Group symbol: **W04IST-SI4023P-3**

Team: **3.1**

Project title: **Market of Things**

Team members (*filled by PM, Team Leader*):

No	Name	Surname	Student ID	Role
1	Daniil	Kuznetsov	266943	*PM, Team Leader*
2	Volodymyr	Shepel	266617	*Full Stack Developer, DevOps*
3	Valentina	Bolbas	268891	*Business Analyst, Full Stack Developer*

1. Elaboration of application concept (F1)

1.1. Project (business) goals

Present as a tree of the project’s objectives, i.e., decomposition of general project objective into specific ones. A goal should be:

- relevant to the project,
- important from the perspective of the end-user,
- achievable,
- measurable,
- realistic (achievable in terms of constraints: cost and time-oriented, technological, organizational, human resources, legal).

To improve our product and service, we are aligning our business goals and needs with the following key points:

Customer Satisfaction: Enhance the overall customer experience and satisfaction by delivering a user-friendly and highly available marketplace.
Reliability and Uptime: Achieve a 95% or higher uptime rate to ensure continuous access to our services.
Scalability: Implement a microservice architecture to support our growing user base and ensure seamless scalability.
Security: Prioritize user security to safeguard sensitive data and protect user privacy.

Goal 1:

- **Specific**: Develop a web service for a shared marketplace with a focus on achieving 95% uptime, implementing a fault-tolerant system with microservice architecture, and prioritizing user security and a positive user experience.
- **Measurable**: Monitor and measure uptime using appropriate tools to ensure a 95% or higher uptime rate. Track and measure the effectiveness of the fault-tolerant (for some extent) system by monitoring the number of faults and outages.
- **Achievable**: Allocate dedicated time and resources for the technical development, ensuring that you have the necessary infrastructure and expertise in microservices, and web security.
- **Relevant**: These technical goals are directly related to the project's main purpose of creating a highly available and user-friendly marketplace.
- **Time-Bound**: Complete all required design stages by the end of the 8th week, finalize the software production phase as per the project timeline, and finish all software testing within the allocated timeframes.

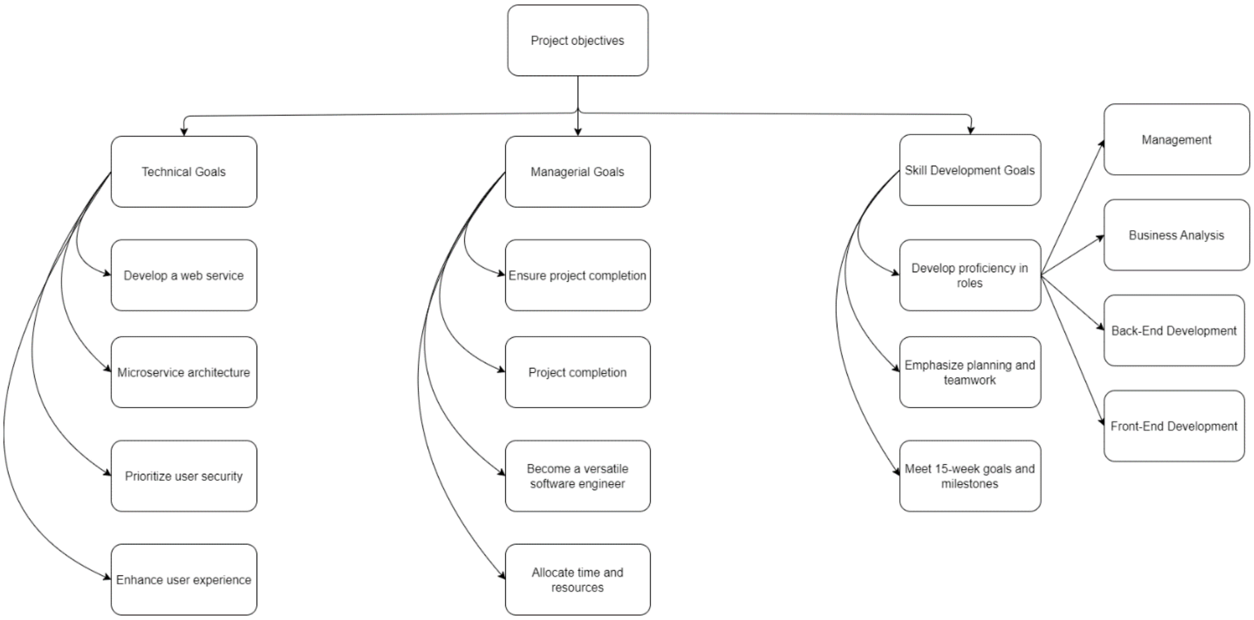
Goal 2:

- **Specific**: Ensure that all aspects of the project are completed within the specified 15-week period, including design stages, software production, and testing.
- **Measurable**: Monitor progress through weekly reports, highlighting tasks completed and skills acquired in each role, and track the completion of predefined milestones related to each role.
- **Achievable**: Allocate dedicated time and resources for learning and practicing various software engineering roles, and ensure that the workload is manageable within the 15-week timeframe.

- **Relevant**: These managerial goals are aligned with the overall objective of becoming a well-rounded software engineer capable of performing various roles effectively.
- **Time-Bound**: Establish a clear 15-week timeline with specific goals and milestones for each week, focusing on different roles and skills.

Goal 3:

- **Specific**: Develop proficiency in various software engineering roles, including Management, Business Analysis, Back-End, and Front-End Development, while emphasizing planning and teamwork skills throughout the 15-week period.
- **Measurable**: Track progress through weekly reports, highlighting the tasks completed and skills acquired in each role, and set specific deadlines for achieving predefined milestones related to each role.
- **Achievable**: Allocate dedicated time and resources for learning and practicing each role, ensuring that the workload is manageable within the 15-week timeframe.
- **Relevant**: Align skills development with the overall objective of becoming a well-rounded software engineer capable of performing various roles effectively.
- **Time-Bound**: Establish a clear 15-week timeline with specific goals and milestones for each week, focusing on different roles and skills.



1.2. Identification of project’s internal and external Stakeholders

Internal Stakeholders

- Project Manager/Team Leader
- Product Manager
- Business Analyst
- Solution Architect
- UX Designer
- Full-stack Developers (front-end and back-end)
- Testers
- Tech Support

External Stakeholders

- End-users: Buyers
- End-users: Sellers (customers)
- Payment Processors and Financial Institutions
- Shipping Providers (Shipping and Logistics like Post)
- Web Hosting and Domain Providers
- Teacher/Supervisor

Internal Stakeholders

Name	Description	Interests
Project Manager/ Team Leader	A person responsible for planning, executing, and overseeing the project. Plays a pivotal role in coordinating the efforts of various team members, ensuring tasks are completed on time, and aligning the project with organizational goals.	- Successful and timely completion of the project - Ensuring that all team members work cohesively towards achieving project goals by setting clear objectives, establishing timelines, and allocating resources efficiently - Improving management skills
Product Manager	A person who defines business needs, requirements, and priorities of features of the product - the e-commerce platform	- Understanding the needs of both buyers and sellers, as well as the broader objectives of the platform - Defining a business value of the platform
Business Analyst	A person who describes business requirements as functional specifications, use cases, user stories, etc. to define detailed requirements for the development team	- Ensuring that the e-commerce platform meets the business goals and requirements defined by the Product Manager - Providing clear and detailed documentation of requirements - Enabling the Solution Architect and the development team to build a solution that precisely addresses these requirements
Solution Architect	A solution architect responsible for overall solution architecture design decisions and architecture documentation.	- Designing a target solution architecture of the e-commerce platform which meets architecturally significant requirements of the project: functional requirements, constraints, and quality attributes (like security, performance, availability, etc.) and functions seamlessly
Full-stack Developer	A software engineer with expertise in both front-end and back-end development. Is proficient in a variety of programming languages and frameworks, allowing them to create functional and visually appealing web applications and back-end services.	- Developing the skills to create a robust and efficient system - Training to work as a team, collaborating with other team members - Practicing integrating front-end and back-end components effectively - Adopting best practices, utilizing modern technologies and efficient solutions

		- Improving knowledge on security, separation of concerns
UX Designer	A person responsible for crafting visual elements and aesthetics for the e-commerce platform.	- Crafting an engaging and visually appealing interface for the e-commerce platform - Dedicated to creating a design that not only catches the user's eye but also provides a seamless and intuitive user experience - Improving UX and visual design skills
Tester	A person responsible for evaluating the functionality and quality of the e-commerce platform, who systematically identifies, documents, and reports any defects or issues in the software.	- Quality assurance that the platform performs as intended, offering a seamless and error-free experience for both buyers and sellers - Maintaining a high level of quality, ultimately leading to enhanced user satisfaction and trust in the platform - Improving quality assurance skills
Tech Support	A person responsible for the system maintenance after go-live	- Improving incident management, troubleshooting, and other maintenance skills - Maybe, would not be covered in scope of the project within the course

External stakeholders

Name	Description	Interests
End-user: Buyer	An individual who interacts directly with the e-commerce platform to browse, select, and purchase products or services.	- Obtaining a satisfying and convenient shopping experience through the e-commerce platform. - Seeking for a seamless browsing and purchasing experience, with features including easy navigation, detailed product information, secure payment options, and efficient customer support.
End-user: Seller (customer)	Individual or business that utilizes the e-commerce platform to list, market, and sell the products to potential buyers. Acts as supplier or merchant, leveraging the platform's reach and features to reach a wider audience and conduct their business.	- Seeking for features that allow for easy product listings, robust inventory management, secure payment processing, and access to a large and diverse customer base.

Financial Institution/Payment Processor	External entities that facilitate secure and efficient online transactions. Financial institution can include bank, credit card company, and other organizations that manage monetary transactions and accounts. Payment processor is a specialized company that handles the electronic authorization and processing of payments between buyers and sellers.	- e-commerce platform's ability to securely and reliably process payments. - Ensuring that transactions are conducted in compliance with industry standards and regulations. - Minimizing fraud and ensuring the security of financial information.
Web Hosting and Domain Provider	External companies that offer services related to website hosting and domain registration. Web hosting involves providing the infrastructure and server space needed to store and serve website content. Domain provider, on the other hand, facilitates the registration and management of website domain names.	- Ensuring that the platform has reliable hosting services and a registered domain name. - Guaranteeing that the platform has sufficient server capacity, uptime, and performance to support user traffic and transactions. - Maintaining a secure hosting environment to protect the platform's data and user information.
Teacher/supervisor	A person who's goal is to supervise and evaluate the students' performance during the project development.	- Ensuring that the Team completed all stages of the project according to the guidance and predefined deadlines. - evaluating the project's quality for each stage separately.

1.3. Domain description

- Description of phenomena in the application domain that can be observed.
- Definitions of concepts that abstract these phenomena.
- The concepts include:
    - entities – things that one can "distinguish" from the fraction of reality,
    - relationships – either properties (unary relationships of entities) that yield some information about them or relationships between two or more entities (binary or *n*-ary relations),
    - events – things that can happen (occur).
- Use UML class diagram to depict entities (class with attributes), relationships (associations).
- This diagram **must** be supplemented with the list of entities, relationships and events along with their description in natural language.

Phenomena in the Application Domain:

User Roles: Within the application domain, there exist two distinct user categories - Customers, and Administrators. Customers engage in product exploration and purchase, while Administrators oversee service operations but are not eligible for self-enrolment.

- **User Registration**: Prospective users must initiate a formal registration request through email to obtain registered status.

- **Product Management**: The system manages various aspects related to products, encompassing product listings, availability, and comprehensive product information. Sellers possess the authority to create, update, and withdraw product listings.

- **Product Reviews**: Customers are empowered to submit comprehensive product reviews and ratings, which constitute a valuable feedback mechanism regarding product quality and desirability.

- **Payment Processing**: The system rigorously executes payment processing for customer orders to ensure successful financial transactions.

- **Inventory Management**: The system diligently maintains and governs inventory, serving as a critical reference point for both customers and sellers.

- **Shopping Cart**: Customers possess the capability to add products to a shopping cart, facilitating the review and modification of their product selections before the finalization of orders.

- **Order Placement**: Customers initiate the order placement process to acquire the products within their shopping cart, ultimately culminating in transaction completion.

Definitions of Concepts:
Entities:

- **Administrator**: An entity fulfilling the role of overseeing service management but ineligible for self-registration.
- **Customer**: An entity representing a user with privileges to peruse products, add them to a shopping cart, place orders, and furnish product evaluations.
- **Address**: An entity specifying the shipping destination for orders, storing recipient details, street address, city, state, postal code, and country, ensuring precise order deliveries.
- **Order**: An entity capturing the customer's concluded request to purchase products from their shopping cart.
- **Product**: An entity embodying a tangible or digital item available for purchase on the platform.
- **Shopping Cart**: An entity representing a provisional storage container permitting customers to aggregate and manage their product selections prior to order finalization.
- **Product Review**: An entity embodying customer feedback and ratings regarding a specific product.
- **Product Inventory**: An entity representing the warehouse or inventory location where products are stored and managed within the e-commerce system, allowing for efficient tracking and management of available merchandise
- **Category**: An entity representing product categories, enabling the organization and grouping of products based on shared characteristics or attributes, simplifying the browsing and searching experience for users on the e-commerce platform.

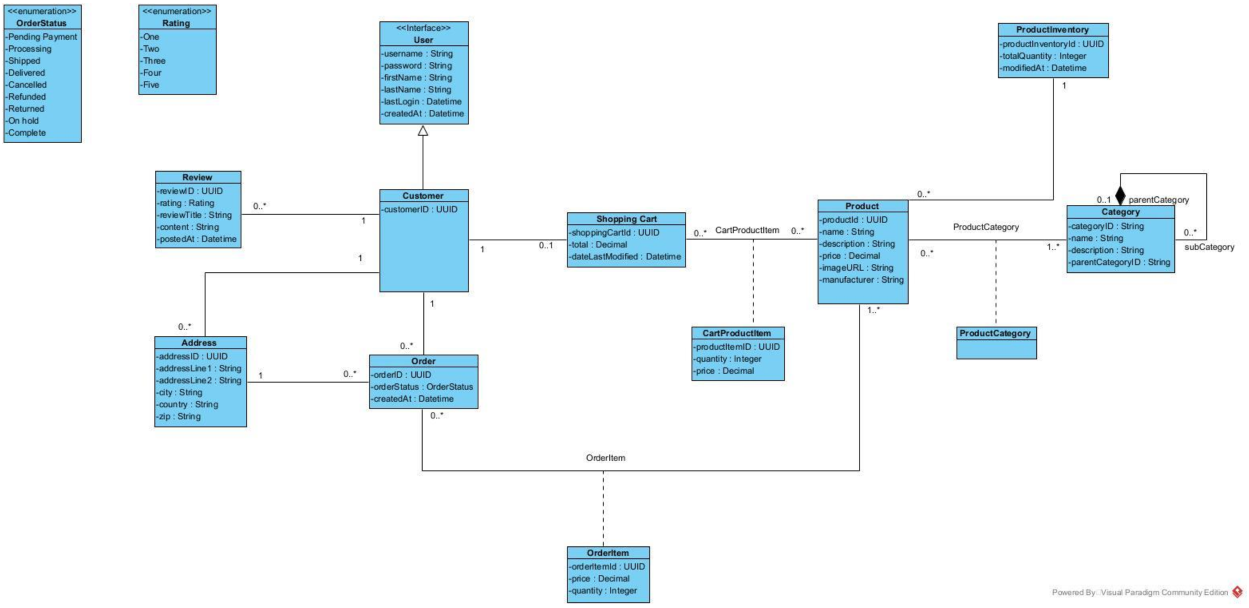
Relationships:

- **Customer-Shopping Cart**: A relationship connecting customers with their individualized shopping carts.
- **Customer-Order**: A relationship encompassing the association between customers and the orders they place.
- **Customer-Product Review**: A relationship connecting customers with the product reviews they write or provide, indicating the reviews submitted by each customer for various products.
- **Product-Product Review**: A relationship associating products with the pertinent product reviews.
- **Product-Category**: A relationship associating products with specific product categories, allowing products to be organized and grouped based on shared characteristics or attributes, simplifying the browsing and searching experience for users on the e-commerce platform.
- **Product-Product Inventory**: A relationship linking products to the corresponding product inventory, ensuring efficient tracking and management of product availability within the e-commerce system. This connection helps maintain accurate stock information for products.
- **Customer-Address**: A relationship connecting the "Customer" class to the "Address" class, indicating the association between customers and their respective addresses. This association represents the shipping or billing address associated with a customer.
- **Order-Address**: A relationship connecting the "Order" class to the "Address" class, showing the connection between orders and the address information. This represents the shipping address associated with a specific order.
- **Order-Product**: A relationship connecting the "Order" class to the "Product" class, representing the products that are included in a specific order. This association shows the connection between orders and the products that customers have purchased.

Events:

- **User Registration Request**: An event representing the initiation of a registration request by a potential user via email.
- **Customer Login**: An event that occurs when a customer successfully logs into their account on the e-commerce platform.
- **Product Listing**: An event indicating the creation of a new product listing by a seller.
- **Product Added to Cart**: An event indicating when a customer adds a product to their shopping cart.
- **Product Removed from Cart**: An event representing the removal of a product from a customer's shopping cart.
- **Product Quantity Update in Cart**: An event marking changes in the quantity of a product within a customer's shopping cart.
- **Address Added**: An event denoting the addition of a new shipping or billing address to a customer's profile.
- **Address Update**: An event triggered when a customer updates their existing shipping or billing address.
- **Order Cancellation**: An event occurring when a customer cancels an order before it is processed or shipped.
- **Product Purchase**: An event marking the successful purchase of a product by a customer, culminating in an order.
- **Product Review Submission**: An event denoting the submission of a product review and rating by a customer.
- **Payment Authorization**: An event signifying the system's authorization of a payment transaction.
- **Inventory Update**: An event reflecting changes in product availability due to purchases or replenishment.

- **Shopping Cart Modification**: Events recording alterations to the contents of a customer's shopping cart.
- **Order Placement**: An event marking the commencement of the order placement process by a customer.



Order Status possible values:

- **Pending Payment**: This status is used for newly created orders that have not been paid for yet.
- **Processing**: The order is being processed, which may include tasks like packing and shipping.
- **Shipped**: The order has been shipped to the customer.
- **Delivered:** The order has been successfully delivered to the customer.
- **Cancelled:** The order was cancelled before it was shipped or delivered.
- **Refunded:** The order was cancelled, and a refund has been issued to the customer.
- **Returned:** The customer has returned one or more items from the order.
- **On Hold**: The order is temporarily on hold for various reasons, such as addressing issues with payment or customer inquiries.
- **Complete**: The order has been successfully processed and delivered.

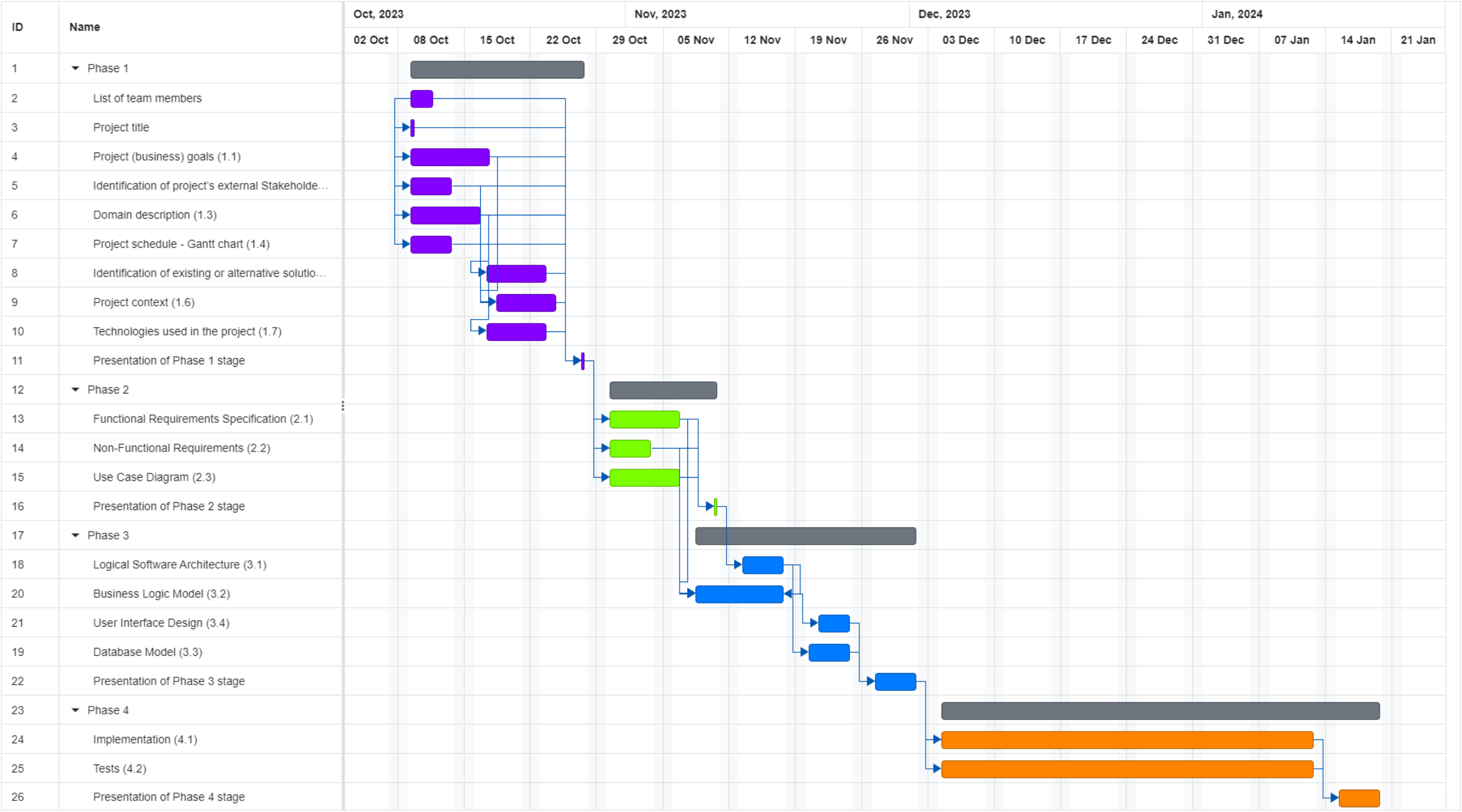
Self-association (composition) in the e-commerce class diagram
is used to represent how categories and subcategories are connected within the website.
It's used here to illustrate the idea that categories (e.g., "Electronics" or "Clothing") can contain subcategories (e.g., "Smartphones" or "Women's Apparel"). This helps organize products, making it easier for users to navigate and find what they're looking for on your website.

Attributes (e.g., productId, reviewId) act as unique labels for information. They are essential for maintaining order, preventing data repetition, and simplifying data organization. Think of them as crucial labels for data.

1.4. Project schedule (Gantt chart)

- tasks with dependencies,
- start time and duration,
- resource allocation: staff, costs, equipment.
- S2s, s2e,e2e, e2s

- Gant chart tool



ID	Name
1	Phase 1
2	List of team members
3	Project title
4	Project (business) goals (1.1)
5	Identification of project's external Stakeholde...
6	Domain description (1.3)
7	Project schedule - Gantt chart (1.4)
8	Identification of existing or alternative solutio...
9	Project context (1.6)
10	Technologies used in the project (1.7)
11	Presentation of Phase 1 stage
12	Phase 2
13	Functional Requirements Specification (2.1)
14	Non-Functional Requirements (2.2)
15	Use Case Diagram (2.3)
16	Presentation of Phase 2 stage
17	Phase 3
18	Logical Software Architecture (3.1)
20	Business Logic Model (3.2)
21	User Interface Design (3.4)
19	Database Model (3.3)
22	Presentation of Phase 3 stage
23	Phase 4
24	Implementation (4.1)
25	Tests (4.2)
26	Presentation of Phase 4 stage

Task #	Task Description	Start Date	End Date	Duration	Predecessor Tasks	Assigned Team Members
1	Phase 1	Oct 09, 2023	Oct 27, 2023	15 days		Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
2	List of team members	Oct 09, 2023	Oct 11, 2023	3 days	1SS	Daniil Kuznetsov
3	Project title	Oct 09, 2023	Oct 09, 2023	1 day	2SS	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
4	Project (business) goals (1.1)	Oct 09, 2023	Oct 17, 2023	7 days	2SS	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
5	Identification of project's external Stakeholders (1.2)	Oct 09, 2023	Oct 13, 2023	5 days	2SS	Valentina Bolbas

6	Domain description (1.3)	Oct 09, 2023	Oct 16, 2023	6 days	2SS	Volodymyr Shepel
7	Project schedule - Gantt chart (1.4)	Oct 09, 2023	Oct 13, 2023	5 days	2SS	Daniil Kuznetsov
8	Identification of existing or alternative solutions (1.5)	Oct 17, 2023	Oct 23, 2023	5 days	6FS	Valentina Bolbas
9	Project context (1.6)	Oct 18, 2023	Oct 24, 2023	5 days	6FS,5FS,4FS	Daniil Kuznetsov
10	Technologies used in the project (1.7)	Oct 17, 2023	Oct 23, 2023	5 days	6FS	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
11	Presentation of Phase 1 stage	Oct 27, 2023	Oct 27, 2023	1 day	2FS+9 days,3FS+7 days,4FS+5 days,5FS+7 days,6FS+7 days,7FS+7 days,8FS+2 days,9FS+2 days,10FS+2 days	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
12	Phase 2	Oct 30, 2023	Nov 10, 2023	10 days	16FF	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
13	Functional Requirements Specification (2.1)	Oct 30, 2023	Nov 06, 2023	6 days	11FS	Valentina Bolbas
14	Non-Functional Requirements (2.2)	Oct 30, 2023	Nov 03, 2023	5 days	11FS	Volodymyr Shepel
15	Use Case Diagram (2.3)	Oct 30, 2023	Nov 06, 2023	6 days	11FS,14SS,13SS	Daniil Kuznetsov
16	Presentation of Phase 2 stage	Nov 10, 2023	Nov 10, 2023	1 day	15FS+3 days,14FS+3 days,13FS+2 days	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
17	Phase 3	Nov 08, 2023	Dec 01, 2023	18 days	20SS	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
18	Logical Software Architecture (3.1)	Nov 13, 2023	Nov 17, 2023	5 day	16FS	Volodymyr Shepel,

						Valentina Bolbas
19	Database Model (3.3)	Nov 20, 2023	Nov 24, 2023	5 days	18FS	Volodymyr Shepel, Daniil Kuznetsov
20	Business Logic Model (3.2)	Nov 08, 2023	Nov 17, 2023	8 days	18FF,13FS,14FS,15FS	Valentina Bolbas, Volodymyr Shepel
21	User Interface Design (3.4)	Nov 21, 2023	Nov 24, 2023	4 days	20FS+1 day	Daniil Kuznetsov, Volodymyr Shepel
22	Presentation of Phase 3 stage	Nov 27, 2023	Dec 01, 2023	5 days	21FS,19FS	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
23	Phase 4	Dec 04, 2023	Jan 19, 2024	35 days	22FS	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
24	Implementation (4.1)	Dec 04, 2023	Jan 12, 2024	30 days	22FS	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
25	Tests (4.2)	Dec 04, 2023	Jan 12, 2024	30 days	24SS	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel
26	Presentation of Phase 4 stage	Jan 15, 2024	Jan 19, 2024	5 days	25FS,24FS	Daniil Kuznetsov, Valentina Bolbas, Volodymyr Shepel

1.5. Identification of existing or alternative solutions

Each competitor should be characterized with

- name of the project/application,
- main features,
- advantages,
- disadvantages.

Shop name Comparison parameter	Market of Things – our project	X-kom	ZARA	H&M	Peek & Cloppenburg	Media Expert
Filtering, Appearance, User experience while choosing a product						
User-friendly, well-organized cathegories	May	+	- [2]	+	+	- [1]
User-friendly filters	May	+	- [3]	+	+	+
Grid / List interchangable dispay option	Probably	+	+	-	-	+
Button “go to top of the page”	Must	-	-	+	+	+
Access to filters when they disappear	Probably	-	+	+	-	-
Nested cathegories	Must	+	-	+	+	+
Notifications request	Probably	-	-	-	-	+
Search a product option	Must	+	+	+	+	+
Reasonably short loading speed of the page	May	+	+	+	+	-
Load page instantly after applying each filter	May	+	+	+	+	-
“Clear Filters” ability	Must	+	-	+	+	+
“Apply Filters” ability	May	-	-	-	-	+
Compare products option	Probably	+	-	-	-	+
Features of a product page						
“Like” a product option / favourites list	May	+	+	+	+	+
Product Rating	Must	+	-	+	-	+
Opinions / Reviews	Must	+	-	+	-	+
Like / Dislike the review option	Must	+	NA	-	NA	+
Video about the product	Probably	+	-	-	-	+
Additional Accessories option appearing when adding to the cart / at the bottom of the product page	Probably	+	+	+	+	+
Similar products list at the bottom of the product page	May	+	+	+	+	+
Previously Viewed option at the bottom of the product page	May	+	-	+	+	-
Products from the same manufacturer list at the bottom of the product page	May	-	NA	NA	+	+
Brands (manufacturers) list at the bottom of the page	Must	-	NA	NA	+	+ -
Amount of available items of a certain product / Check Availability	Must	+	+	+	+ -	+
Cart, Order and Buyer account features						
Sign in with Google	Probably	-	-	-	-	+
Big cart capacity	Must	+	+	+	+	+
Additional products / accessories at the botton of the cart page	Probably	+	+	+	+	+
Check Order Status option	May	+	+	+	+	+
Share Cart option	May	-	-	-	-	+
Contact Seller (phone, email, location, chat, social media, etc.)	Probably	+	+	+	+	+
Present package option in the cart	May	-	+	-	-	+
General						
Chatbot with the seller / shop	May	+	+	+	-	-

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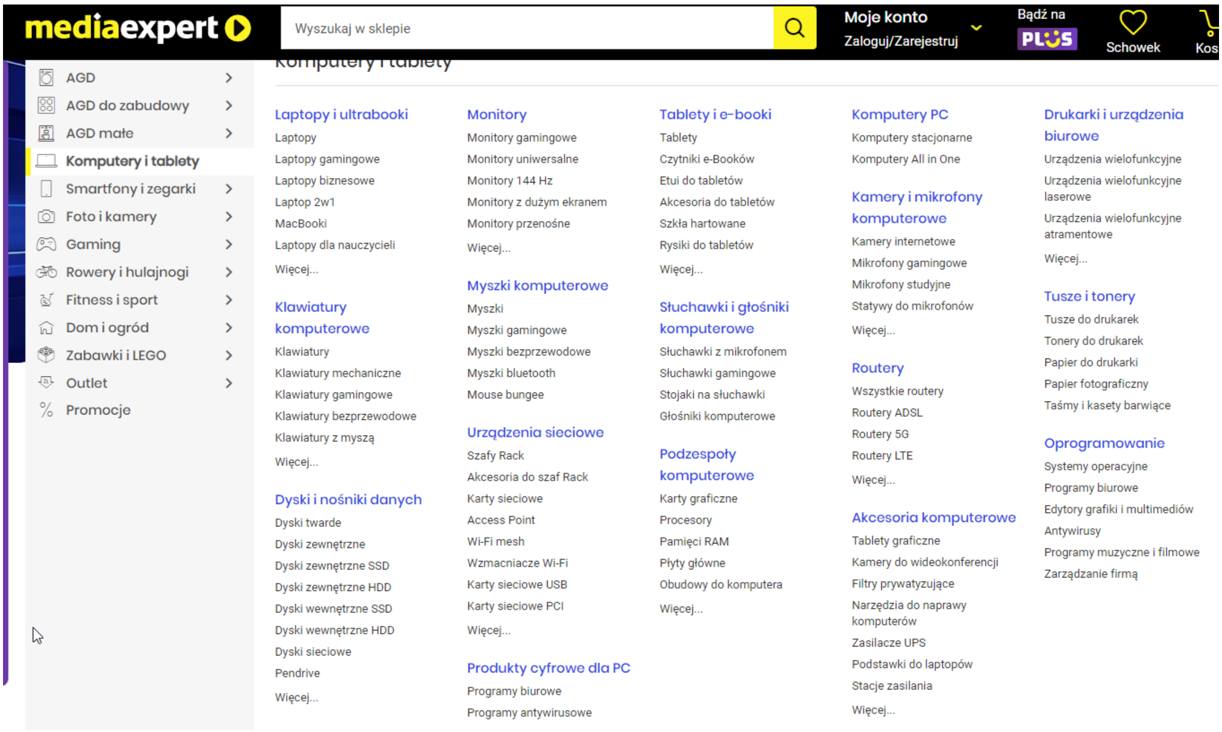

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Wyszukaj w sklepie

Moje konto
Zaloguj/Zarejestruj

Bądź na PLUS

Schowek

Kos

Komputery i tablety

- AGD
- AGD do zabudowy
- AGD małe
- Komputery i tablety
- Smartfony i zegarki
- Foto i kamery
- Gaming
- Rowery i hulajnogi
- Fitness i sport
- Dom i ogród
- Zabawki i LEGO
- Outlet
- Promocje

Laptopy i ultrabooki
Laptopy
Laptopy gamingowe
Laptopy biznesowe
Laptop 2w1
MacBooki
Laptopy dla nauczycieli
Więcej...

Klawiatury komputerowe
Klawiatura
Klawiatury mechaniczne
Klawiatury gamingowe
Klawiatury bezprzewodowe
Klawiatury z myszą
Więcej...

Dyski i nośniki danych
Dyski twarde
Dyski zewnętrzne
Dyski zewnętrzne SSD
Dyski zewnętrzne HDD
Dyski wewnętrzne SSD
Dyski wewnętrzne HDD
Dyski sieciowe
Pendrive
Więcej...

Monitory
Monitory gamingowe
Monitory uniwersalne
Monitory 144 Hz
Monitory z dużym ekranem
Monitory przenośne
Więcej...

Myszki komputerowe
Myszki
Myszki gamingowe
Myszki bezprzewodowe
Myszki bluetooth
Mouse bungee

Urządzenia sieciowe
Szafy Rack
Akcesoria do szaf Rack
Karty sieciowe
Access Point
Wi-Fi mesh
Wzmacniacze Wi-Fi
Karty sieciowe USB
Karty sieciowe PCI
Więcej...

Produkty cyfrowe dla PC
Programy biurowe
Programy antywirusowe

Tablety i e-booki
Tablety
Czytniki e-Booków
Etui do tabletów
Akcesoria do tabletów
Szkła hartowane
Rysiki do tabletów
Więcej...

Słuchawki i głośniki komputerowe
Słuchawki z mikrofonem
Słuchawki gamingowe
Stojaki na słuchawki
Głośniki komputerowe

Podzespoły komputerowe
Karty graficzne
Procesory
Pamięci RAM
Płyty główne
Obudowy do komputera
Więcej...

Komputery PC
Komputery stacjonarne
Komputery All in One

Kamery i mikrofony komputerowe
Kamery internetowe
Mikrofony gamingowe
Mikrofony studyjne
Statywy do mikrofonów
Więcej...

Routery
Wszystkie routery
Routery ADSL
Routery 5G
Routery LTE
Więcej...

Akcesoria komputerowe
Tablety graficzne
Kamery do wideokonferencji
Filtry prywatyzujące
Narzędzia do naprawy komputerów
Zasilacze UPS
Podstawki do laptopów
Stacje zasilania
Więcej...

Drukarki i urządzenia biurowe
Urządzenia wielofunkcyjne
Urządzenia wielofunkcyjne laserowe
Urządzenia wielofunkcyjne atramentowe
Więcej...

Tusze i tonery
Tusze do drukarek
Tonery do drukarek
Papier do drukarki
Papier fotograficzny
Taśmy i kasety barwiące

Oprogramowanie
Systemy operacyjne
Programy biurowe
Edytory grafiki i multimediów
Antywirusy
Programy muzyczne i filmowe
Zarządzanie firmą

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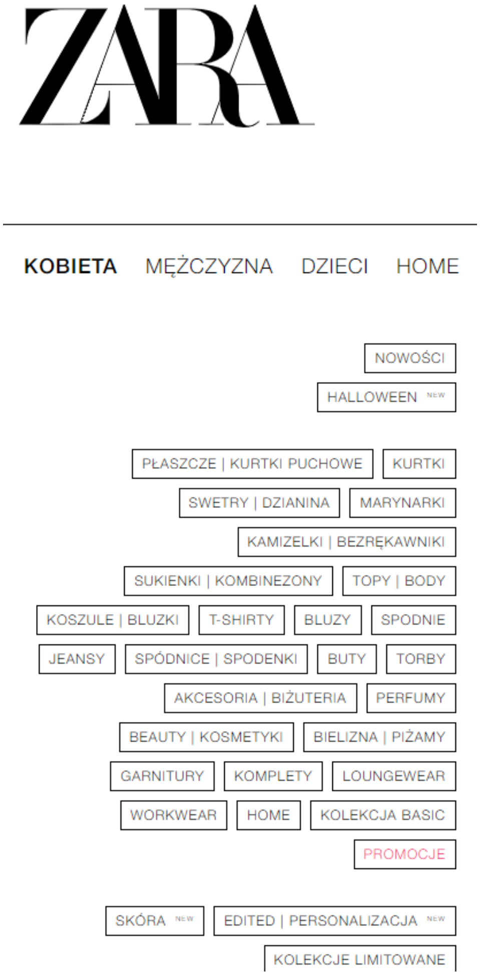
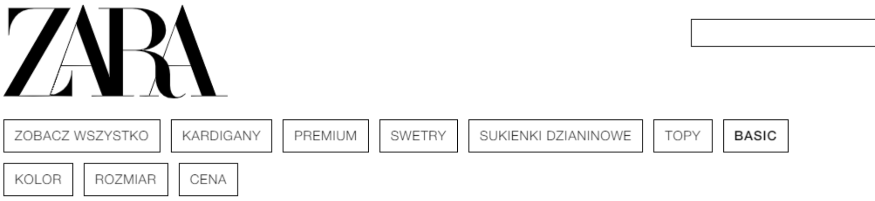


ZARA

KOBIETA MĘŻCZYZNA DZIECI HOME

NOWOŚCI
HALLOWEEN NEW
PŁASZCZE | KURTKI PUCHOWE
KURTKI
SWETRY | DZIANINA
MARYNARKI
KAMIZELKI | BEZRĘKAWNIKI
SUKIENKI | KOMBINEZONY
TOPY | BODY
KOSZULE | BLUZKI
T-SHIRTY
BLUZY
SPODNIE
JEANSY
SPÓDNICE | SPODENKI
BUTY
TORBY
AKCESORIA | BIŻUTERIA
PERFUMY
BEAUTY | KOSMETYKI
BIELIZNA | PIŻAMY
GARNITURY
KOMPLETY
LOUNGEWEAR
WORKWEAR
HOME
KOLEKCJA BASIC
PROMOCJE
SKÓRA NEW
EDITED | PERSONALIZACJA NEW
KOLEKCJE LIMITOWANE

[3]:



ZARA

ZOBACZ WSZYSTKO
KARDIGANY
PREMIUM
SWETRY
SUKIENKI DZIANINOWE
TOPY
BASIC
KOLOR
ROZMIAR
CENA

1.6. Project context

Condensed!

- application context
- technological context
- organisational context
- legal context – gdpr etc.

Indicate aspects that are important for the product. It should lead to the identification of constraints of the project and the chances for its development.

1. Application Context:

a. API Integration: The e-commerce website integrates with multiple APIs, including payment gateways (e.g., PayPal, Stripe or Blik), shipping carriers (e.g., UPS, FedEx or inPost), and a product catalogue API to update product information.

   b. Data Exchange Protocols: The application uses RESTful APIs for real-time inventory updates and SOAP APIs for payment processing. These protocols are chosen to ensure secure and efficient data exchange.

2. Technological Context:
   a. Network Constraints The application is optimized for both high-speed internet connections and slower mobile networks to accommodate a wide range of users. It uses content delivery networks (CDNs) to minimize page load times and system applies load balancing for better request handling (Nginx).
   b. Device Compatibility: The e-commerce platform is responsive and works seamlessly on various devices, including smartphones, tablets, and desktop computers through web environment.
   c. GSM and GPS Integration: The platform uses GPS data for location-based features, such as store locators and local inventory search (Maybe be implemented).
3. Organizational Context:
   a. Organizational Structure: The e-commerce platform is designed for a retail organization with multiple departments, including sales, marketing, customer support, and logistics.
   b. Interdepartmental Interaction: The system facilitates interdepartmental collaboration by providing real-time sales data to the marketing team, inventory information to the logistics team, and customer support ticketing for handling customer inquiries. (Maybe implemented)
   c. Deployment and Usage: The application is deployed in a hybrid cloud environment, ensuring scalability during peak seasons. (Docker pods) The README and Confluence provides instructions for deploying and maintaining the system.
4. Legal Context:
   a. Regulatory Compliance: The e-commerce platform complies with data protection regulations such as GDPR and CCPA to protect customer data. It also adheres to industry-specific regulations regarding the sale of certain products (e.g., alcohol or tobacco).
   b. Data Usage Policies: The organization has clear policies on how customer data is collected and used. It is only shared with trusted third-party services when necessary (e.g., for shipping or payment processing).

1.7. Technologies used in the project

Justify the choice of technology. Focus on each element and provide the required information

- technology name,
- description of the technology,
- justification,
- key responsibilities in the project, e.g., front-end development,
- link to the technology description.

1. **Java 20:**
   a. Description: Java is a widely used, platform-independent, and mature programming language.

   b. Justification: Java 20 brings the latest features and enhancements to the language, ensuring code efficiency and security. It's a strong choice for server-side development and integration tasks.
   c. Key Responsibilities: Backend development, server-side logic.
   d. Link: Java 20

2. **Spring Framework:**
   a. Description: Spring is a comprehensive framework for building Java applications. It provides modules for various tasks, such as data access, security, and web development.
   b. Justification: Spring simplifies the development process and enhances modularity and testability. It's ideal for building robust, scalable applications.
   c. Key Responsibilities: Backend development, dependency injection, aspect-oriented programming.
   d. Link: Spring Framework
3. **Flutter:**
   a. Description: Flutter is an open-source UI framework for building natively compiled applications for mobile, web, and desktop from a single codebase.
   b. Justification: Flutter allows for rapid cross-platform development, reducing development time and effort.
   c. Key Responsibilities: Mobile and web app development.
   d. Link: Flutter
4. **PostgreSQL:**
   a. Description: PostgreSQL is a powerful, open-source relational database management system (RDBMS).
   b. Justification: PostgreSQL offers robust data management and high reliability, making it a good choice for data-intensive applications.
   c. Key Responsibilities: Database management and storage.
   d. Link: PostgreSQL
5. **MongoDB:**
   a. Description: MongoDB is a NoSQL database that stores data in a flexible, JSON-like format.
   b. Justification: MongoDB is well-suited for projects with dynamic and evolving data schemas. It's a good choice for storing and managing product characteristics, especially when the attributes may vary or change over time.
   c. Key Responsibilities: Database management and storage for product characteristics, accommodating flexibility in data structure.
   d. Link: MongoDB
6. **Docker:**
   a. Description: Docker is a platform for developing, shipping, and running applications in containers.
   b. Justification: Docker ensures consistent deployment across various environments, simplifying the development and deployment process.
   c. Key Responsibilities: Containerization and deployment.
   d. Link: Docker
7. **Nginx:**
   a. Description: Nginx is a high-performance, open-source web server and reverse proxy server.
   b. Justification: Nginx can improve application performance, security, and scalability, making it an excellent choice for serving web applications.
   c. Key Responsibilities: Web server and load balancing.
   d. Link: Nginx
8. **RabbitMQ:**
   a. Description: RabbitMQ is an open-source message broker software that implements the Advanced Message Queuing Protocol (AMQP).

   b. Justification: RabbitMQ facilitates asynchronous communication and task distribution, critical for scalability and robustness.
   c. Key Responsibilities: Message queuing and communication.
   d. Link: RabbitMQ

9. **Figma:**
   a. Description: Figma is a cloud-based design tool for creating user interfaces and interactive prototypes.
   b. Justification: Figma facilitates collaboration among designers and developers, streamlining the design and development workflow.
   c. Key Responsibilities: UI/UX design, prototyping.
   d. Link: Figma

10. **Visual Paradigm:**
    a. Description: Visual Paradigm is a modelling and diagramming tool used for system design, modelling, and documentation.
    b. Justification: Visual Paradigm aids in design, documentation, and visualization of complex systems, making it easier for developers and stakeholders to understand the project.
    c. Key Responsibilities: System modelling, design documentation.
    d. Link: Visual Paradigm