CmpE 451
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Final Milestone
Report

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1 Final Project Assessment:

As group 8, we can easily say that the project was quite challenging in many aspects compared to the previous years. The coverage of the project was unexpectedly large, as we built an e-commerce website and app from scratch just in 3-4 months, without even meeting each other face-to-face. We also went through unfortunate events happened to our team members. It is undoubtedly a roller coaster season for all of us involved.

Many of us did not have that much experience in the fields we were going to work on, so we needed to learn - and we did - and practice what we learned in a short time. Both our learning curve and developing curve grew kind of exponentially as we got experienced in our fields and also got familiar with the project itself. Even though the limited time got, our team thrived the obstacles of such limits. It is safe to say that now we are all somehow experienced developers regarding our divisions individually and project managers(or partners) collectively.

When it comes to the project, we successfully built the e-commerce website and app that talks to the server regarding our customer's needs. The app is working just fine, considering it is done in a couple of months by students with somehow busy schedule. It might be arrogant to say that it is perfect, however in a real-life(real-job may be a better phrase) scenario, it could come close with more tweaks as the ground implementation and infrastructure of the app is operating nicely. We also diverged from our vision of some structure of our database according to our customer's will, so we can say we were adaptive in that way.
Users can login, sign up, buy and sell products as they like in our app, which is the core for any e-commerce product. Besides the payment system, users can act like in a real e-commerce app; search, filter, rate, comment, like, watch and message which constitute almost all of our requirements.

Before concluding our final assessment, we can state that our biggest challenge was time, as probably always will be. We grew as functioning team members, developers and project managers as our final milestone comes to an end. Even though the process was somewhat tiresome, we will be looking back and cherish to see what we gained as experience as a team and as individuals.

2 Status of the deliverable:

The status of deliverables for the front-end team as follows:

Deliverable	Status
Home page	DONE
Login and Sign-up	DONE
Google Login and Sign-up	DONE
Product	DONE
Search	DONE
Profile	DONE
Activity Stream	DONE
List	DONE
Watchlist	DONE
Notification	DONE
Customer Shopping Cart	DONE
Guest Shopping Cart	DONE
Order Page	DONE
Vendor Panel	DONE
Vendor Public Page	DONE
Customer Purchase	DONE
Guest Purchase	DONE
Comment and Rate	DONE
Messaging	DONE
Admin Panel	DONE
Terms and Conditions	DONE
AWS Deployment	DONE
Dockerize	DONE
Testing	DONE

Table 1: Status of Deliverable for Front-end

After the Final Milestone, the front-end team did not implement a new feature but some bugfixes.

- Fixed categories not showing at add new main product form:
  When a vendor added a new product, there was a text field, and the vendor entered the category name of the product. Since there is no specification for the category name, users could enter various names for the same category. To fix category names for all users, we converted this text field to the category list. Now the vendor chooses the category name from this list.

- Fix the no amount change in the guest's cart:

The guest users can add a product to their cart and change their amount as they wish. But we noticed that the amount changes in the guest card are not reflected in the price sidebar. We changed the price sidebar according to the amount and the price of the products.

- Make product tags deletable:
  In our system, vendors can add tags when they create a new product. This new product can be 'main' or 'normal.' They can either add tags or delete them. However, tags were not deleted because we forgot one line of code that sets the updated tags. We wrote the necessary function and made tags removable.

- Remove static categories:
  We had static category names in the header. We removed these static data and started to get category names from the backend. Also, we can search for the category by clicking the name of the category in the header.

- Improve the UI/UX of the activity streams page in the admin panel:
  This is not a bug fix but a design improvement. We have an activity stream page in the admin panel in which the admin can display all of them. Now, it looks nicer than before.

- Remove static estimated delivery date:
  As Meriç noticed in the Milestone presentation, we displayed the estimated delivery date of a product as static info on the product page. We removed that line because we do not calculate such information.

- Delete a wrong-written error message:
  There was an error message in the Vendor Account, which says that "Something went wrong...." When a vendor logged into the system, it displayed this error, although there was nothing wrong. We fixed this error by removing it.

- Fixed alert message shown before confirm deletion:
  When a vendor wanted to delete a product, the system asks the confirmation. However, before the approval, it was giving an alert message stating that the deletion was successful. We fixed that problem. Now, the alert message is showing after the approval.

- Fixed product form showing tags of other products:
  The vendor adds tags while adding products to the system. While adding a child product, you can see the tags coming from the main. Before we fixed it, it was showing not only the tags of the respective main product but also others. We changed it as in the expected scenario.

- Fixed product title overlapping other information:
  The product titles in our system were so big. So if the title was so long, it overlapped with other information. We changed the font size according to other components on the page.

The status of deliverables for the backend team as follows:

Deliverable	Status
Home page	DONE
Login and Sign-up	DONE
Google Login and Sign-up	DONE
Product	DONE
Search	DONE
Profile	DONE
Activity Stream	DONE
List	DONE
Watchlist	DONE
Notification	DONE
Customer Shopping Cart	DONE
Guest Shopping Cart	DONE
Order Page	DONE
Vendor Panel	DONE
Vendor Public Page	DONE
Customer Purchase	DONE
Guest Purchase	DONE
Comment and Rate	DONE
Messaging	DONE
Admin Panel	DONE
Terms and Conditions	DONE
AWS Deployment	DONE
Dockerize	DONE
Testing	DONE

Table 2: Status of Deliverable for Back-end

After the Final Milestone, the back-end team improved some features, did some bug fixed, improved documentation and implemented unit tests.

- Improve recommendation:
  We started using Datamuse api to improve recommendation system for both product page and customer product recommendation.

- Writing tests:
  We wrote unit tests for the endpoints we implemented. However, They are still not complete.

Deliverable	Status
Home page	DONE
Login and Sign-up	DONE
Google Login and Sign-up	DONE
Product	DONE
Search	DONE
Profile	DONE
List/Watchlist	HALF-DONE
Notification	NOT DONE
Customer Shopping Cart	DONE
Guest Features	NOT DONE
Order Page	NOT DONE
Vendor Panel	DONE
Vendor Public Page	DONE
Customer Purchase	DONE
Comment and Rate	DONE
Ticket System	DONE
Terms and Conditions	DONE

Table 3: Status of Deliverable for Mobile

3 Summary of the Coding Work Done:

Name	Coding Work Done
İbrahim Özgürcan Öztaş	There are several jobs that I've changed the implementation interval from Milestone 2 to Final Milestone. Activity Streams, Ticketing System and Messaging System are the features that I've implemented in the final milestone interval. In Activity Streams, I've reported every authorized event that all clients produced by requesting an endpoint. I've used W3C 3.2 definition in the W3C and stored activities in our database. For Ticketing System, I've developed a system where admins and the clients can communicate each other. There's a pool of unassigned tickets in our admin system and any admin can assign a ticket to themselves. Messaging Systems is the feature where a customer and a vendor can talk over an active order, which is a communication channel where any misinformation can be cleared.
Afra Arslan	There were jobs left after the Milestone-2 presentation. First of all, I tried to finish those remaining things. List and Cart features are some of them. They were already implemented but not tested. I tested and completed these features. Then, I noticed some small bugs. I fixed these bugs and cleaned our code by deleting unused functions, components, and unnecessary console logs. Until the backend team implemented the endpoints of new features, I designed pages such as the Order and Order details page. When endpoints were ready, I made the rest of the Order pages. At some point, the Cart endpoint changed, so I rewrote them. We needed the vendor's public page for all users to view. I implemented this page. Finally, I added a button onto the product page to add the product to the watchlist. After the final milestone, I did not implement a new feature but fix some bugs we noticed.

Name	Coding Work Done
Yasin Kaya	First of all, I started to this milestone with solving a few bugs that I noticed. They were both about searching for the products. Then, I've implemented the ticketing system between admins and customers (including vendors). Also, I've added a similar page for messaging between customers and vendors. Then, I've showed the personalized recommended products in the homepage, and related products to a product in the product page. Then, I've added notification page as a table, and also polled for the notifications for customers and vendors. Lastly, I've added activity streams to the admin panel. After the milestone presentation, I fixed a few bugs as well. Firstly, I corrected the categories in our homepage. Then, I removed the static expected delivery date from the product detail page, as it's been discussed after the presentation. Lastly, I've improved the UI/UX of the admin activity stream page.
Nazım Berke Metin	After second milestone I made some bug fixes caused by changes on the api call types on the backend. After that implemented orders page for vendors and single order page for showing details of the order and change its status. Also made backend connection of the vendor stock update feature.
Burak Berk Özer	Starting the milestone 3, front-end was integrating order shoppingCart, order, purchase related functionalities. Firstly, I have updated those endpoints with new requests from the other teams. Also, before continuing with new features I have refactored above mentioned endpoints to fit better the conventions of our repository. My next task was implementing guest users. I have found the solution with the self-expering documents. Guest user had to be able to use shoppingCart, order and purchase endpoints. Hence, I have implemented guest version of all them. Also, I have implemented vendor order history and total vendor balance endpoints. Additionally, bugs relating to mentioned endpoints discovered and I hotfixed them as soon as possible.

Name	Coding Work Done
Onur Enginer	I have created the messages section on mobile, which has 2 different sections for order messaging and tickets. There I implemented a messaging view and functionality for sending tickets to admins, but order messaging remained not functional. Then I re-added the rate functionality on commenting. Then I fixed order implementation and add to cart functionalities according to changes since milestone 2. I added adding new card and new address options on order page. I have also added some list functionalities but due to some issues not being able to be resolved it remained unmerged with the main Android branch.
Ahmet Yiğit Gedik	Firstly, I have moved to fix the bug that was left from milestone 2. It was the other seller's part on the product page. After that fix, I have transferred the comment section to the orders page according to the requirements. I have implemented adding a review ability to both active and inactive order pages. In this section, users are able to give a rate for a vendor and a product by using star buttons. Moreover, users can add a comment to the product via this part. Finally, I have deployed our web application to the AWS server before the customer presentation.

Name	Coding Work Done
Nursima Çelik	I firstly revised the appearance of products at home page and search results. I added a background to the products to show them in boxes. Also added UI elements to show rating, number of rating, and Add to Cart button. Connected this button to addToCart function. Then, I added recommendations carousel to the home page, and also to the product page. At home page, I made it visible to customers only. After that, I adjusted call to search endpoint so that we send bearer token also, since back end required it for recommendations. I fixed a bug about search: when there was no result, app was crashing. I added a null check to prevent it, and also added an image to let user know no result is found. Another thing we should take care of was clearing filters. I added a clear button to clear all filters and search again. For the Cart, I added changing amount option on the cart page. Also added a clear cart option. Then I noticed a bug that recommended products could not be added to cart. I fixed it by changing given argument to the product id while creating Product. Then there was a bug in vendor UI of product page, company name was uninitialized and a line was causing crash. We fixed it (with Onur and Berke). After that, I return to add to cart button on home page, and fixed its bugs. I added isInCart field to the Product and initialize or set to true/false when needed. To finish, I tidied up and added comments to my code. And lastly, I searched for writing unit tests and added tests for SearchFragment. As we paid attention to the feedback from customer, I added a Sales Agreement while purchasing after the presentation.

Name	Coding Work Done
Muhammet Tayyip Yazıcı	After milestone 2, the first thing I did was to split our API documentation json file into multi-file structure. I used openAPI's ref feature to create the multifile structure. After writing documentation into multiple files, we use Swagger's CLI tool to compile them into one file. There were missing documentation from milestone 2, I added documentation using the new format. I also wrote the recommendation systems for product and customer. Product recommendation is used in product page for finding similar products. Customer product recommendation uses customer's order and search history to recommend related products. I integrated Datamuse API to find relevant words with the user's query string. I also did some bug fixes for features I implemented this and last milestone. As backend, our unit tests were missing. I changed our testing structure to Mocha and Chai. I added tests for services related to customer, vendor, product, main product, product request, and client.

Name	Coding Work Done
Göksu Başer	After Milestone 2 we as Android Division shared the jobs left for Milestone 3. Vendor Profile was missing therefore I continued with this since I am familiar with profile page implementation. There was need for Google Maps location pick implementation for vendors. According to the backend documentation, a vendor could have just one form address and in addition to that s/he can have several google maps locations saved by a pin with its latitude and longitude values. Therfore, I implemented Google Maps Api in Android. Also profile page has several other features such as Company Information Editing, Change Password, Logout and also Legals tab for KVKK and GDPR text.
Öncel Keleş	After the milestone 2 presentation, I quickly fixed some minor issues that our customer pointed out. Then I wrote some units tests for some of our components. After we received the necessary endpoints, I implemented order pages for vendors, where they can see their orders and change their status according to their delivery state. Afterwards, I carried out with the implementation of guest user actions such as adding to cart and purchasing. Then I created an interface where guest users can enter their order track no and see their orders' status. Then, I created privacy policies and terms and conditions from some templates and altered them for our website, which I implemented at sign up and purchase processes.

4 Requirements

4.1 Glossary

1. User: A person who is using the platform.

2. Customer: A registered user who wants to buy and verified their e-mail.

3. Profile: An outline of user or customer's information. Holds personalized settings.

4. Vendor: A registered user who wants to sell and verified their e-mail.

5. Shopping Cart: List of products that user's intending to buy. Can proceed to checkout.

6. Guest: A user who is using the platform but has not signed in yet.

7. Admin: A registered user who can manage the platform.

8. Admin Panel: A tool that enables platform managers to control products/categories.

9. Product: Thing that is sold or bought.

10. List: A list that customers can add products that they want to buy.

11. Active Order: An order that is not delivered yet.

12. Inactive Order: An order that is either delivered or canceled.

13. Product Page: Individual page that is showcasing one special product.

14. Uptime: The percentage of time the platform has been working and available.

15. Order Tracking Number: A unique 9 digit number associated with an order.

16. Orders Page: A page where all the order history can be seen. Customers and vendors have an orders page.

17. Order Details Page: A page associated with one order, that contains Order Details.

18. Order Details: Order Tracking Number, products' names, products' pictures, products' prices, total price, cargo brand, customer/vendor name, status (being prepared, on the way, delivered, canceled by the customer, canceled by the vendor, returned), order date, delivery date if delivered.

19. Semantic Search: It denotes search with meaning, as distinguished from lexical search where the search engine looks for literal matches of the query words or variants of them, without understanding the overall meaning of the query.

20. Credential: An e-mail and password pair

21. Strong Password: A string that contains numbers or characters of length between 6 and 20. It must contain at least one lowercase letter, one uppercase letter, one numeric digit, but cannot contain white space.

4.2   Functional Requirements

4.2.1   User Requirements

- **1.1.1 Registration and Login:**

- **1.1.1.1** Users shall be able to register as a customer by providing an e-mail address, a strong password and name/surname.

- **1.1.1.2** Users shall be able to register as a vendor by providing an e-mail address, a strong password, one or more locations of their stores through Google Maps, and name and title of the company.

- **1.1.1.3** Users should be able to use a Google account instead of e-mail & password while registering.

- **1.1.1.4** Registered users shall be able to log in as a customer or a vendor.

- **1.1.1.5** Registered users shall be able to login with their e-mail and password.

- **1.1.1.6** A customer shall be able to create a vendor account with the same credentials and vice versa.

- **1.1.1.7** A customer shall accept system to store the password, the email, and the phone of the user to sign up.

- **1.1.1.8** A vendor shall accept system to store the location, the name, and their contact information to sign up.

- **1.1.1.9** Registered users shall be able to verify their e-mail by clicking the link that is sent to their e-mail address.

- **1.1.1.10** For users who are in the verification process shall not login the application unless complete the verification process

- **1.1.1.11** Customers or vendors shall be able to select "Forgot your password" when they have forgotten their password and select their new password.

- **1.1.2 Profile:**

- **1.1.2.1** Customers shall be able to change their name/surname or password after a confirmation of current password.

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- **1.1.2.2** Customers shall have a profile settings page where after they confirm their current passwords they can edit their:
    - **1.1.2.1.2** Address
    - **1.1.2.1.3** Phone number
    - **1.1.2.1.4** Payment method
    - **1.1.2.1.5** Birthday date

- **1.1.2.3** Vendors shall have a profile settings page where they can change their password after they confirm their current passwords.

- **1.1.2.4** Vendors shall have a public profile page where they can edit fields:
    - **1.1.2.3.1** Name of the company.
    - **1.1.2.3.2** Contact information of the company.
    - **1.1.2.3.3** Location of the store through Google Maps.

- **1.1.3 Products:**

- **1.1.3.1** Users shall be able to view the page of products.

- **1.1.3.2** Page of the products shall contain price, expected delivery date, images of the product(if possible), technical features, availability at the moment, comments, rating, and its current vendor.

- **1.1.3.3** Vendors shall be able to request to create, update or delete the page of products from admins.

- **1.1.4 Search:**

- **1.1.4.1** Users shall be able to choose to search for products or vendors.
    - **1.1.4.1.1** Users shall be able to search for products based on one of the followings: product title, category, brand, vendor, color.

- **1.1.4.2** Users shall be able to do a semantic search for products.

- **1.1.4.3** Users shall be able to filter results according to:
    - **1.1.4.3.1** Brand name
    - **1.1.4.3.2** Vendor name
    - **1.1.4.3.3** Minimum and maximum price
    - **1.1.4.3.4** Color

- **1.1.4.4** Users shall be able to sort results according to:
    - **1.1.4.4.1** Price, increasing or decreasing

- **1.1.5 Shopping Cart:**

- **1.1.5.1** Customers and guests shall be able to add products to their shopping cart.

- **1.1.5.2** Customers and guests shall be able to see the price of each product in the cart.

- **1.1.5.3** Customers and guests shall be able to increase or decrease the quantity of the products.

- **1.1.5.4** Customers and guests shall be able to delete products from their carts.

- **1.1.5.5** Customers and guests shall be able to see the total price of the cart.

- **1.1.6 Lists:**

- **1.1.6.1** Customers shall perform these operations on the lists: creating, naming, deleting.

- **1.1.6.2** Customers shall be able to add/remove products to/from their lists.

- **1.1.6.3** Customers are provided with one list namely "Watchlist" and one list namely "Favlist" by default and Requirements (1.1.6.1) is not applicable to these two lists.

- **1.1.6.4** Watchlist is the default list given by the application which enables user to get notified if one or many events happen in Requirements (1.1.10.1).

- **1.1.7 Order:**

- **1.1.7.1** Registered users shall have an Orders Page where all the active/inactive orders are listed.

- **1.1.7.2** Guests who previously placed an order shall be able to enter to the Order Details Page by providing their Order Tracking Number.

- **1.1.7.3** All users shall be to see Order Details on the Order Details Page.

- **1.1.7.4** Users shall be able to cancel orders that have not been shipped yet on the Order Details Page.

- **1.1.7.5** Customers and guests shall be able to return an inactive order within 14 days after delivery.

- **1.1.7.6** Vendor shall accept the return or not, according to the condition of the product.

- **1.1.7.7** Upon acceptance of a return request, the customer/guest shall get a refund.

- **1.1.7.8** Upon acceptance of a return request, customers shall also get cancellation of an increase in points due to that product(s).

- **1.1.7.9** Upon rejection of a return request, the customer/guest shall receive the products again.

- **1.1.7.10** Customers shall be able to see their scores based on the money that they spent so far on the platform.

- **1.1.7.11** Vendors shall be able to see the money that they earned so far on the platform.

- **1.1.7.12** Customers should be able to return their orders for exchange.

- **1.1.7.13** Customers should be able to request missing/flawed parts.

- **1.1.8 Purchase:**

- **1.1.8.1** Customers and guests shall be able to purchase the products in their shopping carts.

- **1.1.8.2** Guests shall log in, or provide an e-mail address to proceed to payment.

- **1.1.8.3** Customers and guests shall choose between those payment methods: credit or debit card.

- **1.1.8.4** Customers who have chosen credit/debit cards shall either provide card information or use a saved one in case there is any.

- **1.1.8.5** Guests who have chosen credit/debit cards shall provide card information.

- **1.1.8.6** Customers shall either enter a new address or use a saved one.

- **1.1.8.7** Guests shall enter an address.

- **1.1.8.8** Customers and guests shall receive an Order Tracking Number upon payment.

- **1.1.8.8** Customers and guests shall receive an e-mail about the details of the order.

- **1.1.8.10** Customers and guests shall be able to allow the system to store the card information of him/her after he/she made a purchase.

- **1.1.9 Comment and Rate**:

- **1.1.9.1** Customers shall be able to comment on or rate the products they bought.

- **1.1.9.2** Users shall be able to view user comments and ratings about products.

- **1.1.10 Notifications**:

- **1.1.10.1** Customers shall be able to choose to get notifications concerning one product or any product in their watchlists, for certain events:
  - **1.1.10.1.1** A change in price
  - **1.1.10.1.2** An unavailable product becomes available

- **1.1.11 Recommendations:**

- **1.1.11.1** Customer users shall receive product recommendations based on purchase history.

- **1.1.11.2** Recommendations will be based on purchases and their associated weights(price, date, etc.).

- **1.1.12 Messaging System**:

- **1.1.12.1** Vendors and admins shall be able to communicate via messaging anytime.

- **1.1.12.2** Customers shall be able to start a conversation with a vendor after purchasing a product from that vendor.

- **1.1.12.3** Customers should be able to message admins if a problem arises after the delivery within guarantee extent.

- **1.1.13 Admin Panel:**

- **1.1.13.1** Admins shall be able to add/remove categories.

- **1.1.13.2** Admins shall be able to delete or suspend accounts.

- **1.1.13.3** Admins shall confirm or not when a product is added.

- **1.1.13.4** Admins shall be able to delete products.

- **1.1.13.5** Admins shall be able to confirm if a product information is editted by the vendors.

4.2.2 System Requirements

- **1.2.1. Registration and Login**:

- **1.2.1.1** The system shall allow guest users to register via e-mail and password or their google account as a customer, vendor.

- **1.2.1.2** The system shall allow guest users to login via their e-mail and password or their google account.

- **1.2.1.3** The system shall require users to verify their e-mail via a link sent to their e-mail.

- **1.2.1.4** The system shall give a warning when the user tries to signup with shorter than 8 characters, at least an uppercase character, a lowercase character, and a number.

- **1.2.1.5** The system shall take consent from the customer user to store the password, the email, birthday information, and the phone of the user while signing up.

- **1.2.1.6** The system shall take consent from the vendor user to store the location, the name, and the contact information of him/her while signing up.

- **1.2.2.7** The system shall store user names, e-mail addresses, passwords, store address, phone numbers, full names, the location from Google Maps of each registered vendor.

- **1.2.2 Profile Management:**

- **1.2.2.1** The system shall store user names, e-mail addresses, passwords, addresses, phone numbers, full names, and birth dates of each registered customer.

- **1.2.3 Search**:

- **1.2.3.1** The system shall allow keyword and semantic search for users.

- **1.2.3.2** The system shall have categories for products that have a similar feature.

- **1.2.3.3** The system shall allow users to search for products categorically.

- **1.2.3.4** The system shall distinguish the same products which are sold by different vendors.

- **1.2.3.5** The system shall allow users to filter products by brand, vendor-rate, price and color.

- **1.2.4 Purchase**:

- **1.2.4.1** The system shall allow customers and guest users to buy the products in their cart after they supply the information about their payment and address.

- **1.2.4.2** The system shall give the registered users the option to save their credit card information.

- **1.2.4.3** The system shall give options for using a new address or a saved address for the purchase.

- **1.2.4.4** The system shall allow users to add products to their carts.

- **1.2.4.5** The system shall allow customers and guest users to remove products from their carts.

- **1.2.4.6** The system shall allow customers and guest users to buy products that are in their carts only.

- **1.2.4.7** The system shall support different types of purchase methods such as credit card and debit card.

- **1.2.5 Comment and Rate**:

- **1.2.5.1** The system shall have a rating system out of five for the products.

- **1.2.5.2** The system shall allow customers who ordered a product, to comment on those products.

- **1.2.5.3** The system shall allow customers who ordered a product, to rate on those products.

- **1.2.6 Product pages**:

- **1.2.6.1** The system shall hold product information on the product's page.

- **1.2.6.2** The system shall have pictures of products.

- **1.2.6.3** The system shall support comments for products.

- **1.2.6.4** The system shall support product rate.

- **1.2.6.5** The system shall hold the property of the products.

- **1.2.6.6** The system shall support vendor rate.

- **1.2.7 Lists**:

- **1.2.7.1** The system shall allow users to create, edit, delete non-default lists.

- **1.2.7.2** The system shall allow available products to be transferred from lists to cart.

- **1.2.7.3** The system shall allow products to be added in lists.

- **1.2.7.4** The system shall keep the lists private for each user.

- **1.2.7.5** Users shall be notified about unavailable products while transferring product from the list to the shopping cart.

4.2.2.1 1.2.8 Google Accounts and Maps Synchronization

- **1.2.8.1** The system shall support Google Maps

- **1.2.9 Recommendation System**:

- **1.2.9.1** The system shall recommend users similar products related to their search history.

- **1.2.10 Messaging System**:

- **1.2.10.1** The system shall have a private chat platform for customer and vendor communication.

- **1.2.10.2** The system shall allow customers and vendors to ask help from admins by opening tickets.

- **1.2.11 Order Page**:

- **1.2.11.1** The system shall allow customers and vendors to see their active and delivered orders.

- **1.2.11.2** The system shall allow customers to cancel an active order before it being shipped.

- **1.2.11.3** The system shall support returning and refunding of delivered products.

- **1.2.11.4** The system shall contain shipment information containing tracking number and customer adress accessible by customers and vendors.

- **1.2.11.6** Users shall be able to track return exchanges and part requests.

- **1.2.12 Admin Permissions**:

- **1.2.12.1** Admins shall be allowed to delete or suspend accounts violating.

- **1.2.12.2** Admins shall be allowed to create a new category.

- **1.2.12.3** Admins shall be able to confirm a product edit.

- **1.2.12.4** Admins shall be able to see and edit message tickets.

- **1.2.13 Notification System**:

- **1.2.13.1** The system shall allow customers to set alarm for products in the watchlist for a certain price and notify them via e-mail.

4.3   Non-functional Requirements

- **2.1 SECURITY**

- **2.1.1** Each user shall have a strong password.

- **2.1.2** All user passwords shall be stored with encryption in the database using SHA-256.

- **2.2 PRIVACY**

- **2.2.1** All user data shall be processed according to KVKK and GDPR.

- **2.2.2** The system shall take consent from the customer user to store the password, the email, birthday information, and the phone of the user while signing up.

- **2.2.3** The system shall take consent from the vendor user to store the location, the name, and the contact information of him/her while signing up.

- **2.3 ACCESSIBILITY**

- **2.3.1** Product shall be accessible from any Android device that has Android 6.0+.

- **2.3.2** Product shall support Google Chrome 79+, Safari 10+, Firefox 71+.

- **2.4 AVAILABILITY**

- **2.4.1** Product information shall be available in English.

- **2.5 STANDARTS**

- **2.5.1** The system shall follow the standards introduced by the World Wide Web Consortium (W3C).

- **2.5.2** Platform should support the W3C Activity Streams protocol.

5   All Design documentations:

5.1   Mockups

5.1.1   Mockup 1
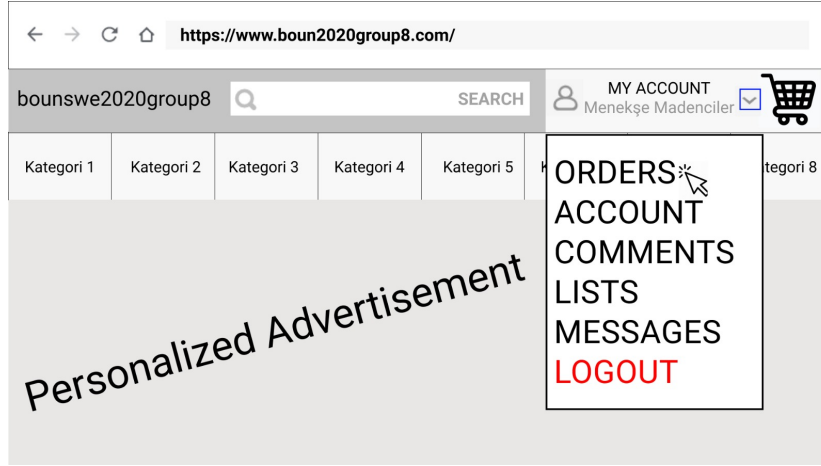
Figure 1: She visits her order page.
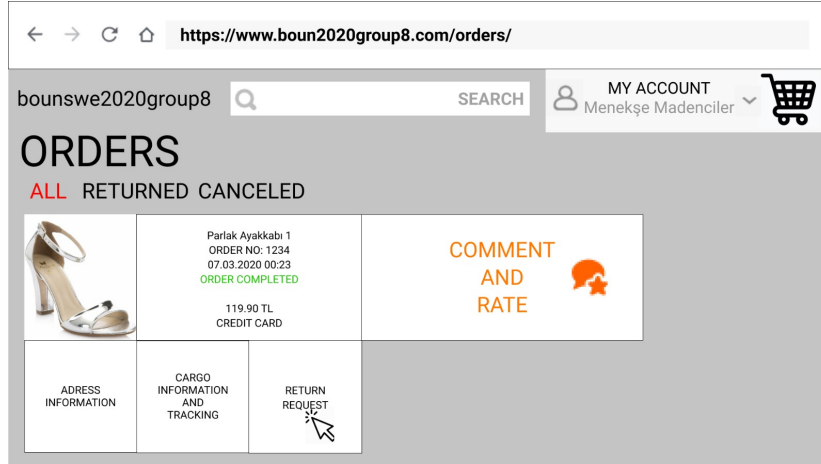
Figure 2: She clicks return on the order with shoes that she wants to return.

Figure 3: A pop up opens asking details of the return request.

Figure 4: An information box appears saying success and giving information about the procedure.
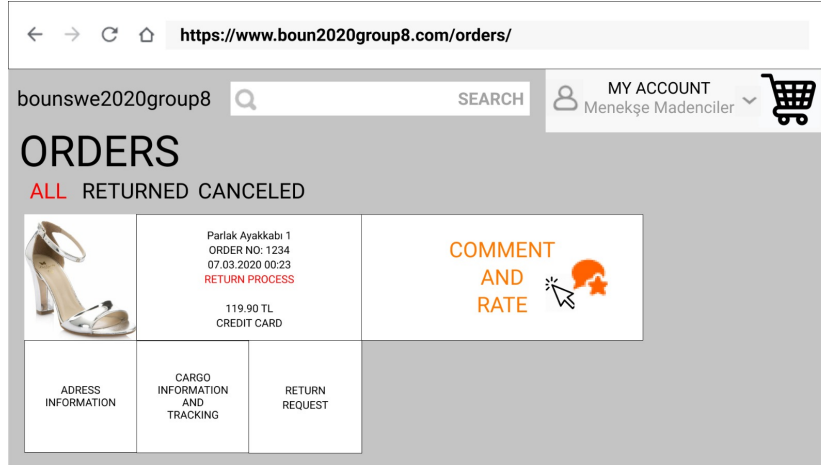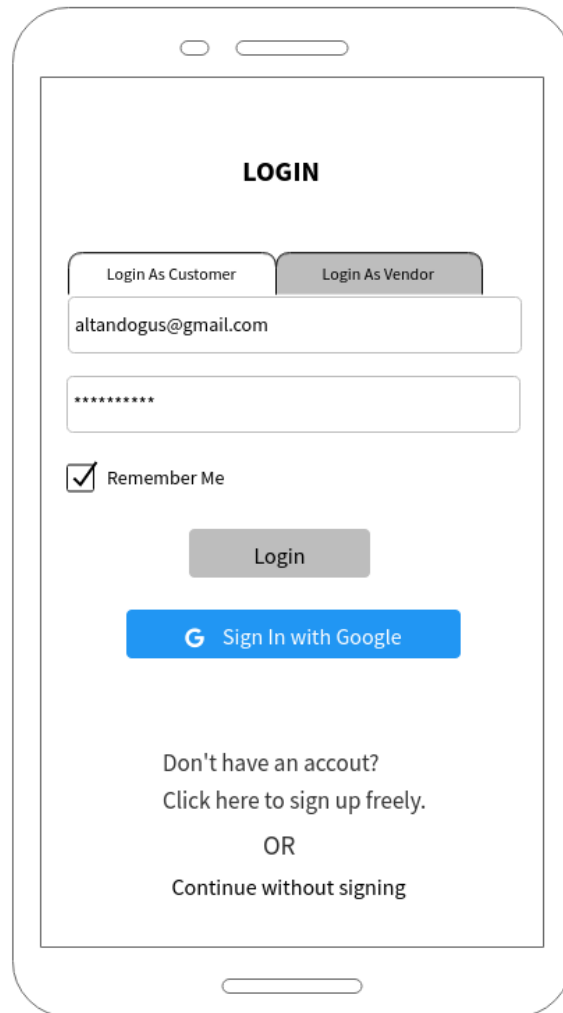
Figure 5: She clicks on comment and rate.

Figure 6: She writes a comment, rates the product and shares it.

5.1.2   Mockup 2

Figure 7: He logins as a vendor with his e-mail address and password.
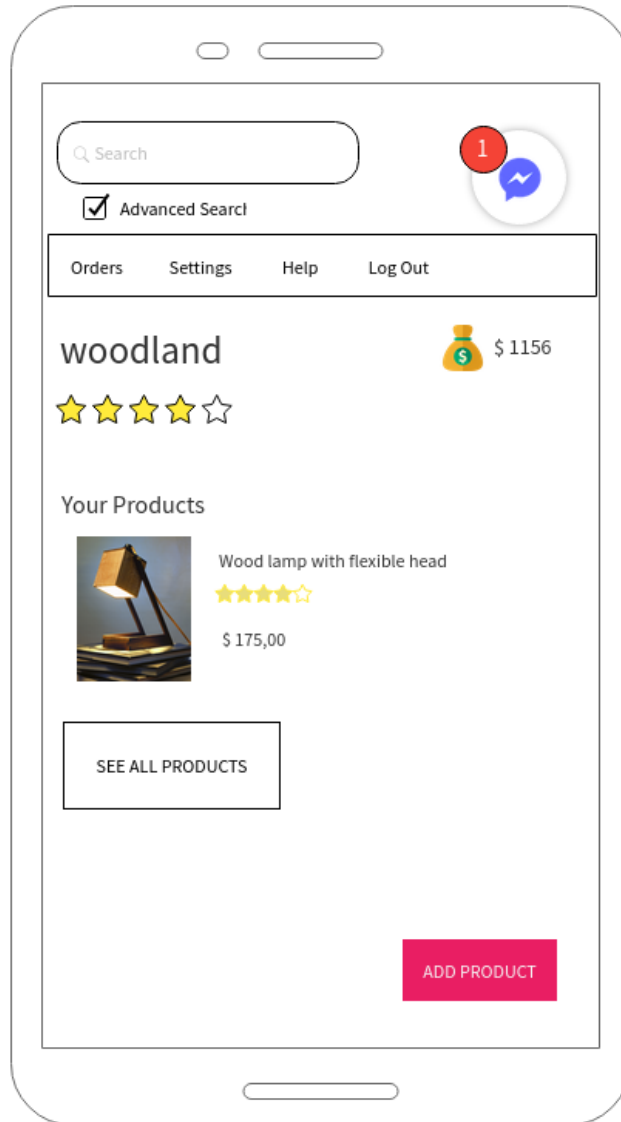
Figure 8: He sees that a message has been sent.
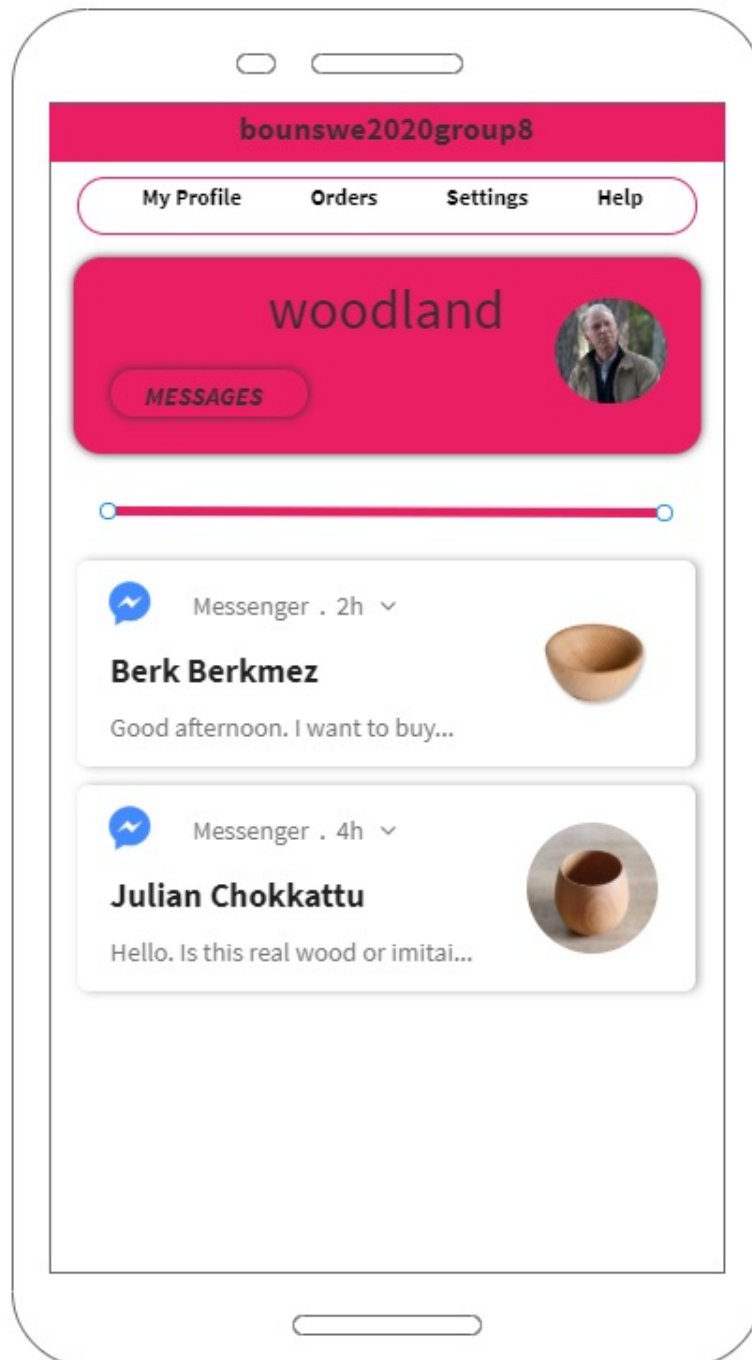
Figure 9: He opens the message and reads it. A customer is asking a detail about a product he sold to her.
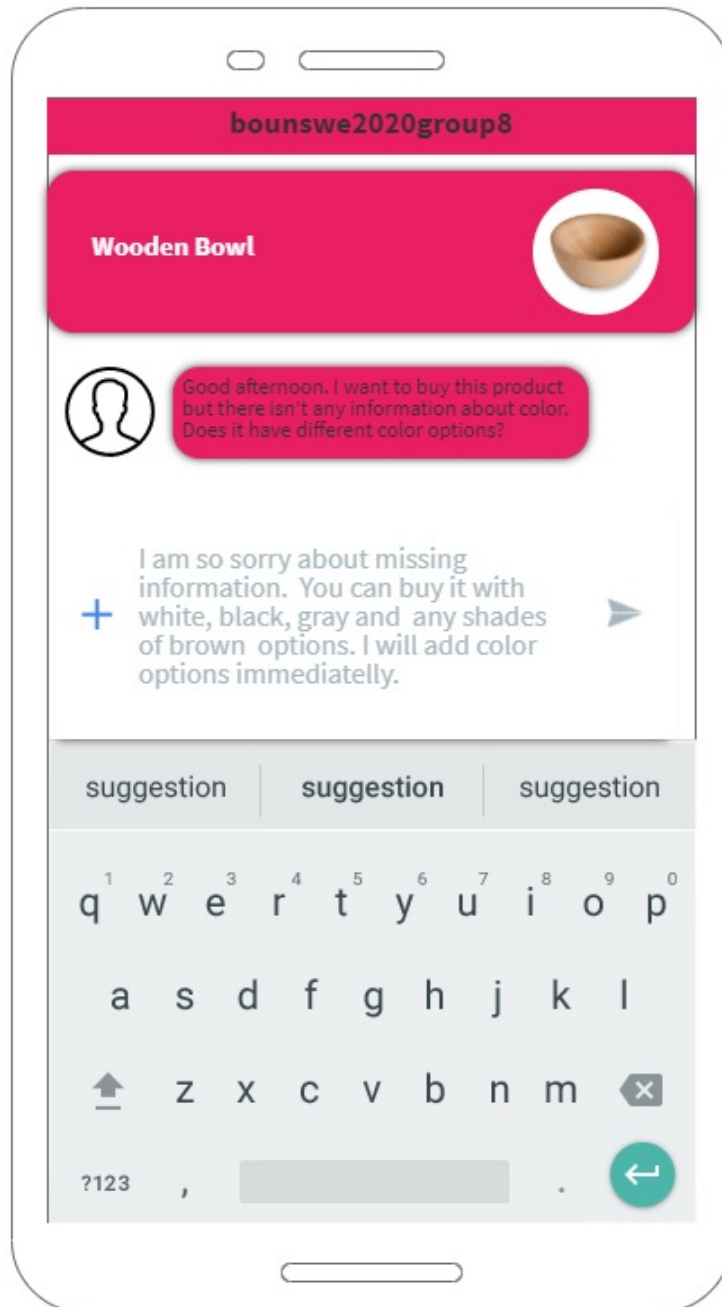
Figure 10: He answers the customer's message.

5.1.3 Mockup 3
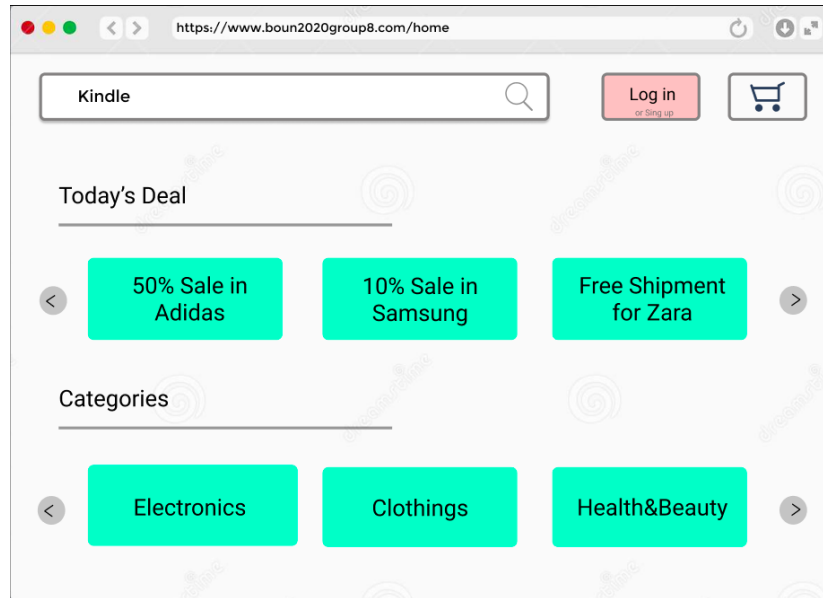
Figure 11: He enters the website.
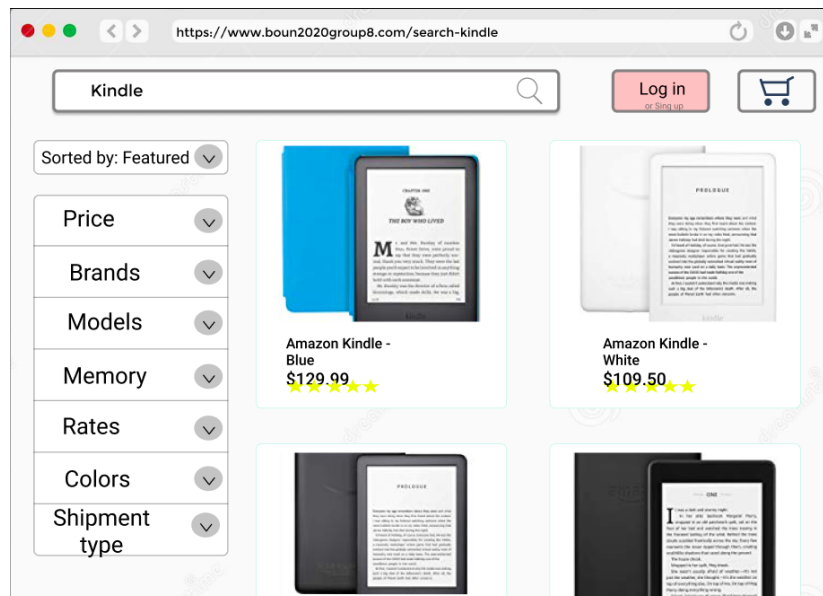
Figure 12: He searches for Kindle.
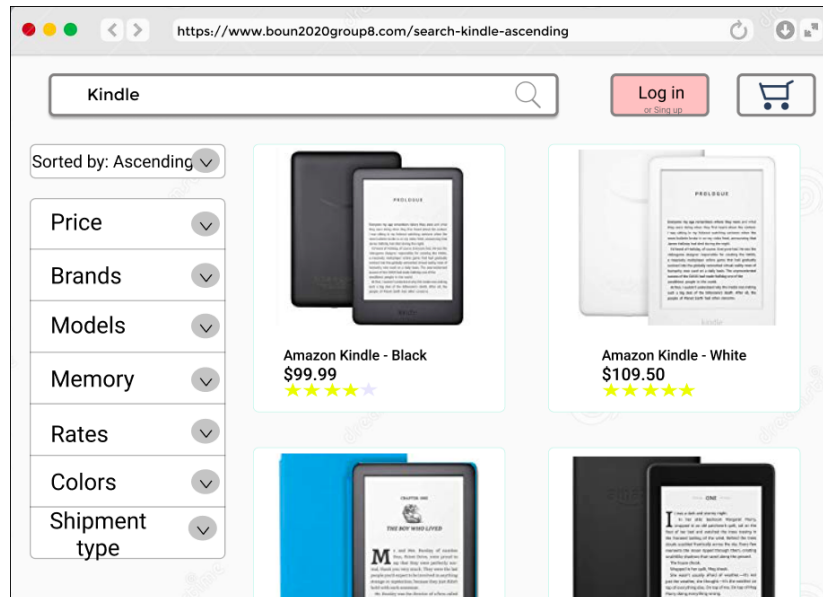
Figure 13: He sorts by price, in ascending order.
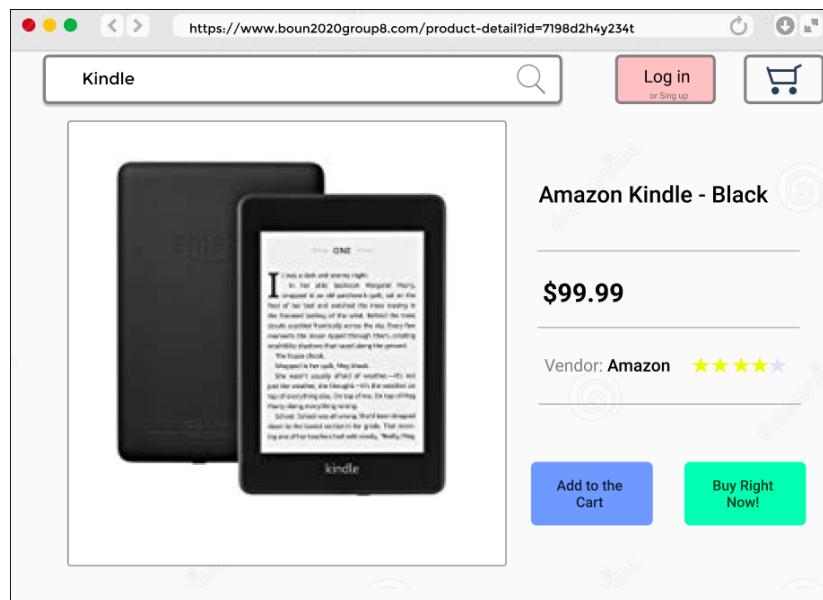
Figure 14: He goes to the specific page of Kindle he wants to buy. He looks at the rate of vendor and product.
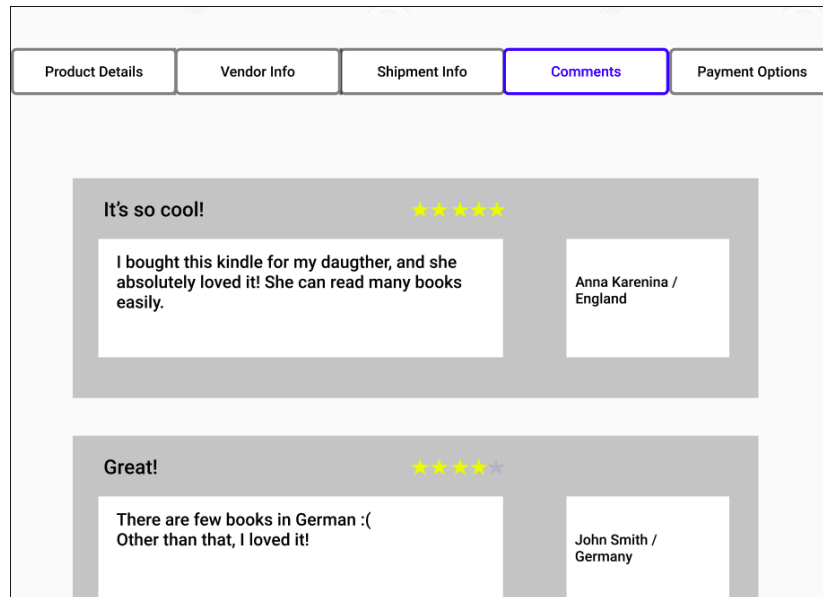
Figure 15: He goes to the comments and reads comments about the product.
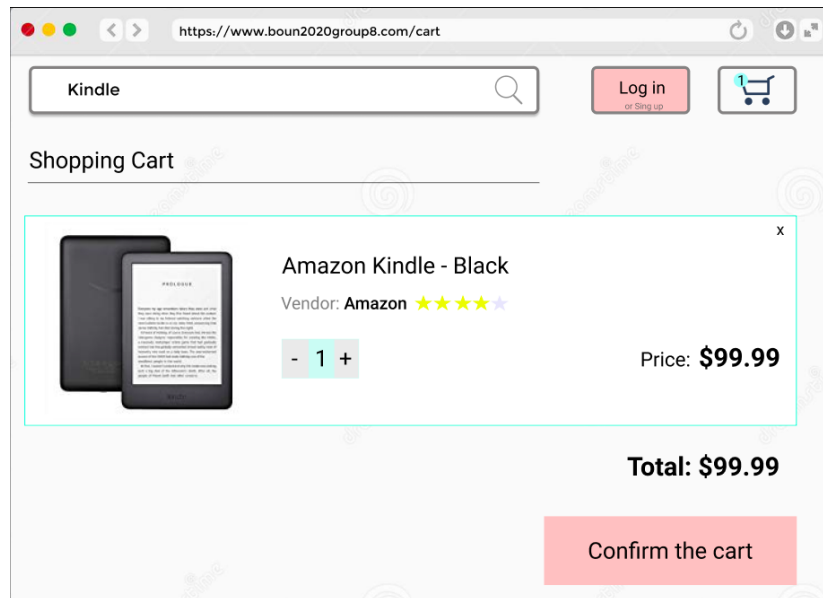
Figure 16: He adds this Kindle to his cart.

Figure 17: He goes to the cart page to confirm and gets a warning saying that whether he should log in or continue as a guest.

Figure 18: He gives his address info and google account for shipment and chooses to pay by credit card then completes the purchase.

Figure 19: He gives his address info and google account for shipment and chooses to pay by credit card then completes the purchase.
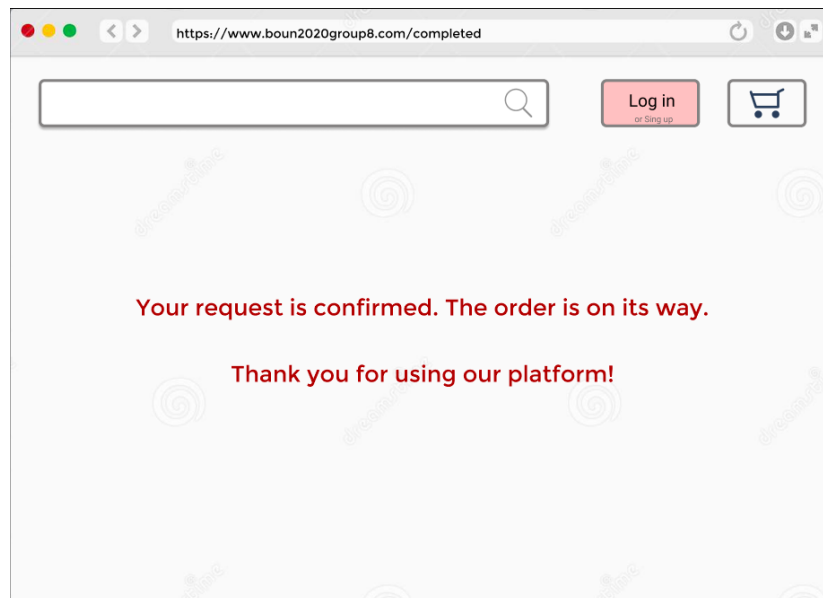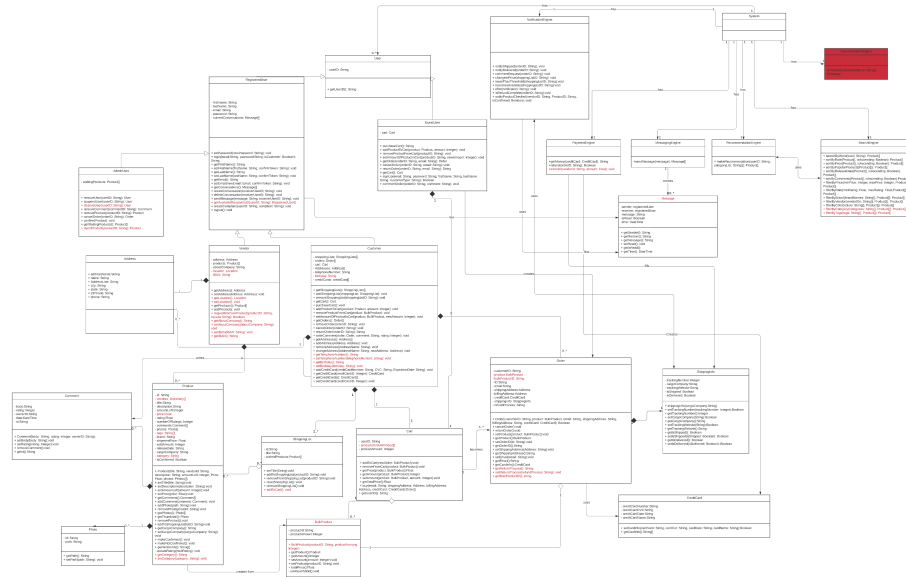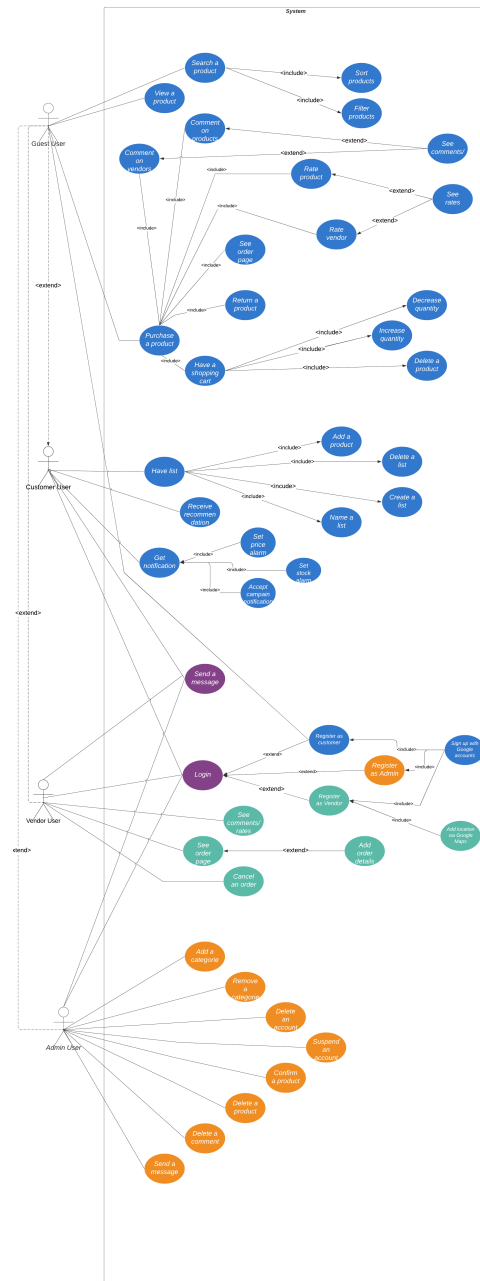

Figure 20: He gives his address info and google account for shipment and chooses to pay by credit card then completes the purchase.
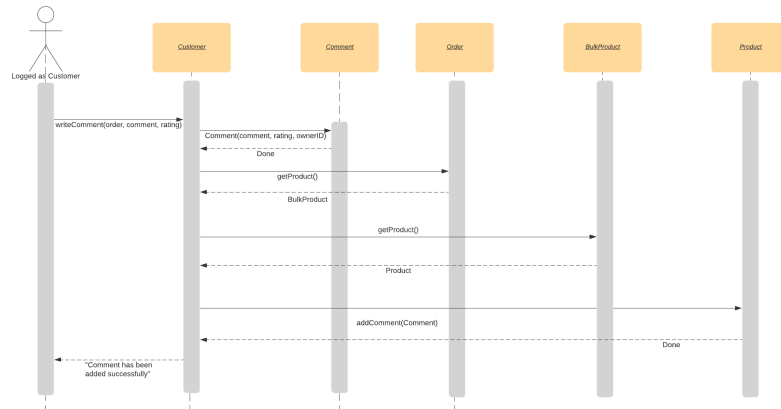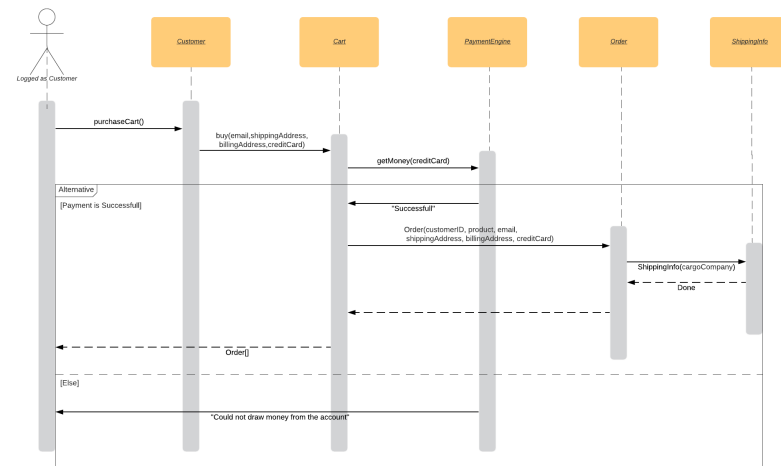
5.2 Class Diagram

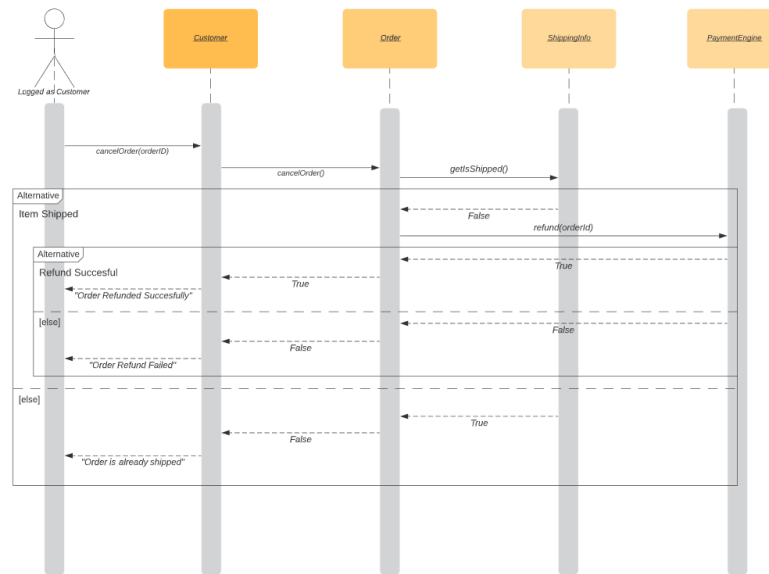## 5.3 Use Case Diagram

5.4 Sequence Diagrams

5.4.1 Comment

5.4.2 Purchase Order

5.4.3 Cancel Order

5.4.4 Add Product
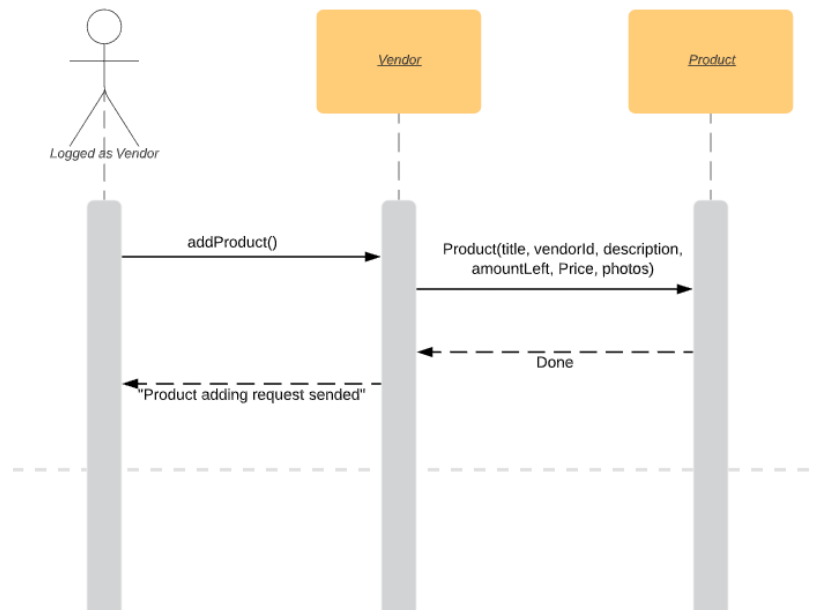
5.4.5　Confirm Product
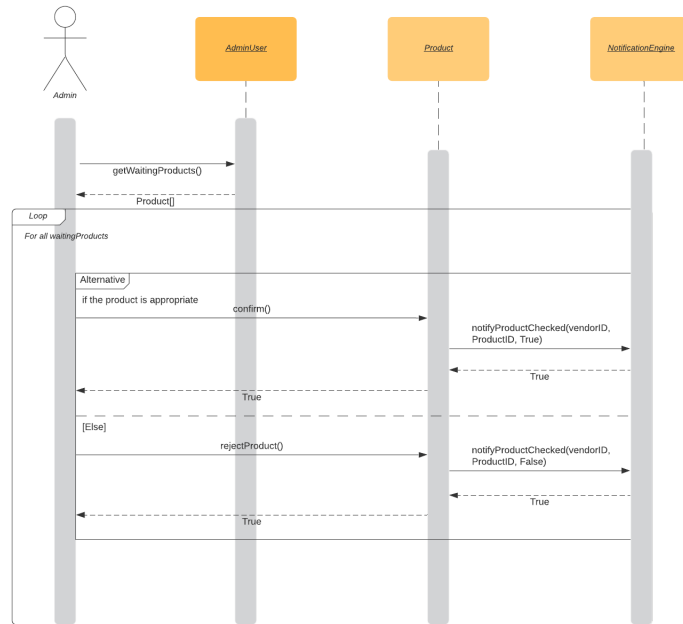
5.4.6　Add To Cart
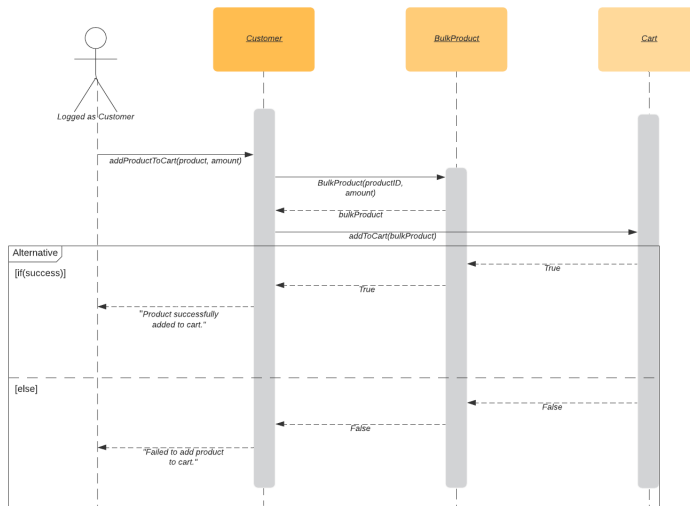
5.4.7 Check Messages

5.4.8 Search For A product

SearchEngine

User

Alternatives

searchByWord(word)

sortByPrice(Product[],isAscending)

sortByRate(Product[],isAscending)

searchByPopularProducts(Product[])

sortByReleaseDate(Product[], isAscending)

sortByComments(Product[], isAscending)

filterByPrice(minPrice, maxPrice:, Product[])

filterByRate(minRating, maxRating,Product[])

filterByBrand(brandNames[] , Product[])

filterByVendor(vendorIDs[], Product[])

filterByColor(colors[], Product[])

filterByCategory(categories[], Product[])

filterByTags(tags[], Product[])

Product[]

5.4.9 Report User

6   User Manual

6.1   Web

6.1.1   Home Page

When users go into the URL http://www.carousel.ml/, they will be landed on the home page. At anytime, users can go to the home page, by clicking the website icon on the top-left of the page header.
The home pages are different for customers and vendors. The vendors cannot do search or go to List and Cart as they are not for the vendors. These features are for customers and guests.

Admins do not have a sign up process. Admins can only be registered via adding directly to the database in order to prevent malicious attempts.

6.1.2   Sign Up

You can sign up as a customer if you are interested in buying products or sign up as a vendor if you are interested in selling products.

You can sign up as a **Vendor** as such:

1. Go to the website http://www.carousel.ml/

2. Click on "Login" button on the top-right side of the website.

3. On the page, click on the "Sign Up" button. The default sign up section is for customers.

4. On the bottom of the section on the page, click "Do you want to sell?" in order to change to vendor sign up.

5. Enter the requested information:

    - E-mail
    - Password - needs to have 1 capital letter, 1 small letter, 1 number, should be at least 6 and at most 20 characters, should not contain any white spaces.
    - Password confirmation - should be same as password
    - Name
    - Surname
    - Company Name
    - Company website domain
    - Address location through Google Maps

6. Accept the privacy policies.

7. Click "REGISTER AS VENDOR" to complete the process

8. Check the e-mail you have provided in the sign up process.

9. Click on the activation link in the e-mail received from the website.

Your whole sign up process will be completed. You can login as vendor with your login information.

You can sign up as a **Customer** as such:

1. Go to the website http://www.carousel.ml/

2. Click on "Login" button on the top-right side of the website.

3. On the page, click on the "Sign Up" button. The default sign up section is for customers.

4. If you want to signup with Google, click on the 'Sign up with Google' button. Or proceed with the rest.

5. Enter the requested information:

   - E-mail
   - Password - needs to have 1 capital letter, 1 small letter, 1 number, should be at least 6 and at most 20 characters, should not contain any white spaces.
   - Password Confirmation - should be same as password
   - Name
   - Surname

6. Accept the privacy policies.

7. Click "SIGN UP" to complete the process

8. Check the e-mail you have provided in the sign up process.

9. Click on the activation link in the e-mail received from the website.

Your whole sign up process will be completed. You can login as customer with your login information. You can sign up as a vendor and as a customer with the same email address.

6.1.3 Login

You can login to the system as a customer if you are interested in buying products or login as a vendor if you are interested in selling products.

You can login as a **Vendor** as such:

1. Go to the website http://www.carousel.ml/

2. Click on "Login" button on the top-right side of the website. The default login section is for customers.

3. On the bottom of the section on the page, click "Login as Vendor" in order to change to vendor login.

4. Enter the requested information:

   - E-mail
   - Password - the one you entered while registering

5. Click "LOGIN" to complete the process

When your login process is completed, you will redirected to the home page.

You can login as a **Customer** as such:

1. Go to the website http://www.carousel.ml/

2. Click on "Login" button on the top-right side of the website. The default login section is for customers.

3. If you want to login with Google, click on the 'Login with Google' button. Or proceed with the rest.

4. Enter the requested information:

   - E-mail
   - Password - the one you entered while registering

5. Click "LOGIN" to complete the process

When your login process is completed, you will redirected to the home page.

Admins can also login to the website, but through a different URL. Admins do not have sign up, as they can only be added through the database.
Admins can login as follows:

1. Go to the website with the URL: http://www.carousel.ml/administration/login/admin

2. Enter necessary information:

   - E-mail
   - Password

3. Click "Login"

After these steps, you will be directed to admin profile. Admins cannot do any operations other than that are listed on the left sidemenu.
The only admin for now has the following credentials:

- E-mail: admin@admin.com

- Password: 123456

WARNING: Do not share admin information with third parties!

6.1.4   Searching Products

To search about products, one has two options. They can either enter the product name that they want to search about using our search bar in the top of the website and by clicking on the magnifying glass or clicking "Enter". Or you can click on one of the category names that is provided right under the search bar. After searching for products, one can sort according to the some feature, and filter the products.
   Sorting
   You can products sort according to:

   - Lowest Price

   - Highest Price

   - Featured (Highest Match)

   Filtering
   For each product search, you can always filter the products, using the filtering sidebar on the left, according to following parameters:

   - Price

        - You can specify the price range, using the slider.

   - Vendors

        - You can narrow the search by specifying the vendor of the product.

   - Brand

   - Category

Also, according to the search results, there may some other parameters such as: color, memory, size, etc. You can also filter by that parameters as well.

6.1.5 Viewing Product Details

Customers and guests can **view products and their details** by going to the product page. They can see the product's features, sellers, comment, and rates of that product on this page. For customers, adding the product to the cart, the list, and the watchlist can be performed on this page. You can reach the product page in 3 different ways. These paths are from the homepage, the result page of a search, or a vendor's public page. But the action is always the same, which is clicking on the product.

You should follow one of these steps below to view product details:

1. Go to one of these pages: Home page, Search page, Vendor's public page

2. Click on the product you want to view

By following any of them, you can reach the product details. If you do not know how to reach these three pages (Home page, Search page, or Vendor's public page), please check the related sections.

6.1.6 Adding Product to Your Cart

Customers and guest can **add a product to their cart**. There are many pages that you can add a product to the cart, such as the home page, search page, product page, etc. They can also delete one or all products from it and view the last status of it. To pruchase your cart, check the Purchase section.

To add a product, except from the product page:

1. Hover on the product

2. click on the 'Add to Cart' button

To add a product from the product page:

1. Go to the product page. Check the Viewing Product Details section.

2. click on the 'Add to Cart' button

Both procedures redirect you to the cart page. You can see your added products listed in the cart.

You can view your current status of your cart as such:

1. click on the 'Cart' button on the upper-right corner of the website.

The items in your cart will be listed on the page. You can return to shopping by clicking to the 'Go back to Shopping' button.

To delete a product from the cart:

1. click on the 'Cart' button on the upper-right corner of the website.

2. click on the delete icon next to the product

The product you want to the delete will be removed after these steps.

You can empty your cart with the following steps:

1. click on the 'Cart' button on the upper-right corner of the website.

2. click on the 'Empty Cart' button at the end of the page.

All items in your cart will be removed with these steps. The Cart will be empty.

6.1.7   Adding Product to List

Customers can **add a product to their list**. If they do not have any List, they should create a 'list' first. The created list or items added to that list can be deleted later.

You can add a product to a list as such:

1. Go to the product page you want to add. Check the Viewing Product Details section.

2. Click on the heart icon below the price.

3. If you have a list and want to add add the product to one of them, click on the name of that list.

4. If not, click the 'Create a New List' button.

5. Enter the name of the list.

6. Go back to Step-3.

The product will be successfully added to your list.

You can check your lists as follows:

1. click on the 'List' button on the upper-right corner of the website.

2. Click on the name of the list.

The items in the list will appear below the name. You can check your products.

To delete a product from the list:

1. Click on the 'List' button on the upper-right corner of the website.

2. Click on the name of the list.

3. Click on the delete icon next to the product

The product you want to the delete will be removed after these steps.

You can delete one of your lists with the following steps:

1. Click on the 'Cart' button on the upper-right corner of the website.

2. Click on the delete icon next to the name of the list.

The list and the items in it will be removed.

6.1.8 Adding Product to Watchlist

Customers can **add a product to their watchlists** so that they can get notifications about that product.
You can add a product to your watchlist as such:

1. Go to the product page. To see how, check the Viewing Product Details section

2. Click on the bell icon below the price.

The product will be on your watchlist after these steps.

You can delete a product from your watchlist:

1. Go to the product page. To see how, check the Viewing Product Details section

2. Click on the bell icon below the price.

The product will be no longer in your watchlist after these steps.

6.1.9 Purchase

Customers and guests can **purchase** products. To buy a product, you first add the product you want to buy to the cart. Check the 'Adding Product to Your Cart' section. The procedure to purchase a product as a customer:

1. Click on the 'Cart' button on the upper-right corner of the website.

2. click on the 'Continue' button on the right sidebar.

3. Enter your home address or select one of your registered address.

4. Enter your credit cart info or select one of your registered credit card.

5. Accept the sales agreement and click the 'Confirm' button.

If the transaction made by successfully, your order will display on the active order page. To track your order, please check the Tracking an Order section.

The procedure to purchase a product as a guest:

1. Click on the 'Cart' button on the upper-right corner of the website.

2. click on the 'Continue' button on the right sidebar.

3. Enter your email and click the 'Submit' button.

4. Enter your home address and click the 'Submit' button.

5. Enter your credit cart info and click the 'Submit' button.

6. Accept the sales agreement and click the 'Confirm' button.

If the transaction made by successfully, your tracking number will display on the screen. Also, you will receive an email contains this order tracking code. To track your order with this code, check the Tracking an Order section.

6.1.10   Commenting to a Product

To comment to a product, you have to purchase it firstly. Then you can make a comment, and rate both vendor and the product. To do so, you can do the following:

1. Hover on "Account" Button in the upper-right corner of the website.

2. Click on "My Order" from the dropdown menu.

3. Select "Active Orders" or "Inactive Orders" according to status of your order from the sidebar.

4. Find the order and product that you want to comment about it.

5. Click on the "Add review" button right next to it.

6. Rate vendor.

7. Rate product.

8. Add your comment about the product and vendor.

9. Click on the "Add Review" button.

6.1.11 Tracking an Order

Customers who did purchase can **track** their orders from their account page. You should follow these steps:

1. Go to the website.

2. If you have not logged in yet, login. To login, go to Login section.

3. Hover on "Account" Button in the upper-right corner of the website

4. Click "My Order" from the dropdown menu. The default order page is active order page.

5. If you want to track your active order, click 'See Details' button for the order you want to track.

6. If you want to see your inactive order, click on the 'Inactive Orders' button in the sidebar and click 'See Details' button for the order you want to view.

The details of your active orders will be display if you follow these steps. The shipping address, payment information, details of products, and the status of order can be seen from this page.

The guest users who did purchase can **track** their orders via the provided order tracking interface using the order tracking number they received after purchase via the website and e-mail.

These guest users can see the status of their orders as follows:

1. Go to the website.

2. Click on the "Track your order" button on the very top of the page.

3. On the page, enter your order tracking number in the provided text area.

4. Click "Submit"

Then, if provided a valid active order tracking number, the order detail will be opened regarding the order tracking number where you can see the status and information about the order.

6.1.12 Canceling a Product

Customers and guest can **cancel** a product from their active order. This process can be done on the active order page. Follow the procedure below, to cancel an order:

1. Go to the website.

2. Go the order page. To reach the order page, go to Tracking an Order section.

3. click on the 'Cancel Product' button to cancel the product you want to cancel

When you clicked to 'Cancel Product' button, the status of the product will be 'Cancelled by Customer'

6.1.13 Returning a Product

Customers and guest can **return** a product from their active order. This process can be done on the inactive order page. Follow the procedure below, to cancel an order:

1. Go to the website.

2. Go the order page. To reach the order page, go to the Tracking an Order section.

3. Click on the 'Return Product' button to return the product you want to return

When you clicked to 'Return Product' button, the status of the product will be 'Returned'

6.1.14 Viewing Recommendations

There are two types of recommendation in our website. One is personalized recommendation for customers, and the other is related products to a product.

When a customer just registers to the our application, they won't be able to see any recommended products, as we don't have any information about their preferences. To get a recommendation, one has to either search for products using our search bar or purchase an order. Then, customers will receive personalized recommended products. To view personalized recommended products:

1. Login to the website as an customer

2. Go to Homepage

3. You will see the recommended products to you if applicable in the recommendations carousel, right under the hotsellers carousel.

To view the related recommended products to a product:

1. Go to the product detail page, either after searching for specific product or clicking on them in the homepage.

2. You will see the related products to a product, right under the product details.

6.1.15 Sending Messages to Vendors

Customers are able to start conversation with Vendors, if and only if they ordered a product from them. Also, customers has to start conversation, otherwise vendors can not start a conversation with customers.

To start the conversation with vendor about an order as a customer (Assuming thay you have ordered at least one product from them)":

1. Hover on "Account" Button in the upper-right corner of the website.

2. Click on "My Order" from the dropdown menu.

3. Select "Active Orders" or "Inactive Orders" according to status of your order from the sidebar.

4. Find the order that you want to send a message about it.

5. Click on the messaging icon right next to the vendor's name.

6. Enter your message

7. Click on "Submit New Message"

To view the conversation as a customer or vendor, you can either see the message by clicking on the link icon in the notifications page (described in below) or you can do the following:

1. Hover on "Account" Button in the upper-right corner of the website.

2. Click on "My Profile" from the dropdown menu.

3. Click on "My Messages" from the sidebar.

4. Click on the conversation that you want to see.

6.1.16 Viewing and Editing Account Information

Both vendors and customers have "My Profile" page, where they can see/edit their profile information. To open the "My Profile" page as vendor or customer:

1. Hover on "Account" Button in the upper-right corner of the website.

2. Click on "My Profile" from the dropdown menu.

To change password as vendor or customer:

1. Enter the old password

2. Enter the new password twice according to the strong password rules.

3. Click on "Change Password"

To edit account information as customer:

1. Enter the changed Name, Surname, Phone Number of Birthday date.

2. Click on "Save Changes"

To edit account information as vendor:

1. Enter the changed Company Name, Company Locations from Google Maps, email, IBAN, Company Website, Contact Number, About Company.

2. Click on "Save Changes"

6.1.17 Viewing Public Vendor Page

Vendors have a **public profile page** for all types of users to view. This page contains information about the vendor such as the company name, contact info, and products of the vendor.

You can see the public page of a vendor:

1. Go to a product page.

2. Click on the seller text next to the photos of the product

When you clicked, it navigates to the public page. You can view vendor information and other products the vendor sells.

6.1.18 Adding Product as Vendor

We have two types of products: Main Products and Subproducts. We can give examples of Main Products as iPhone 10, iPad Air, etc. And the Subproducts would be iPhone 10 256GB Black, etc. If a vendor wants to add a product, they has three options: They can either use the Main Product that has already been used by other vendors and create a new product from that, create a new Main Product and Subproduct, or they can add their name to the already published product. If they opt to use the already existing Main Product, they has to give photos, and should use the already existing parameters (color, size, etc.). To create a new Main Product:

1. Login as vendor

2. Click on the "My Products" from the sidebar.

3. Click on the "Add Product" from the newly opened dropdown menu.

4. Click on the "Create new main product".

5. Fill the required information, enter tags (like "cool", "notebook" ..), choose category and add parameters such as ("color", "size").

6. Click on the "Submit".

To publish a new product using a Main Product:

1. Login as vendor

2. Click on the "My Products" from the sidebar.

3. Click on the "Add Product" from the newly opened dropdown menu.

4. Click on the "List Child Products" right next to the Main Product of your choice.

5. Click on "Create new product from this product".

6. Fill the Price, Amount, Shipment Price, Cargo Company information, new tags, parameters.

7. Upload the images of the product.

8. Click on the "Submit".

9. Wait for the admins to approve your product request.

To add yourself to the already published product:

1. Login as vendor

2. Click on the "My Products" from the sidebar.

3. Click on the "Add Product" from the newly opened dropdown menu.

4. Click on the "List Child Products" right next to the Main Product of your choice.

5. Click on the "Place Product" right next to the product of your choice.

6. Fill the Price, Amount, Shipment Price, Cargo Company information

7. Click on the "Submit".

6.1.19 Viewing Published Products and Editing and Deleting as Vendor

Vendors can **view their products** they have put on sale on the website and can edit information about these products from their panel.

Vendors can view products as follows, considering they have already logged in:

1. Click on "ACCOUNT" button on the top-right side of the page.

2. Click on "My Profile" on the dropdown menu that appeared below.

3. On the page after, click on "My Products" on the left side of the page.

4. Click on "My Products".

Then, vendors can see their published products on the website with thier information. They can also go to this page by clicking "My Products" just after clicking "ACCOUNT".

Vendors can also **search for some of their products** in their My Products page as follows, considering they are at their My Products page:

1. Click on the text area with the search icon on the right.

2. Type in the product name.

3. Hit enter.

Then if the vendor has a product or products with the given name, it/they will be filtered and shown. Then the vendor can hit enter by selecting the search field by not typing any characters to list all of their products.

Vendors can **edit a product** in their My Products page as follows, considering they are at their My Products page:

1. Click on "Edit" on the row of the products to be edited. You will be redirected to a form.

2. On the form, change the fields you want to change. The fields can be changed are:

   - Price
   - Amount
   - Shipment Price
   - Cargo Company

3. Click on "Submit" on the bottom of the form.

Then if the vendor has a product or products with the given name, it/they will be filtered and shown. Then the vendor can hit enter by selecting the search field by not typing any characters to list all of their products.

Vendors can **delete a product** in their My Products page as follows, considering they are at their My Products page:

1. Click on "Delete" on the row of the products to be deleted.

2. On the pop-up appeared, click "Delete" again to confirm the deletion.

After the confirmation, the deletion request will be sent. The admins will confirm the deletion if there are no lingering issues tied with the product.

6.1.20 Vendor Order Page

Vendors can change see their active and inactive orders. Active orders are the ones that are not delivered yet. Inactive orders are those which are delivered, returned and cancelled by the vendor/customer.

Vendors can **view their active orders** as follows, considering they are logged in:

1. Click on "ACCOUNT" on the top right of the page

2. Click on "My Profile"

3. Click on "My Order" on the left side menu, then click on "Active Orders"

Then the vendors can see their listed active orders. The statuses "being prepared" and "on the way" are highlighted according to the current status. "DELIVER" and "CANCEL" buttons do not indicate status, they are buttons only. Vendors can directly go to this page by clicking on "My Order" on the dropdown menu after clicking on "ACCOUNT".

Vendors can **edit the status of active orders** as follows, considering they are logged in and in active orders page:

1. Scroll right to "Status" column if not fitted into the page

2. See the status

3. According to the status to be changed, click on:

   - **being prepared**: Changes order status to being prepared
   - **on the way**: Changes order status to on the way, indicating that the order is in cargo
   - **DELIVER**: Changes order status to delivered, indicating that the order is arrived to the purchaser
   - **CANCEL**: Cancels the order

If DELIVER or CANCEL is clicked, the order will be stated in Inactive Orders, as it is no longer in an active state.
Vendors can change status of the order, according to their delivery state. These changes are also can be tracked by the purchaser of the order.

Vendors can **view their inactive orders** as follows, considering they are logged in:

1. Click on "ACCOUNT" on the top right of the page

2. Click on "My Profile"

3. Click on "My Order" on the left side menu, then click on "Inactive Orders"

The inactive orders are the ones that are delivered, cancelled by the vendor, cancelled by the customer and returned. There are no actions to be carried out in this page.

6.1.21   Creating and Viewing Tickets

Both Customers and Vendors are able to create a ticket about an issue they have. To create a ticket as a vendor or customer:

1. Hover on "Account" Button in the upper-right corner of the website.

2. Click on "My Profile" from the dropdown menu.

3. Click on the "My Tickets" from the sidebar.

4. Click on the "Create New Ticket".

5. Enter "Title" and "Message".

6. Click on the "Save" button.

To view the tickets as a customer or vendor:

1. Go to the "My Tickets" from the sidebar.

2. Click on the conversation of your choice.

To assign yourself to a ticket and make a reply as an admin:

1. Login as admin.

2. Click on the "Tickets" from the sidebar.

3. Click on the Unassigned Tickets.

4. Click on the "Assign Me" button right next to the ticket that you want to assign yourself.

5. Enter your reply.

6. Click on "Submit New Message".

7. Also, you can close the ticket if you think that is applicable.

6.1.22 Getting Notification

When an important event happens, customers and vendors will receive a notification. We can classify these events for customers as:

1. Getting a reply

2. Drop in the price of product that they put into the their watchlist, below a some percentage. (You can check "Adding Product to Watchlist" in the user manual.)

And vendors will receive notification for the events such as:

1. Getting a reply

2. Drop in the amount of product they sell below a threshold.

And to see the notifications, or going to the related page, you can do the following:

1. Hover on "Account" Button in the upper-right corner of the website.

2. Click on "Notifications" from the dropdown menu.

3. You will see descriptions of the notifications.

4. You can click on the "Link Icon" of your choice of notification and visit the related page about that notification.

Note that, you will be see number of notifications that you have, right next to the "Account" button in the upper right corner, if you have any notifications.

6.1.23 How to use Admin Panel

The admin can carry out many operations. These operations can be listed as:

- Product Operations: see requests, available products and main products

- Add/Delete Categories

- Suspend/Delete Accounts

- Tickets: see tickets that are opened by customers and vendors and message with the users

- Activity: see logs of the actions carried out in the website and app

These actions are explained below.

Admins can view, confirm and dismiss pending product requests. These pending requests are:

- Add Product

- Update Product

- Delete Product

Admins can **view the product requests** as follows, considering that they are logged in:

1. Click on "Products" on the left sidemenu

2. Click on Product Requests

The pending requests will be listed in tabular format with the necessary information.

Admins can **confirm the product requests** as follows, considering that they are logged in and on the Product Requests page:

1. Click on "Confirm" on the row of the product request to be confirmed.

The pending request will be confirmed, and complete the process.

Admins can **delete the product requests** as follows, considering that they are logged in and on the Product Requests page:

1. Click on "Delete" on the row of the product request to be confirmed.

The pending request will be deleted and won't complete the operation.

Admins can **view categories** as follows, considering they are logged in:

1. Click on "Categories" on the left sidemenu

Then the current active categories will be listed.

Admins can **add a new category** as follows, considering they are logged in:

1. Click on "Categories" on the left sidemenu

2. Click on "New Category"

3. Type new category name

4. Hit enter

The new category will be added and can be used while adding new main products.

Admins can **delete a category** as follows, considering they are logged in:

1. Click on "Categories" on the left sidemenu

2. Click on the "x" icon of the category that you want to delete

The category will be deleted.

Admins can **view all user accounts** as follows, considering they are logged in:

1. Click on "User Accounts" on the left sidemenu

Then all the accounts will be listed with the necessary information. On this page, admins can also carry out search as:

1. Click on the text field with the search icon on the right side, just on top of the table.

2. Type in the word or characters you want to search

3. Hit enter

Then the accounts will be searched and listed that has match with the given input. One can again list all the accounts by not typing anything in the text field and hit enter.

Admins can **delete an account** as follows, considering they are logged in:

1. Click on "User Accounts" on the left sidemenu

2. Click "Delete" on the row of the account you want to delete

Then the selected user account will be deleted from the system.

Admins can **suspend an account** as follows, considering they are logged in:

1. Click on "User Accounts" on the left sidemenu

2. Click "Suspend" on the row of the account you want to suspend

Then the status of the user will be changed to suspended.

Admins can **view tickets** as follows, considering they are logged in:

1. Click on "Tickets" on the left sidemenu

For further explanation, please look at 6.1.20: Creating and Viewing Tickets

Admins can **view the activity log, also known as the activity stream** as follows, considering they are logged in:

1. Click on "Activities" on the left sidemenu

Then all the users' activites will be listed.

6.2 Android

6.2.1 Home Page

When you first open the Carousel app, you see the home page. Here, there is a banner to welcome users. If you've logged in as a customer, you see a "Recommended For You" section, where you can see the products recommended to you based on your activity on the app (search and purchase). If you haven't logged in, or logged in as vendor, this section won't appear on your screen.

After that there comes "More to See" section. Here, you can see the newly arrived products.

6.2.2 Sign Up

You can choose to sign-up as a customer or vendor. If no user is logged-in, clicking "account" on bottom navigation bar redirects user to login page. From there clicking sign up button redirects to customer sign up. Or you can click the "Do you have a shop?" text on the bottom and then click the sign-up button on the new page to sign-up as a vendor. **Customer** Customer sign-up requires name, surname and email information. Email field is checked for validity. Then after clicking next user is asked to enter a password and confirm it. If these match, and the agreement of privacy policy field is checked, user completes the sign-up process on mobile. Then, to activate their accounts user will be sent emails. After clicking the link sent there, user will be successfully created a customer account. **Vendor** Similarly to customer sign-up, vendors are asked to enter some required fields. As extra, they are required to enter company name and company domain. Then they can verify their sign-up process from the entered company e-mail like in customer sign-up.

6.2.3 Login

Registered users can login from the same page that they have signed up from. They can use default customer login page and enter email/password information to login, or they can choose to click "Do you have a shop?" text and login as a vendor.

6.2.4 Searching Products

You can search products from the search page. While in the home page, click the magnifying class symbol in the bottom navigation to open the search page. You can search a category, like "fashion". Or you can write some keywords according to what you would like to retrieve. An example is "casual strapless dress".

Sorting

Sort the results to see products that you are interested at top. You can sort by:

- Lowest Price

- Highest Price

- Best Rating

- Most Commented

- New

Note: A product can be sold by multiple vendors, and vendors may give different price to the same product. While sorting by price, only the minimum of these prices are regarded.

Filtering

You may want to filter search results to see only what you're interested. Filter by:

- Price

    - You can specify the price range, by choosing from the options ($ 0-50 for example) and/or editing the minimum price/maximum price fields.

- Rating

    - You can select the rating threshold. For example, you can select "4 stars and above" to see 4 or 5 star products.

- Color

    - You can select multiple colors. Same for Size, Brand, and Category.

- Size

- Brand

- Category

Note: Options shown under Price, Rating, Category are hard coded, ie. they don't change. On the other hand, options of Color, Size, Brand are determined according to the search results, they may be different from one search to another. For example, if you've searched for "dress", and only red and black dresses exist in the platform, you'll see only those options for Color when filtering.

6.2.5 Adding Product to Your Cart

Logged-in users can add products to their carts using add to cart buttons in product pages, after selecting the number of products they want to add in the counter. Also, they can add products to carts from homepage, search page or recommendations in product pages or in home page, which only adds one of them.

6.2.6 Adding Product to List

This feature is not connected to backend, however users can see a preview of the feature in if they logged in, go to account in bottom navigation bar, and select my lists from the menu shown there. After creating the lists using create list button in this page they can add products to lists using add to list button in product pages.

6.2.7 Purchase

Logged-in users can press purchase button while they are on the cart section of the bottom navigation bar. This takes users to purchase page, where they can select their previously saved addresses and credit cards. They can also choose to add new ones by pressing the corresponding buttons, where they can see the saved cards/addresses on the order page with the address name user chose or the last 4 numbers of the credit card. Then user can proceed to complete the order by pressing purchase button on the bottom of the page.

6.2.8 Commenting/Rating a Product

After getting to a product page by clicking a product in a search results page, home page or recommendations; on the bottom logged in users can write and see other comments and give a rating by clicking the stars above comment field. The review will be submitted after clicking add button.

6.2.9 Recommendations

Carousel recommends products to its users to enhance their experience while shopping. There are two types of recommendations: product specific, and customer specific. All users can see product specific recommendations under the "You may also like" section in product page. These products are recommended because they are similar to the product you are examining. On the other hand, only customers can see customer specific recommendations. You can see them in the home page, under title "Recommended For You". These are recommended based on your search and purchase history.

6.2.10 Messaging

Logged in users can go to account section, click messages, go to tickets where they can submit new tickets by clicking top right button or see latest tickets, where they can click those tickets and send messages to admins.

6.2.11 Account Information

Registered users can see their account information in user information option in the account section.Users can edit their information via first tab of the profile page as "User Information" if user is a customer and as "Company Information" if user is a vendor. To do that user must activate edit by clicking "EDIT" button

after that user can edit information which is editable. After that, user can click
"SAVE" button to save new information.

6.2.12 Addresses

A customer user can edit his/her address via "Addresses and Credit Cards" tab
in "Account" tab. After going into the tab s/he can click corresponding address'
delete or edit button or click "+" button to add a new one. After that s/he fills
the form in the next page if s/he editing or adding an address and clicks save
to save it to the database.

A vendor can edit his/her address via two ways. S/he can fill form from "My
Address" tab just like a customer or s/he can pick several different locations
from "Google Locations" tab in "Account" tab. If s/he chooses to continue with
google maps, s/he sees his/her saved locations in the tab. S/he can choose any
location to see where it pinned. Then can delete or edit the location. If s/he
wants to add a new one. S/he can choose "New Location" from the drop-down
menu and chooses the new location. Then, s/he can save it as a new location
with "ADD LOCATION" button.

6.2.13 Change Password

A vendor or a customer can change their password with "Change Password"
tab in the "Account" tab. In there they need to confirm their old password and
with that they need to fill two new password boxes. Those two boxes need to
be identical to get a success message.

6.2.14 Logout

Any logged-in user can logout via "Logout" button in the "Account" tab. When
they clicked it, it automatically logs them out.

6.2.15 About, Legals and Contact

Any logged in user can accesss "About", "Legals" and "Contact" tabs via "Ac-
count" tab. They can check their KVKK and GDPR agreement on "Legals".
They can see who created this beautiful app on "About". And lastly, They can
contact with us with the information on "Contact".

6.2.16 How Vendors Update Stock

Login as Vendor. On the home page write desired amount to edittext area at
the side of the product then click update button. Update amount request is
sent to the admin.

6.2.17   How Vendors Change Order Status

Login as vendor. Click orders button on the middle of the bottom app bar. Click to the order you want to change status then choose new status from spinner below product image. Order status is updated.

7 API Documentation:

Our domain of API Documentation.: http://54.165.207.44:8080/api-docs/
P.S.: Our documentation on the URL is nearly complete. However in the report
there are less endpoints documented.

7.1 Client: (/client)

Functionality	URI	Method	Parameters	Return
Login	/login	POST	password, email	tokenCode: String
Logout	/logout	POST	tokenCode	None
Verify Email	/verifyEmail	GET	verifyToken	None
Change Password	/changePassword	POST	tokenCode, newPassword, newPasswordRepeat	None
Forgot Password	/forgotPassword	POST	email, type	Check your mailbox
Reset Password	/resetPassword	POST	resetPasswordToken, newPassword, newPasswordCheck	None

7.2 Admin: (/admin)

Functionality	URI	Method	Parameters	Return
Login	/loginAdmin	POST	email, password	tokenCode
Logout	/logoutAdmin	POST	None	None

7.3 Customer: (/customer)

Functionality	URI	Method	Parameters	Return
Signup as customer	/signup	POST	email, password, passwordConfirm, name, lastName	None
Login with Google	/loginWithGoogle	POST	googleToken	None
Get all customers	/	GET	None	results: number of customers, data: Customer list
Get one customer	/:id	GET	None	data: Customer
Update one customer	/:id	PATCH	customer	data: updated customer
Delete one customer	/:id	DELETE	None	data: null
Get this customer	/me	GET	None	data: Customer
Update this customer	/me	PATCH	customer	data: updated customer
Deactivate this customer	/me	DELETE	None	data: null
Get product recommendation for customer	/me/recommendations	GET	None	data: product list

7.4 Vendor: (/vendor)

Functionality	URI	Method	Parameters	Return
Signup as vendor	/signup	POST	email, password, passwordConfirm, name, lastName, companyName, companyDomainName, locations	None
Login with Google	/loginWithGoogle	POST	googleToken	None
Get all vendors	/	GET	None	results: number of vendors, data: Vendor list
Get one vendor	/:id	GET	None	data: Vendor
Update one vendor	/:id	PATCH	vendor	data: updated vendor
Delete one vendor	/:id	DELETE	None	data: null
Get this vendor	/me	GET	None	data: Vendor
Update this vendor	/me	PATCH	vendor	data: updated vendor
Deactivate this vendor	/me	DELETE	None	data: null
Get this vendor's products	/me/product	GET	None	results: number of products, data: product list
Get this vendor's product	/me/product/:id	GET	None	data: product
Create an update product request	/me/product/:id	PATCH	vendor	data: product request
Create a delete product request	/me/product/:id	DELETE	None	data: product request
Create a product request for new product	/me/product/new	POST	vendor	data: product request
Create a product request for existing product	/me/product/existing	POST	None	data: product request
Get all main products of this vendor	/me/mainProduct	GET	vendor	results: number of main products, data: main products

Functionality	URI	Method	Parameters	Return
Create a product request for deleting one main product	/me/mainProduct/:mpid	DELETE	None	data: product request
Get this vendor's product requests	/me/productRequest	GET	None	results: number of product requests, data: product request list
Get one product request request	/me/productRequest/:id	GET	None	data: product request
Update a product request	/me/productRequest/:id	PATCH	vendor	data: product request
Delete a product request	/me/productRequest/:id	DELETE	None	data: null

7.5 Category: (/category)

Functionality	URI	Method	Parameters	Return
Get all categories	/	GET	None	results: number of categories, data: category list
Post a category	/	POST	name	data: created category
Get one category	/:id	GET	None	data: required category
Update one category	/:id	PATCH	name	data: updated category
Delete one category	/:id	DELETE	None	data: deleted category

7.6 Product: (/product)

Functionality	URI	Method	Parameters	Return
Get all products	/	GET	None	results: number of products, data: product list
Create one product	/	POST	product	data: product
Get one product	/:id	GET	None	data: product
Add a vendor to the product	/:id	POST	vendorSpecifics	data: product
Update one product	/:id	PATCH	product	data: product
Delete one product	/:id	DELETE	None	data: null
Update a vendor in product	/:pid/vendor/:vid	PATCH	product	data: product
Delete a vendor in product	/:pid/vendor/:vid	DELETE	None	data: null
Search for products	/:pid/vendor/:vid	DELETE	None	results: number of products. data: product list
Get search filters	/:pid/vendor/:vid	DELETE	None	data: filters
Get product recommendation	/recommendations/:id	GET	None	data: product list

For search and searchFilters more detailed explanation can be found in the following PR: https://github.com/bounswe/bounswe2020group8/pull/302

7.7   Main Product: (/mainProduct)

Functionality	URI	Method	Parameters	Return
Get all main products	/	GET	None	results: number of main products, data: main product list
Create one main product	/	POST	main product	data: main product
Get one main product	/:id	GET	None	data: main product
Update one main product	/:id	PATCH	main product	data: main product
Delete one main product	/:id	DELETE	None	data: null
Delete vendor from all products of this main product	/:mpid/vendor/:vid	DELETE	None	data: null

7.8   Product Request: (/productRequest)

Functionality	URI	Method	Parameters	Return
Get all product requests	/	GET	None	results: number of main products, data: main product list
Get one product request	/:id	GET	None	data: product request
Update one product request	/:id	PATCH	main product request	data: product request
Delete one product request	/:id	DELETE	None	data: null

7.9 Comment: (/comment)

Functionality	URI	Method	Parameters	Return
Get all comments from all customers for a product	/:pid/all	GET	None	results: number of comments, data: comment list
Get all comments from a customer for a product	/:pid	GET	None	results: number of comments, data: comment list
Create one comment	/:pid	POST	text	results: 1, data: created comment
Update one comment	/:pid	PATCH	_id, text	results: 1, data: created comment
Delete one comment	/:pid	DELETE	_id	data: deleted comment

7.10 Rate: (/rating)

Functionality	URI	Method	Parameters	Return
Rate a product	/:pid	PATCH	rate	results: 1, data: rated main product

7.11 List: (/list)

Functionality	URI	Method	Parameters	Return
Create a list	/	POST	title, wishedProducts	results: number of lists, data: current lists
Get all lists of a customer	/all	GET	None	results: number of lists, data: lists
Delete all lists of a customer	/all	DELETE	None	None
Export all lists cart	/all/export	POST	None	None
Get one list	/:lid	GET	None	results: 1, data: list
Update one list	/:lid	PATCH	title, wishedProducts	results: 1, data: updated list
Delete one list	/:lid	DELETE	None	data: deleted comment
Export one list to cart	/:lid/export	POST	None	None

8 Unit Tests

:

- Ibrahim Ozgurcan Oztas: I've added 3 tests for 2 topics that I've implemented. Those two topics are list and comment. You can check the commit with the SHA: dd36fc38206faccda8bc5285d8c5db031d0569e6

- Öncel Keleş: I've added 4 test suits for 11 different components. These are Login, Product, Vendor Products and Header. You can check the commits with the following SHAs:

    - d9b84d5cd888dbe2903b6af531df97d4ea970b65
    - f76c607a91563aeadfa0878d215a584442188f51
    - 194c290ab429c29640c39b4689014e9d564aaab1
    - 11cc3a04e617eeee3a06b1842b154993f84915b9
    - 2ccf8ab86727bb5c588adadd94b5ca0d7bd1ab40

- Muhammet Tayyip YAZICI: I've implemented unit tests in the following commits:

    - 1a736fa66628026203879e0f41cff3838fd15ce8 : Here, I changed our test suite to Mocha and Chai. I also added a file for database resetting and creating necessary documents for testing.
    - 1ac645f3b15f63e5adb9f0f8ff47c71d7ef30d07: Here, I added tests for services related to /product.
    - f2669d970b10f893e517f383595c88a77ac2b75f: I added test for services related to /customer.
    - ef1025f2c2efe5a2f3f5ce5f27011d5b2304cdaf: I added tests for services related to /vendor.
    - 71a2a03f4b0a51c610bbc8ff62d48039ad4df05b: I added tests for client authentication.
    - 74a887a11bb47d2799af5cb8fc5404c1bb1bb2b7: I added tests for CRUD factory functions. I used the productRequest model to test the factory functions. However, we are using the factory functions to implement endpoints for customer, mainProduct, productRequest, productRequest for vendors and vendors. However only testing for one model was enough.

9   Our Project Plan:

We've inserted our complete project plan in the next page.

		Name	Resource Names	Duration
1	⊞	Shopping Cart-Order-Purchase	Nursima Celik;Onur Enginer	22 days?
2		**Revision**		**22 days?**
3		Requirements - revisit	Everyone	8 days?
4	⊞	Scenarios & mockups - revisit	Oncel Keles	8 days?
5	⊞	Class diagram - revisit	Burak Berk Ozer;Kaan Dura;Muhammet Tayyip Yazici;Yasin Kaya;Ozgurcan Oztas	5 days
6	⊞	Sequence diagram - revisit	Afra Arslan;Ahmet Yigit Gedik;Goksu Baser;Nazim Berke Metin;Onur Enginer	3 days?
7	⊞	Project plan - revisit	Nursima Celik	5 days?
8	⊞	W3C Standards Research	Everyone	8 days
9	⊞	Activity Streams 2.0 Research	Everyone	8 days?
10		**Back end**		**19.875 day...**
11	⊞	Login-Signup	Burak Berk Ozer;Kaan Dura;Muhammet Tayyip Yazici;Ozgurcan Oztas	12 days
12	⊞	Homepage	Burak Berk Ozer;Kaan Dura;Muhammet Tayyip Yazici;Ozgurcan Oztas	12 days?
13	⊞	Dockerize	Ozgurcan Oztas	3 days
14	⊞	AWS Deployment - R&D	Muhammet Tayyip Yazici;Ozgurcan Oztas	7.875 days?
15		**Front end**		**15 days?**
16	⊞	Login-Signup	Afra Arslan;Ahmet Yigit Gedik;Oncel Keles	12 days?
17	⊞	Homepage	Oncel Keles;Yasin Kaya	12 days?
18	⊞	Dockerize	Ahmet Yigit Gedik	3 days?
19	⊞	AWS Deployment - R&D	Ahmet Yigit Gedik	3 days?
20		**Mobile**		**16 days?**
21	⊞	Login-Signup	Goksu Baser;Nazim Berke Metin;Onur Enginer	16 days?
22	⊞	Homepage	Nursima Celik	12 days?
23	⊞	Milestone1	Everyone	0 days?
24		**Back end**		**34 days?**
25	⊞	Backend CI/CD	Muhammet Tayyip Yazici	3 days
26	⊞	Split Client Model	Muhammet Tayyip Yazici	4 days?
27	⊞	Profile - Admin Panel	Muhammet Tayyip Yazici;Ozgurcan Oztas	5 days
28	⊞	Product	Muhammet Tayyip Yazici	7 days
29	⊞	Search	Muhammet Tayyip Yazici	6 days
30	⊞	List-Notification	Ozgurcan Oztas	5 days
31	⊞	Shopping Cart-Order-Purchase	Burak Berk Ozer	11 days
32	⊞	Comment and Rate	Ozgurcan Oztas	4 days
33		**Front end**		**34 days?**
34	⊞	Customer Profile	Afra Arslan;Yasin Kaya	5 days?
35	⊞	Vendor Profile	Afra Arslan	5 days?
36	⊞	Admin Panel	Ahmet Yigit Gedik;Oncel Keles	5 days?
37	⊞	Product	Ahmet Yigit Gedik;Oncel Keles;Yasin Kaya	7 days?
38	⊞	Search	Afra Arslan;Yasin Kaya	6 days?
39	⊞	Shopping Cart	Afra Arslan;Oncel Keles	11 days?
40	⊞	Vendor Product Panel	Afra Arslan;Oncel Keles	5.5 days?
41	⊞	Comment and Rate	Ahmet Yigit Gedik	4 days?
42		**Mobile**		**34 days?**
43	⊞	Customer Profile	Goksu Baser;Nazim Berke Metin	9 days?
44	⊞	Product	Onur Enginer	10 days?
45	⊞	Search	Nursima Celik	12 days?
46	⊞	List	Onur Enginer	12 days?
47	⊞	Shopping Cart	Nursima Celik	10 days?
48	⊞	Purchase	Nursima Celik	10 days?
49	⊞	Vendor Home Page	Nazim Berke Metin	11 days?
50	⊞	Comment and Rate	Onur Enginer	12 days?
51	⊞	Milestone2	Everyone	0 days
52		**Back end**		**27 days**
53		API Doc Multi-file Transformation	Muhammet Tayyip Yazici	4 days
54	⊞	Messaging System	Ozgurcan Oztas	5 days
55	⊞	Ticketing System	Ozgurcan Oztas	5 days
56	⊞	Recommendation System	Muhammet Tayyip Yazici	7 days
57	⊞	Activity Streams 2.0	Ozgurcan Oztas	5 days
58	⊞	Testing	Muhammet Tayyip Yazici;Ozgurcan Oztas	6 days
59	⊞	Bugfix	Burak Berk Ozer;Muhammet Tayyip Yazici;Ozgurcan Oztas	5 days
60		**Front end**		**22 days?**
61	⊞	Messaging System	Yasin Kaya	8 days?
62	⊞	Recommendation System	Yasin Kaya	6 days?
63	⊞	Customer Order-Purchase	Afra Arslan	13 days?
64	⊞	Public Vendor Profile	Afra Arslan	5 days?
65	⊞	Guest User Order-Purchase	Oncel Keles	13 days?
66	⊞	Comment and Rate	Ahmet Yigit Gedik	13 days?
67	⊞	List	Afra Arslan	9 days?
68	⊞	Notification	Yasin Kaya	5 days?
69	⊞	Terms & Conditions	Oncel Keles	2 days?
70	⊞	Vendor Order	Oncel Keles	6 days?
71	⊞	Activity Streams	Yasin Kaya	4 days?
72	⊞	Unit Tests	Oncel Keles	10 days?
73		**Mobile**		**37.201 day...**
74	⊞	Recommendation System	Nursima Celik	24.64 days?
75	⊞	Vendor Order Page	Nazim Berke Metin	24.64 days?
76	⊞	Vendor Profile - Public Profile	Goksu Baser	24.64 days?
77	⊞	Testing	Goksu Baser;Nazim Berke Metin;Nursima Celik;Onur Enginer	22 days?
78	⊞	Messaging System	Onur Enginer	37.201 days?
79	⊞	Milestone 3	Everyone	1 day?

10 Assessment of the Customer Meeting:

10.1 Experience of Yasin Kaya, our Web presenter:

This presentation was my second presentation in the Milestones, and I can easily say that I had a lot more confidence about presenting. We had rehearsals before the Milestone Presentation, and my teammates helped me to correct my errors and overcome my excitement. On the other hand, as we tried the features again and again, I had confidence about our application which I believe very important for the presenters and the team.

That being said, I was shaking a bit during the presentation. I don't know whether it was noticed by anyone, but I was very excited at the beginning. It could be due to the pressure of showing what we did in a nice way. But, I think everything went smoothly, and I hope that we put a positive impression on the customers.

Regarding to the scenario we wrote, I think we did a great job. I believe it was an unique scenario, as we showed how to purchase as an guest user, or detailed admin panel of ours. And I believe, we improved our scenarios thanks to the feedback after Milestone 1. They helped us to notice how the milestone presentations/scenarios are important.

Lastly, I really enjoyed the feedback after the presentation. It was not a one way feedback, but rather like a discussion. Other than a few small bugs/things we forgot about, I felt that our customers were satisfied with the presentation.

10.2 Experience of Nursima Çelik, our Android presenter:

First of all, I noticed that presenting online is way more comfortable, because I felt like presenting to 2-3 people. As far as the presentation concerned, I think it was shorter than what customer expected. That is because I thought I would exceed the time, so I try to present faster and fewer, without wandering in the app. However, that resulted in a shorter presentation. I think we can solve such things by practising more. All being said, I think this did not cause a big problem on the customer side. Because afterwards we talked about the app, and they asked their questions. They didn't seem to be angry or frustrated.

There were some comments and suggestions from customers. Like a sales contract before purchasing, and some other intuitive elements in the app in general. But they are not stated in a negative manner, so I felt really comfortable about these comments. Some were missing things that we were aware also. And for other things it was important to let customers know we are planning to handle these issues. I felt that we were not being judged. We had a good discussion about what can be done for the app.

Also it is relieving that all that is mentioned was doable little things that we missed while trying to complete all features.

Overall, I think the presentation was alright, but improvable.