the FAQs for further clarifications.

4.3.6 Testability
The system will allow parallel testing of use cases to take place with the development phase. Minor bug and error fixes will then take place accordingly such that all corner cases are covered extensively.

Appendix A – Top 10 User Stories

Note: The given User Stories have been associated with the given categories in the Functional Requirements, and thus have been presented as such. They have also been solely focused on the primary users.

Data Analysis

1. As the manager, I would like automatically generated sales reports to enhance my time efficiency and decision making.

Online Purchase

2. As the customer, I would like multiple options for payment so that I can choose the one that suits me the best.
3. As the customer, I would like a website easy to browse to ensure a smooth experience while shopping online.
4. As the manager, I would like an easy and efficient process of placement of orders to increase sales.

Customer Support

5. As a customer, I would like a good feedback process to make the process of placing orders through the webpage easy and time efficient.

Accounts Management

6. As the customer, I would like my shipping details to be automatically filled so that I don't have to fill them every time I place an order.

Inventory Management

7. As the manager, I would like to ensure all required information regarding items/collections is readily available to the customers to enhance our sales.
8. As the manager, I would like an automated system for inventory management to cease the need for manual work.
9. As the customer, I would like to immediately know which items/collections are available, so I don't have to send inquiries and wait for replies.

Web Portal Management

10. As the manager, I would like company policies to be readily available to the customers to avoid mishaps.

Appendix B – Architectural Spike (One Story)

< NOT DONE >

Appendix C - Group Log

Group meeting 01:
Date: 01/02/2021
Time: 6:30 - 7:00 PM
Discussion: Go over the SRS template. All group members to list down use cases till the next day and finalize in another meeting.

Group meeting 02:
Date: 02/02/2021
Time: 11:00 PM - 12:00 AM
Discussion: How to go about user research? Survey? Interview with Client?

Meeting with Clients:
Date: 04/02/201
Time: 11:00 PM - 12:20 AM
Minutes of meeting:

- Model Size and Chart Size and description to be given with each article.
- Out of Stock (Sold out, Cross on articles) information is a must.
- Options will have about, sale, home on the website.
- Collections Wise show the content instead of "Fall, Winter, Spring".
- Related Articles show, if possible.
- Track your order (Shipping & Handling)
- Automated Data Entry and Customer Analysis
- Speed - hover on the article, should maximize and stay still.
- Add disclaimer.
- Filters and Search, if possible.
- Calculation of delivery charges city-wise when billing
- Cookies (Shopping Cart)
- Sapphire website (easy to use)
- Zara Shah Jehan, Image, Generation->use as a reference as suggested by clients.
- All essential information to appear on the homepage.
- Problems: Customers ask for the price and size chart repeatedly. Limitations of Instagram.
- Add a new Collection (should come on top when it's updated)
- Update charges
- Tags (Free shipping, Sale, New Launch coming, Delivery above 2000 is free)
- Pop-up similar to Generation website
- Per Item Review or General overall experience.
- Incorporate with Query Box for Complaints
- Aesthetic - Design meeting later
- Tabular Form - client information + filter options
- Update Product Information (Stock, Images, etc)

Group meeting 03:
Date: 05/01/2021
Time: 12:20 PM - 12:40 PM

Discussion: Go over section 1 and 2 of the SRS document and delegate work to group members. These sections will be completed before the meeting with primary TA.

Meeting with TA:
Date: 06/02/2021
Time: 5:15 PM - 5:44 PM
Minutes of meeting:
- Group introductions
- Overview of the proposal
- Discussion on Stack (Advantages of using React)
- Firebase vs MongoDB/NodeJS
- Online Payment will have security issues. Check Stripe.js for this. Or externally link. Do other use cases first, come to this later.
- React has a Cookies library so shopping carts can be easily implemented. The state of the cart should be maintained when page reloads. If logged out, then the same session should be maintained. React has local storage and session storage.
- E-commerce: Admin and Client side should be fully integrated (Important Point)
- Maintenance of the cart is very important as well.
- Loyalty Points can also be implemented.
- User Stories - Mehreen will send the link. There are 3 parts to it: User Role, Need and Result of the functionality.
- Epic - break down an epic into user stories.

Meeting attended by Ahmed Ateeq, Umme Ammara, Mominah Anwar and Maryam Saadat.

Group meeting 04:
Date: 07/02/2021
Time: 12:30 PM - 1:05 PM
Discussion: Finalise the list of use cases, divide into primary and secondary. Delegate 6-7 each to the five group members.

Group meeting 05:
Date: 10/02/2021
Time: 9:30 PM - 11:00 PM
Discussion: Discuss the final division of use cases as secondary and primary. Delegate the remaining work to group members.

Group meeting 06:
Date: 14/02/2021
Time: 11:00 AM - 11:30 AM
Discussion: Categories of use cases finalized, final review and work delegated to complete any left-over work.

Meeting with TA:
Date: 14/02/2020
Time: 6:15 PM - 6:40 PM
Discussion: Progress report (work done and work left), use case diagram improvement, discussion on product perspective diagram. Queries regarding use case template answered.

Appendix D – Contribution Statement

Name	Contributions in this phase	Approx. Number of hours	Remarks
Umme Ammara	1.3 Intended audience and document overview 2.1 Product Perspective & Diagram (made on Figma) 3.1 Seven Use Cases 3.3.3 Use Case 5 4.3 Software Quality Attributes Appendix C - Group Log	10	A major learning point was the importance of keeping the clients in the loop and align the use cases according to the client's requirements.
Ahmed Ateeq	1.1 Document Purpose 1.2 Product Scope 3.1 Ten Use Cases 3.2External Interface Requirements 3.3 Use case view (2, 3)	15	A major learning point was the role people management plays when working in a group project
Maryam Saadat	2.2 Product functionality 3.1 Six use cases 7.1 Performance requirements Data flow diagram Use case diagram	9	
Hania Rafique	3.1 Six Use Cases 4.2 Safety and Security Requirements 3.3.3 Use case 4 1.4 5 terms	9	
Mominah Anwar	2.3 Users and Characteristics 3.1 Seven Use Cases 3.1 Categorisation of Use Cases Appendix A - User Stories Formatting of Final Document	13	