

Assignment 1

Part 1.

User components

- (User Registration and Authentication) Login / Create account
- (Profile management) Create seller profiles, add information about sellers, add listings with images, prices and quantities.
- (Product Listings and Search) Start page with browsing feature.

Communication components

- (Order notifications) Notifications of new orders
- (Communications inside an order), This includes rating/ reviews with feedback but also contact between seller and buyer.

Transaction components

- (Shopping Cart) Add products to shopping cart
- (Delivery options) Choose delivery method, includes in person pickup
- (Payment api integration) Third party payment integration

Data storage component

- (Stores data from other component)

The user component is responsible for managing users login/creation of accounts with the ability to edit users information. It is also responsible for the creation and editing of products but also for displaying the available products with their information.

The communication component is responsible for communication both at the beginning of a new order by sending a notification to the seller. But also during the sale, and after a sale by providing feedback with a rating both from the seller and the buyer.

The Transaction component is responsible for everything that has to do with the sale of a product, from adding a product to the shopping cart, choosing a delivery method and lastly its responsible for the payments using a payment api.

The data storage component is responsible for providing and storing data from other components.

Part 2.

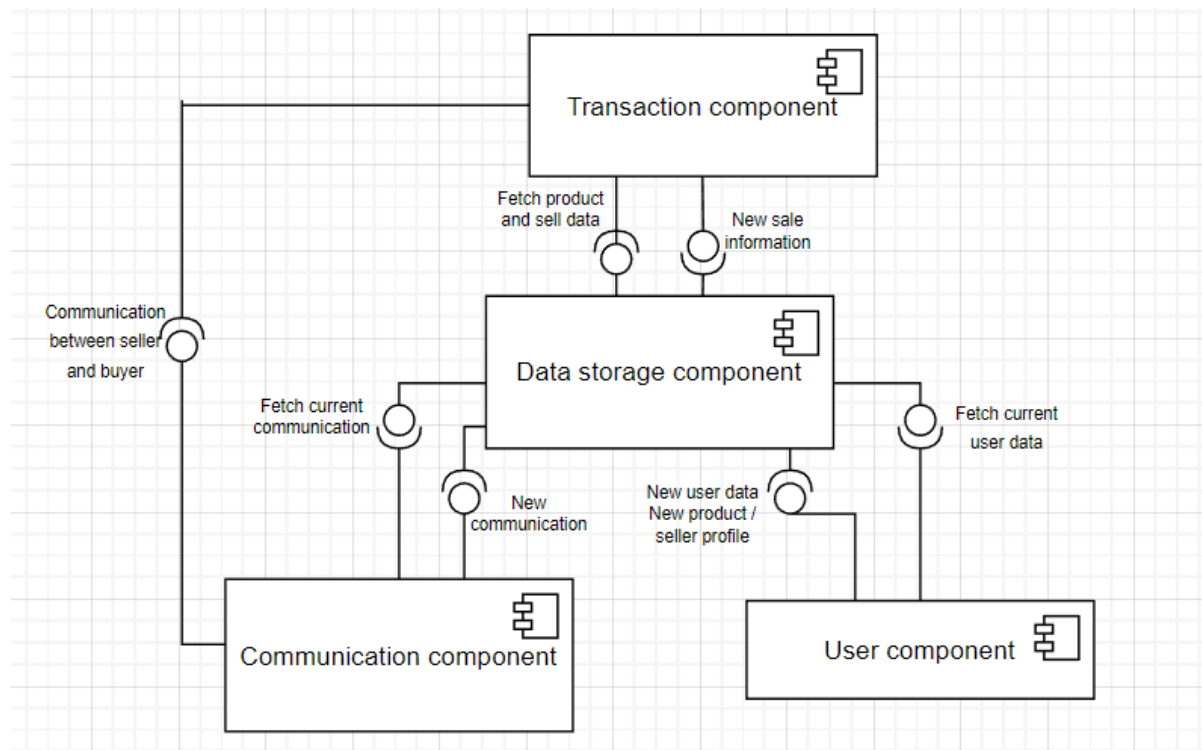
User component requires the data storage component (To fetch user data and to store data about new users and to display product on the product page) also provides to data storage component (To send new user information, update new seller profiles created or updated information about a product.)

Communication component requires data storage component (To fetch current feedback or other communication between seller and buyer), it also provides to sell component and data storage component. (Provides new communication between seller and buyer.)

Transaction component requires data storage component (To Fetch information about a product) ,it also requires Communication component (To fetch communication between seller and buyer)

Data storage component provides to User component, communication component, and sell component. And requires to User component, Communication component and transaction component. (When providing the data storage component sends different kinds of data from its storage and when it requires the data storage component stores the new or updated information in its storage)

Part 3.



Part 4.

- **Backend**

- Server for website hosting (Linux, Software could be apache, Ngix, could also need a backend for the website for example NodeJS or rust)
- Server for database storage (Software could be, mongodb, mysql)
For the backend we need both a server to host the website but we also need a server to host a database that the website can use.

- **Front end**

- User with device that has a web browser (Iphone, Pc , Laptop, android phone)

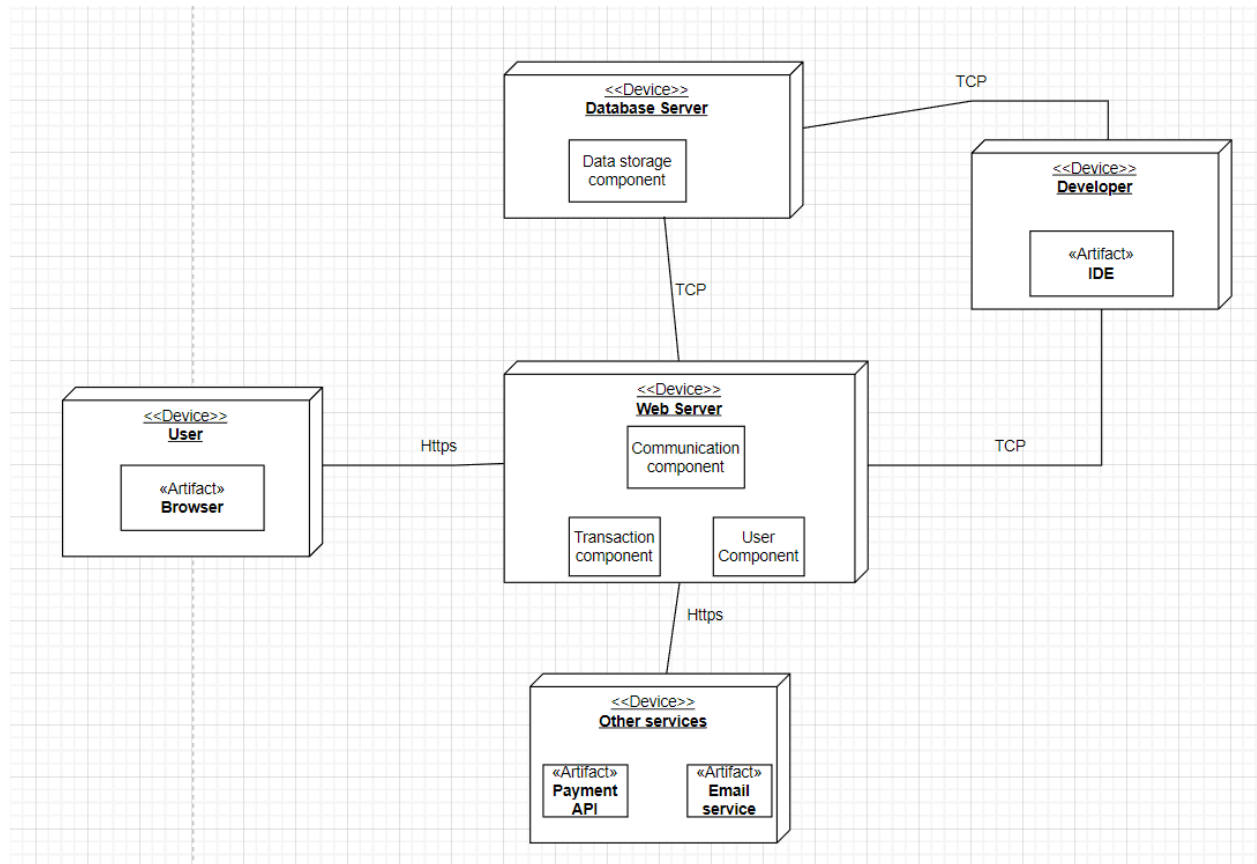
- **Other services**

- Payment API to process payments (Credit card, paypal, swish, Stipe, Klarna)
- Email service to provide notifications and other information using email. (Gmail, hotmail)

- **Maintenance**

- To be able to update or fix/change stuff on the website a developer will need a device (a computer) with an IDE and some program to be able to connect over SSH (TCP) to both the web server and the database. (Vs code)

Part 5.



Change log

Changes on Part 1

Renamed some of the responsibilities and added more clear descriptions on what they are responsible for.

Renamed sell component to Transaction component

Made the text for watch components responsibilities easier to read, and more clear.

Changes on Part 2

Updated with new renamed transactions component.

Updated text on User component to reflect new changes to the component

Changes on part 3

Updated picture with the new renamed transaction component

Changes on part 4

Revised how I displayed the physical architecture. By using bullet points

Added Other services such as payment api and email service

Changes on part 5

- Added the new Other services physical component
- Added the Components from part 1

Extra

Identifying primary actors

- Seller (User)
- Buyer (User)
- Server
- Payment api
- Delivery service

Non primary actors

- Administrator

Identifying use cases

- (Register) An User can register on the platform by giving necessary information.
- (Login)An New User can login either using email and password or using a social media account.
- (Add product) A Seller can add a new product to the website.
- (Search product) A New User can search or browse the available products.
- (Checkout) An Buyer can add items to a shopping cart and complete a purchase, after the purchase the buyer and the seller should be able to give a rating on the other person.
- (Delivery) A third party delivery partner will get information about a incoming package
- (Administrator maintenance) An administrator can check new orders, manage Users ,available products and perform maintenance.

Associate use cases to actors

- Register => New Users and Server with Authentication & Authorization
- Login => Seller and Buyers
- Add product => Seller and Backend server
- Search product => Buyer and Backend server
- Checkout => Buyer and Third party payment system
- Delivery => Third party delivery service
- Administrator maintenance => Administrator, Backend and Authentication & Authorization

Use case diagram

