



UNIVERSITY OF
WEST LONDON
The *Career* University

GROUP RESEARCH PROJECT



Group 25

Module Code: CP5UA05O
Module Tutor: Dr H Shaheen

TM1 Osaid Qattan	21587115
TM2 Muhammad Siddique	21587126
TM3 Mohammad Sheriff	21587035
TM4 Abdulaziz Kattan	21587116

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Abstract TM2

Smart SOSA is the cutting-edge web-based app that aims to satisfy the needs of its consumers that are inspired by the use of smart home devices. The group involved in this project consists of four people, and the project presents an integration of coding expertise and intricate web designing capabilities. The team members that were chosen for this project brought in different skill assets. There was an equilibrium of creativity and skill that helped guide the project to its final stage. Accordingly, an assignment of the required responsibilities was given to each member depending on their strongest skill set.

The user experience and design aspect of Smart SOSA were meticulously crafted by one of the team members, while another team member used their skills on the developing the functionality of the e-commerce side, simplifying user interface, and providing ease of transaction. After that another member who took care of testing the user interface and identifying any bugs, to make it simple for any user to manipulate the website that was developed. Lastly, one more member of the team reassured us that the execution of the tasks would be done seamlessly, by coordinating to complete each challenge.

Smart SOSA does not only show where the technical side of the world is, but also helps in understanding what cooperation and creativity are in all aspects of our lives. Although still with lots to refine, the platform by now captures the major traits of modern e-commerce and thus guarantees it a reliable groundwork for subsequent growth and development.

Introduction TM1

Smart SOSA is a web-based application that is aimed at meeting the needs of smart home device users so that they can look for and shop for different smart home products. Beginning from scratch, our team members used their unique coding skills, as well as utilized their complementary talents like photo editing, to construct the platform.

The members of the team are a 'mirror image' of our team, which was established a few months ago, and just like their predecessors the team now has four members who are dedicated to their tasks and contribute to the team in the best possible way with their strengths. The main taker was the design, the visuals, and the user experience was left to one member to piecing them together. The task of another member was to draw fully on the functionality of the present e-commerce system. He helped to make a simpler interface which combined the listing of products and the transactions processing. In addition to that, the user interface was supposed to be designed and the product should be tested by the same member for a consistent user experience. Finally, fourth person came in, who was ready to perform cutting jobs and backing team up in performing 6-directional tasks for everything to run smoothly.

In that way we split out all tasks with the reason of avoiding conflict and expanding the level of unity. Our essay will be graded based on the clarity, organization, and analysis of our thoughts. Rather than having individual pages, which would be segmented by task, we are well going end up with a website that is uniform in its design and functions. We have harmonized our solution with the components that is a program and the design which made out database to be again the one that smoothly paced the process of development.

Our code does not depend on completing other tasks all the time, but our team proved we knew what we were doing by having many functions implanted during the design phase. This was achieved by cutting the project into personal pages. While the next step did involve the designing pages and the corresponding database table, the integration process was an easy one.

While we make progress, minor adjustments in the website's design parameters will be required to the suitability of the existing database. Discover more about these tweaks in the pages that follow as you learn about the website's functionality and page layout.

Collaboration is crucial during this project. Each team member brought their professional insights into the undertaking, thus developing a working and motivational atmosphere. As a team, we went through the design and database issues to ensure that the system would perfectly work as designed.

Project Team TM1

Team Member 1 - Osaid Qattan - Project Manager

- Control Work Scheme
- Keep Record of Meeting Minutes
- Organize tasks dependency schedule
- Display detail item
- Display account details
- Add item to basket
- Remove Item to Basket
- Add users to table through web application form

Team Member 2 – Muhammad Siddique - Web design and User Interface

- Web Application Structure and Design
- User Interface Design & User Experience Design
- HTML, CSS, JavaScript Developer
- Graphic Designer
- Client-Side Programming & Scripting

Team Member 3 – Mohamed Sharif - Software Development

- Development of the Database Design
- Development of Management Systems.
- Keeps tracking on Database.
- Gantt Chart

Team Member 4 – Abdulaziz Kattan - Quality Assurance and Customer Experience

- PowerPoint Presentation
- Use Case Diagram
- Sequence Diagram
- Pert Chart
- Critical Path Analysis

Project Team Charter TM2

Team Name	Team SOSA
Project Name	SOSA Homes
Team Members and Roles	<ul style="list-style-type: none"> TM1 Osaid Qattan – Project Manager TM2 Muhammad Siddique – Web Design and UI Developer TM3 Mohammad Sheriff – Software Development TM4 Abdulaziz Kattan – Quality Assurance and Customer Experience
Purpose of the Project	The purpose of this team is to develop an e-Commerce website that sells Smart Home Devices.
Goals for the Website	<ul style="list-style-type: none"> Create a user-centric design: Develop and support a straightforward navigation interface that facilitates smart device owners to shop for the related products with ease. Maintain efficient team collaboration: Implement effective task partitioning to maximize performances and to make sure everyone equally participates in building a functional and aesthetic design. Sales Management: Maintaining records of purchases made by the user to analyze trends and optimize future strategies.
Objectives	<ul style="list-style-type: none"> Develop a user-friendly e-commerce website Create a comprehensive product catalog Implement secure payment processing functionality Optimize the website for search engines Provide responsive customer support services Continuously monitor website performance Collaborate with university stakeholders
Resources	<ul style="list-style-type: none"> Adobe XD for website design Odoo.com for building the website Google Spreadsheets to keep track of each members objectives. Specific Whatsapp Group chat for sharing of files. Zoom for online team meetings

Table 1 Project Team Charter

Literature Review TM3

Initially, it was quite complex for the project managers to manage the website development, but later methodologies and tools were developed to simplify it. The two mains accepted, or traditional methods of project management are Waterfall and Agile.

The Traditional (Waterfall) methodology follows a sequential approach, where tasks are executed in a predetermined order: criteria connection, analysis, design, creation, testing, deployment, and correctness. What the Waterfall does is create an easy pathway, it also creates an inflexibility, that doesn't allow changes to be made once the requirements are specified. Lastly, they are obligated accountability for the completion of a given project[2].

The fall of the Waterfall methodology resulted in the beginning of the Agile methodologies, this example being the Agile Manifesto in 2001 [1]. Within agile methodologies, such as Scrum which prioritizes pairing, customer guidance and iterative delivery, flexibility is the key. In contrast to Waterfall, a method that is highly organized and regulated, Agile approaches see change as an inherent part of a project process and welcomes flexibility in the way execution is done.

The Agile methodology with a Scrum framework was the chosen option to build an eCommerce website performing smart home devices for its dynamic nature corresponding to the eCommerce web development project. Scrum provides effective project management by splitting activities to manageable parts; stimulates teamwork among crew members and supports variable factors standing their ground[1].

When implementing Scrum, the project team had already arranged a weekly sprint planning sessions to determine the tasks relevant to the product backlog. Tools which are incredibly useful in communication such Microsoft Teams, UWL Blackboard, and WhatsApp Improved teamwork during the whole process since a Scrum leader was coordinating the team efforts towards the project aims.

Of course, for all its strengths, Scrum has its downsides too. At times, meeting every week could have frustrated some of the team members, and due to the components of the project that depend on every member's cooperation and collaborative attitude, the team cooperation and commitment accounts for a great part of the project success.

The result of this project is summarized here: Scrum was proved to be efficient for business web portal (e-shop) that sells smart home appliances. Appropriate planning, each individuals clear goals, defined responsibilities and strong teamwork formed a solid basis on which an appropriate methodology that would minimize a deal with methodology related challenges was built. This review enrols the features of the project management methodology choosing depending on the character and demands of the project that makes the project outcome effective.

Project Requirements TM2

In the project that was given, there were a number of requirements that needed to be completed for the website. The university had provided a list of mandatory requirements that needed to be present in each group's website. Additionally, the group's ideology was to add more requirements to their project to guarantee user satisfaction.

University Requirements:

- The website must include a minimum of 20 products to be sold.
- Each product required a photo, a detailed description, and a set price.
- Website is required to have a search bar.
- Website must have add to cart functionality and be able to edit the products in the cart.
- Website must include signing in capability for user to create a profile.
- A checkout page where the user may enter their shipping details and payment method.

Group Requirements

- Creating Categories for the user to browse through specific products.
- Adding a filter products option
- Adding vector images and animations to create a clean and attractive website.
- Making the website accessible to any device such as phones and tablets.
- Creating a wishlist feature which saves the products to a separate list on the users profile through which the user may purchase the product on a different day.
- Adding a after sales option that tracks the purchases that have been made by the users and creates detailed invoices for each product sold.

All the above-mentioned requirements have been explained in detail further into the report.

Project Plan

Gantt Chart TM1

The Gantt Chart is a very useful table, or it could be called graphic tool that shows the task that was assigned by us according to the stipulated period and the requirements of this case[3].

It is useful because you can understand how the tasks develop. As shown on the figured below, the green bar represents the time that it took to be completed, it also shows the starting and finishing period.

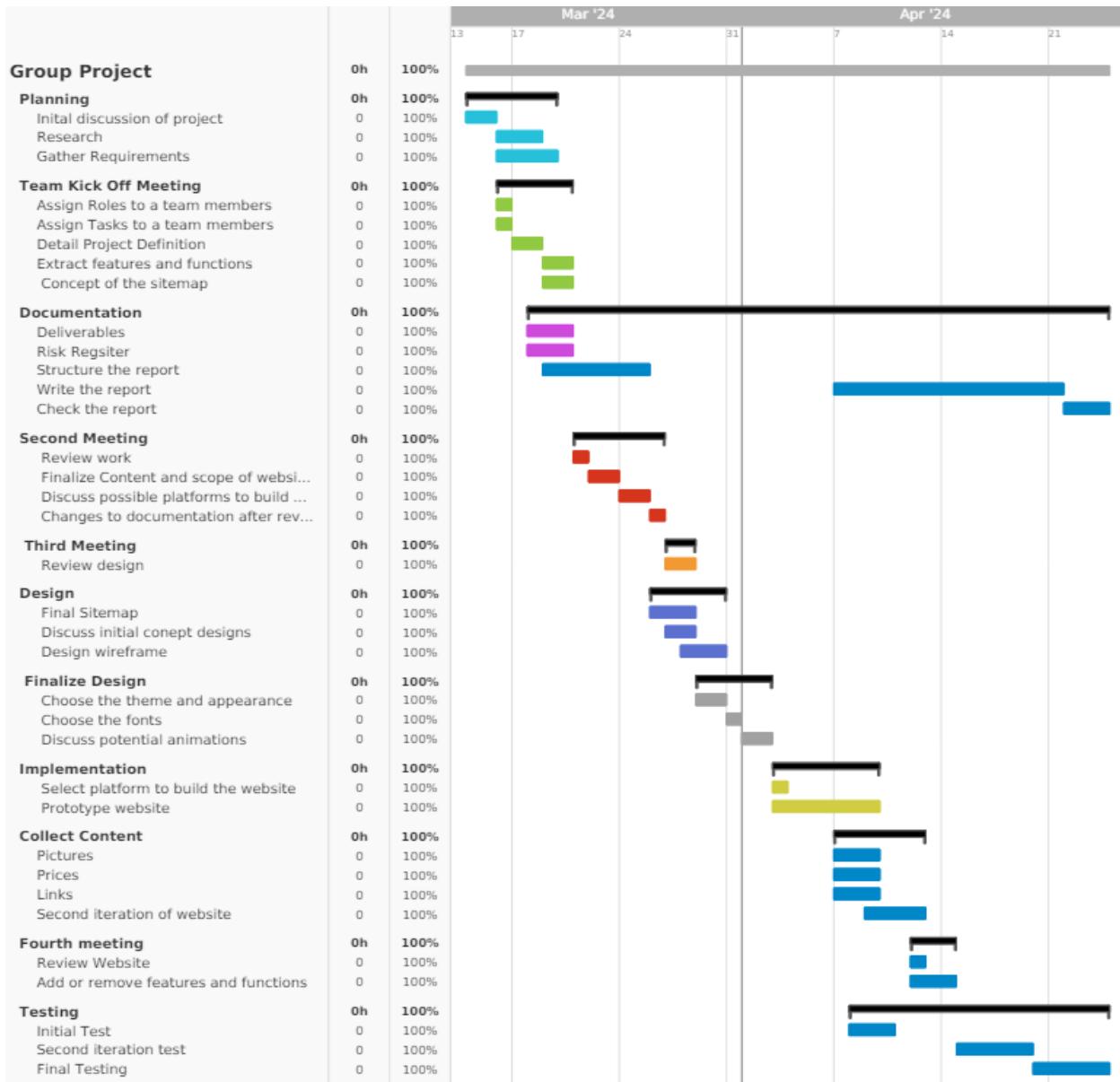


Figure 1 Gantt Chart

In situations where the first scheduled time was insufficient, and some tasks were delayed, a bar extension has been added to provide more time for this.

Use Case Map TM2

Use case diagrams are graphical portrayals of the interactions and functions that the e-commerce website will engage in. It shows the contribution of the users that are using the system (customers or administrators). Additionally, it can be used in clarifying all the features that the customer and the admin have access to. It also creates a basic map of the website to demonstrate the usability of the website [5].

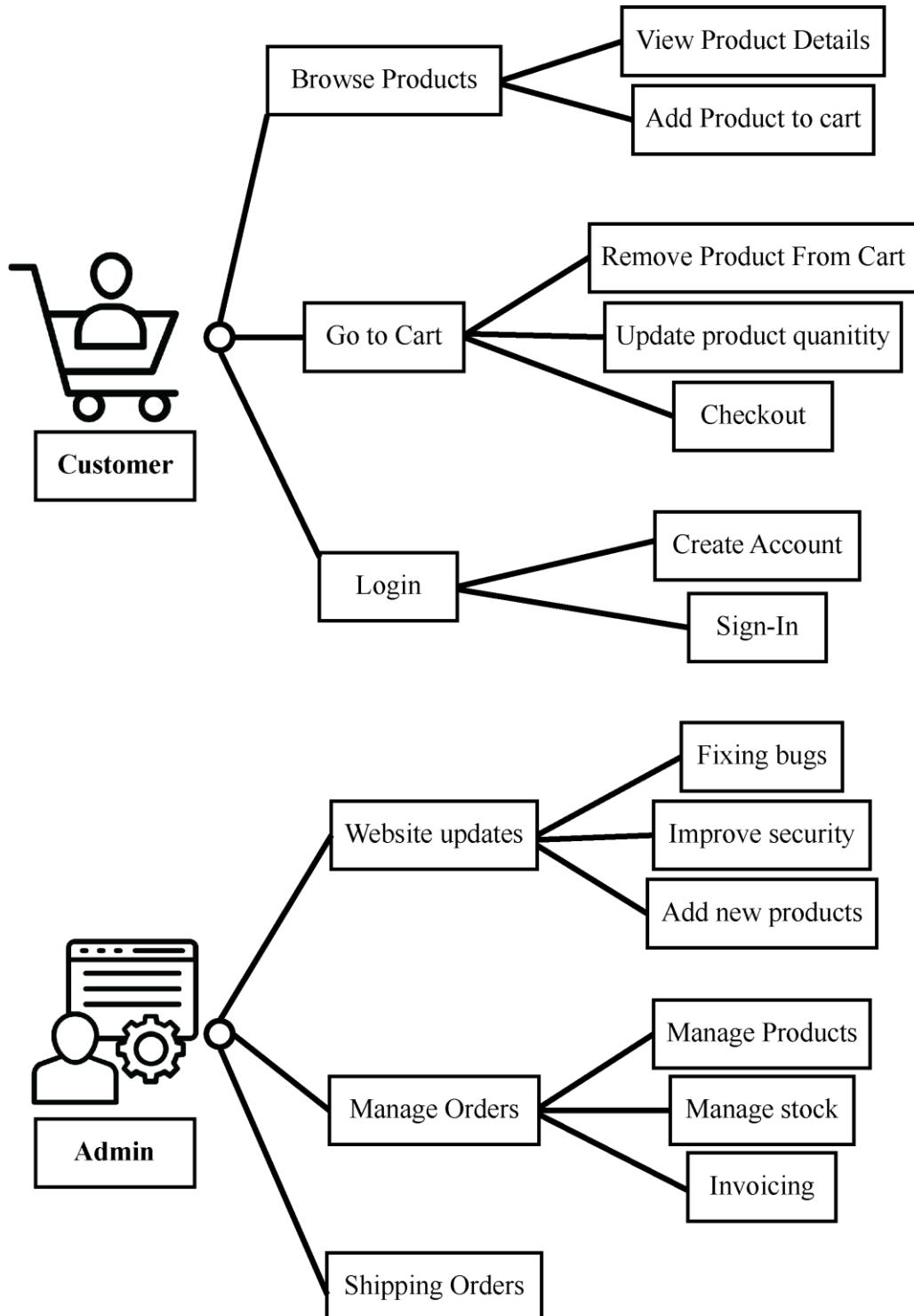


Figure 2 Use Case Map

User Stories TM4

Home Page

As a	I want to	So I can
User	Featured products and promo section	Find new items and special offers in no time
User	Go through product categories without difficulty	Search for products interested in effective
User	Sign in to the site and see purchase history	Track previous purchases and manage account details
User	Fast I begin a search	Notice the specific item I need
User	Know that the site is selling something	Ensure I am on a right site

Table 2 User Story (Home Page)

Shop

As a	I want to	So I can
User	Search for products by keywords or filters	Find specific items or narrow down options
User	Sort search results by price	Easily compare options and make decisions
User	View product details and images in search results	Quickly assess if the product meets my needs
User	See related search suggestions	Discover additional products of interest
User	Search by title	Find something that I have already in my mind

Table 3 User Story (Shop)

Item Overview Page

As a **I want to** **So I can**

User	See detailed product descriptions and specifications	Make informed purchase decisions
User	View high-quality images of the product	Get a clear understanding of its appearance
User	Read customer reviews and ratings	Gauge product quality and user satisfaction
User	Add the item to my cart or wish list	Save it for later or proceed to checkout
User	See related products or items frequently bought together	Explore additional options or accessories

Table 4 User Story (Item Overview Page)

Cart

As a **I want to** **So I can**

User	Review the items in my cart	Confirm my selections before checkout
User	Update quantities or remove items	Adjust my purchase according to my preferences
User	See the total price including taxes and shipping	Understand the final cost before proceeding
User	Apply promotional codes or discounts	Save money on my purchase
User	Proceed to checkout and complete the purchase	Finalize my order and receive the items

Table 5 User Story (Cart)

Admin Portal

As an **I want to** **So I can**

Admin	Add, edit, or remove products from the catalogue	Keep the product inventory up to date
Admin	View and manage customer orders and payments	Ensure orders are processed and payments received
Admin	Analyze sales data and generate reports	Gain insights into business performance
Admin	Manage user accounts and permissions	Control access to administrative functions
Admin	Update website content and layout	Keep the website information relevant and engaging

Table 6 User Story (Admin Portal)

Work Breakdown Structure TM3

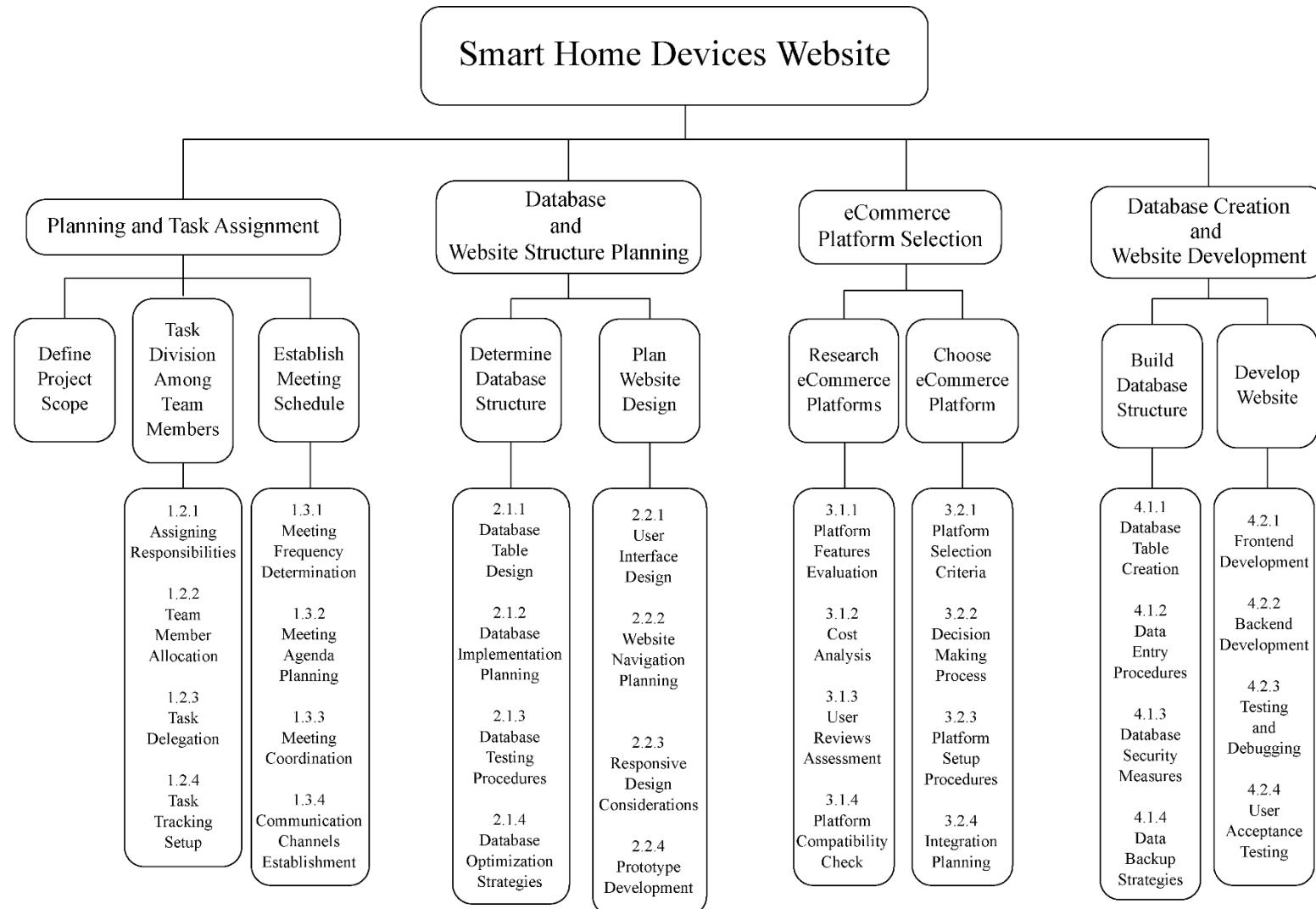


Figure 3 Work Breakdown Structure

Product Backlog TM1

ID	As a ...	I want to be able to...	So that...	Priority	Sprint	Date Completion
1	User	Register for an account	I can access personalized features	Medium	1	12/02/2024
2	User	Log in and log out	I can securely access my account	High	1	13/02/2024
3	User	Reset my password	I can regain access to my account	High	1	14/02/2024
4	User	Browse products by category and brand	I can find products relevant to my interests	Low	1	15/02/2024
5	User	Search for products by name or keywords	I can quickly locate specific products	High	1	15/02/2024
6	User	Add and remove items from my shopping cart	I can manage my shopping list	High	2	19/02/2024
7	User	Checkout securely with multiple payment options	I can complete my purchases securely	High	2	19/02/2024
8	User	View detailed product information	I can make informed purchase decisions	Medium	2	19/02/2024
9	User	View related products and recommendations	I can discover additional products of interest	High	3	10/03/2024
10	User	Receive order confirmation emails	I have a record of my purchases	High	2	20/02/2024
11	User	Track my orders and view order history	I can monitor the status of my orders	High	3	10/03/2024
12	User	Update my account information	I can keep my personal details up to date	Low	4	24/03/2024
13	User	Access the website on mobile devices	I can shop conveniently while on the go	High	2	20/02/2024
14	Software Development	Implement backend database schema	Users can store and retrieve product information	High	3	25/03/2024
15	Software Development	Develop user interface for browsing products	Users can navigate and explore available products	High	4	01/04/2024
16	Software Development	Integrate payment gateway for secure transactions	Users can complete purchases securely	High	4	02/04/2024
17	Software Designer	Design responsive and user-friendly website	Users can access the website on various devices	High	4	03/04/2024
18	Software Designer	Design intuitive shopping cart interface	Users can easily manage their shopping cart items	High	3	22/02/2024
19	Project Manager	Prioritize and plan development sprints	Ensure timely delivery of features and updates	High	2	27/03/2024
20	Project Manager	Coordinate cross-functional team activities	Ensure efficient collaboration and communication	High	3	01/04/2024
21	QA & CE	Perform testing on website functionalities	Ensure the website functions correctly and as expected	High	4	07/04/2024
22	QA & CE	Conduct security testing	Identify and mitigate potential security vulnerabilities	High	4	12/04/2024
23	QA & CE	Optimize website performance	Improve user experience and satisfaction	High	3	01/04/2024
24	QA & CE	Gather feedback and suggestions from users	Continuously improve and tailor the website	High	2	24/02/2024

Table 7 Product Backlog

Website Map TM2

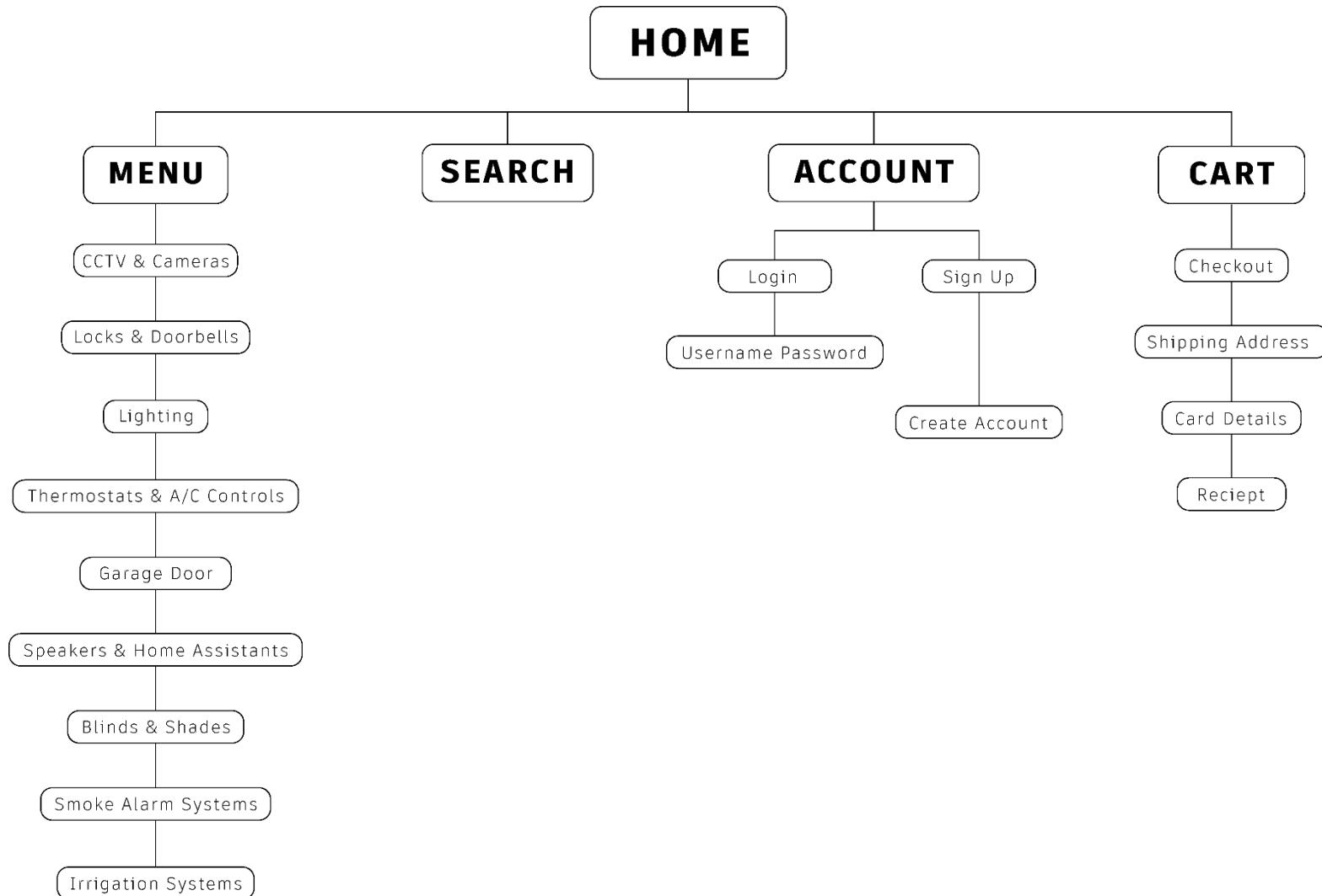
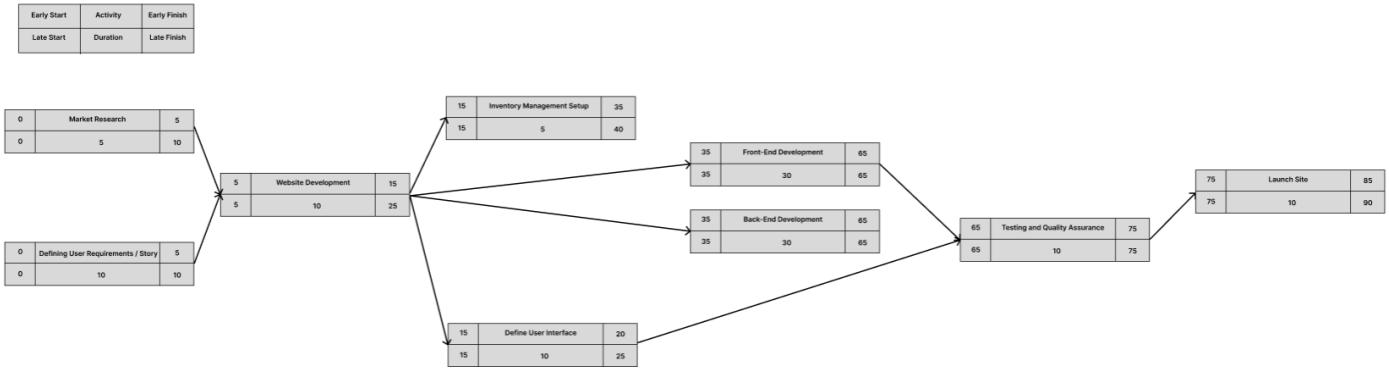


Figure 4 Website Map

Critical Path TM1



Critical path in a project is the line of events, which tautologically means that every other activity on the timeline depends on those events and thus the minimum duration of the project can be determined. It is a critical path that runs in the longest route through the project's network diagram. In fact, anything that causes delays in the activities along this path will inevitably delay the project's overall completion time [6].

Early Start, Early Finish, Late Start, Late Finish:

- Use the early start, early finish, late start, and late finish times to determine the critical path.
- The early start and early finish times represent the earliest possible start and finish times for each activity based on its dependencies and duration.
- The late start and late finish times represent the latest possible start and finish times without delaying the project.
- The critical path consists of activities with zero slack or float, meaning any delay in these activities will directly impact the project's overall duration.

Risk Register TM3

We've created a risk register to highlight some of the recognized issues because it's important to be aware of possible threats. Because these hazards have the potential to negatively impact the project's progress, we consulted this table once a week to stay alert and take preventive action [4].

Category	Name	Risk ID	Probability	Impact	Severity	Mitigation	Contingency	Action By
Project Team	team members not able to finish their parts on time	10	Medium	High	High	agree task images with all team members	giving more time	Project Team
	Project team conflicts	20	Medium	Medium	Medium	Listening to each team member suggestion during meeting without interrupting each others	Project leader should have the final say	Project Lead
	Platform will not provide all the necessary features for free	30	High	High	High	Finding all platforms before starting the project development	Consider platforms that provide free licences for students	Project Lead
Platform	Being forced to pay for some platforms	40	High	High	High	Finding all platforms before starting the project development	Consider creating the whole website from scratch	Project Lead
	Limited time allowed for free live websites	50	Medium	High	High	include a task to check the time limit	work within time constraint	Project Lead

Figure 5 Risk Register Image 1

Time	QA time test for browser	60	High	High	High	List priority browsers for testing based on popularity	Test the top two browsers before going live	Project Lead/QA tester
	Deadline is not met	70	High	High	High	Check in meetings mid week Encourage honesty when discussing deadlines	Leave out low priority items	
						Prioritise workload and split them equally	Project Lead	

Figure 6 Risk Register Image 2

Scope	Scope has not covered everything	80	Medium	Medium	Medium	Research and create a comprehensive scope before starting the project	If there is time, add to the tasks anything missed out from scope Or leave out anything not within the scope for after go live	Project Lead
	To many things in scope	90	Medium	Medium	Medium	Prioritise items in scope before we start	Leave out low priority things on the list for after go live.	Project Lead

Figure 7 Risk Register Image 3

Project Components and Documentation

Homepage Design TM2

The homepage design is kept very simple and efficient. After doing research on many popular websites. It has been found that the home page needs to be clean and must have minimal buttons for an attractive and approachable first impression. The home page consists of links for the shop, About Us page, Cart, Wishlist, Login, My Account details. Additionally, the footer of the home page and every other page consists of a contact us segment. In case the user feels the need to ask any questions during any time of their browsing.

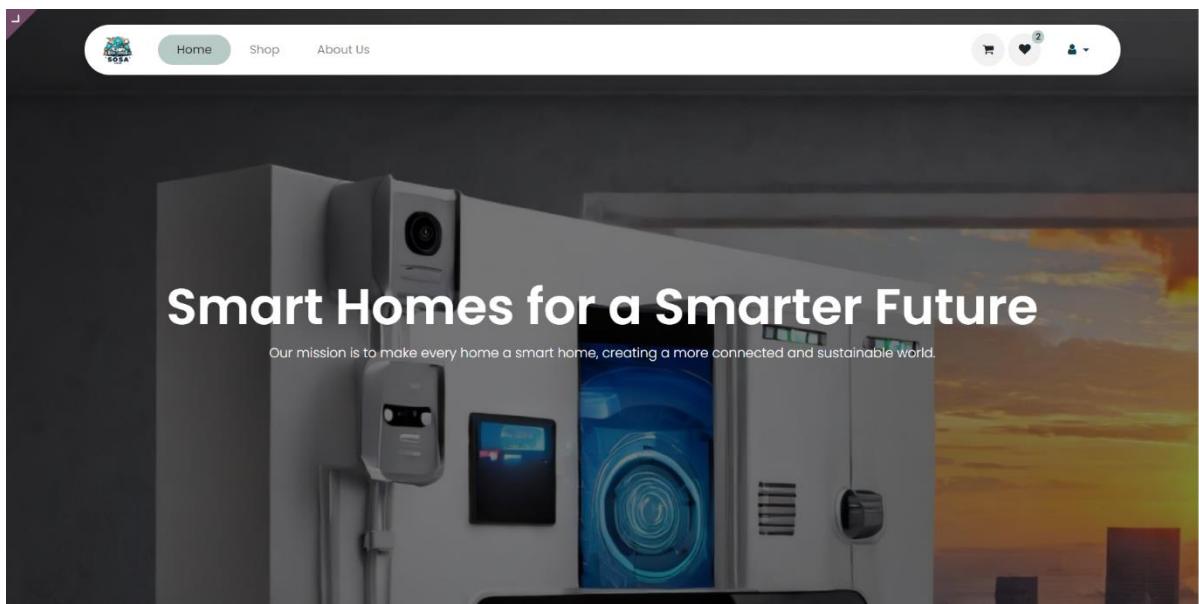


Figure 8 Home Page

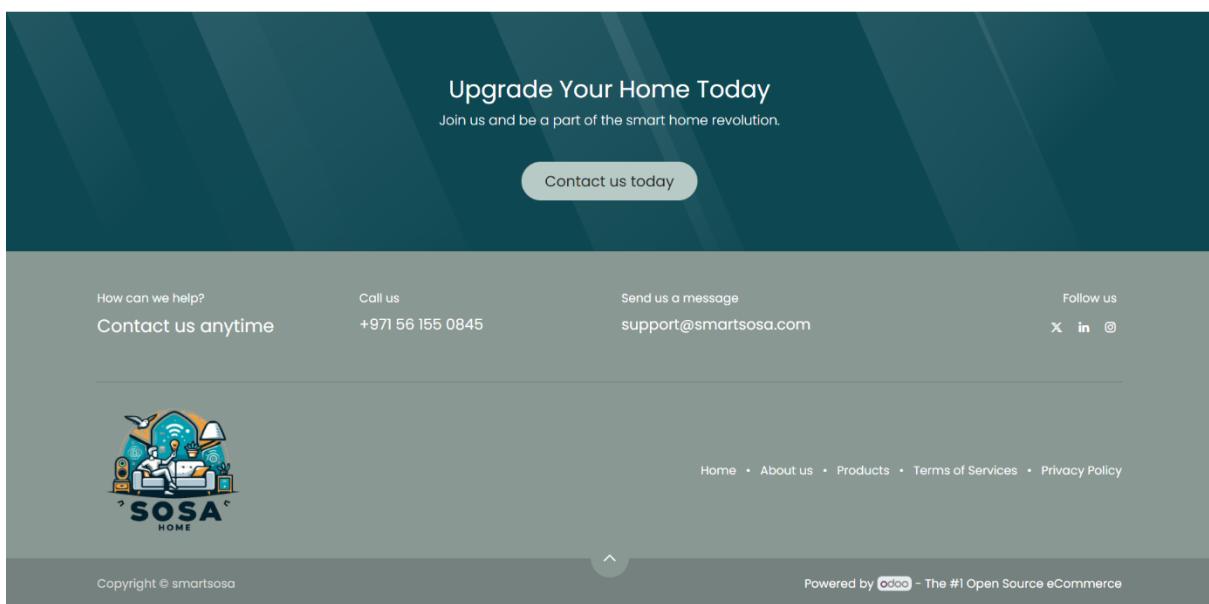


Figure 9 Contact Us Segment

Shop TM2

The Shop design also follows the same simplicity as the rest of the website does. It initially shows the user the most popular products that customers buy. Furthermore, the user may choose to shop from one of the given categories and they may set a price range according to their budget. The user also has the option to view the shop either in a grid or a list format.

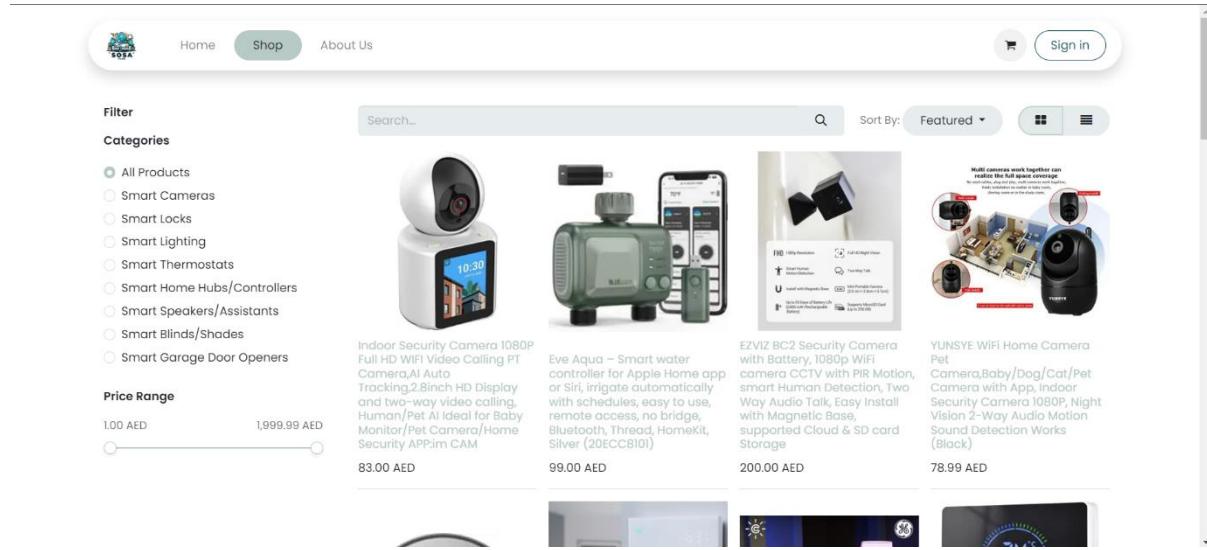


Figure 10 Shop Page

On this page the user may search for any specific queries that they require. Lastly the user may Sort the given categories by five different methods.

- Featured (shows the user the best and most popular products that are for sale on the shop)
- Newest Arrivals (shows the latest added products on top),
- Name (A-Z) (sorts the items in alphabetical order)
- Price - Low to High (displays the products in ascending order of price)
- Price – High to Low (Displays the products in descending order of price)

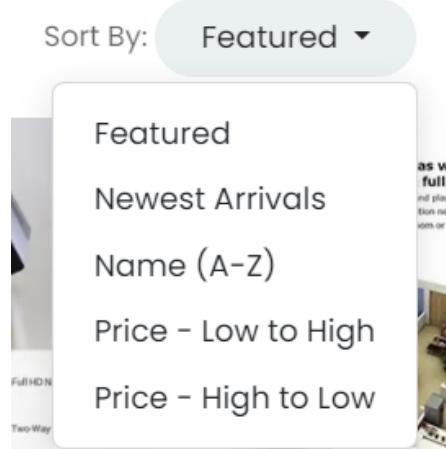


Figure 11 Sort By options.

Once the user clicks on any of the products, they are directed to the in depth details of the product. Here the user may choose to add this item to their cart or wishlist. The user may also choose to edit the quantity of the items using the plus or minus buttons, or by editing the number in between in case of ordering in large quantities.

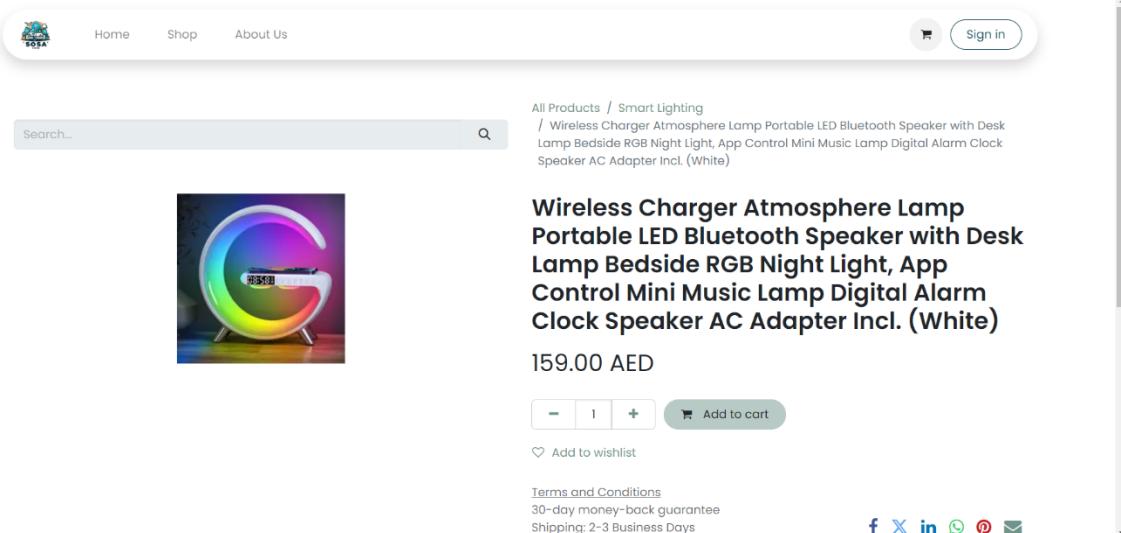


Figure 12 Product details

There is also a link to the terms and conditions page. This page states the terms and conditions that the business offers to the customer. These terms are accepted by the user through their digital signature when they complete the purchase.

STANDARD TERMS AND CONDITIONS OF SALE

You should update this document to reflect your T&C.

Below text serves as a suggestion and doesn't engage Odoo S.A. responsibility.

1. The client explicitly waives its own standard terms and conditions, even if these were drawn up after these standard terms and conditions of sale. In order to be valid, any derogation must be expressly agreed to in advance in writing.
2. Our invoices are payable within 21 working days, unless another payment timeframe is indicated on either the invoice or the order. In the event of non-payment by the due date, My Company reserves the right to request a fixed interest payment amounting to 10% of the sum remaining due. My Company will be authorized to suspend any provision of services without prior warning in the event of late payment.
3. If a payment is still outstanding more than sixty (60) days after the due payment date, My Company reserves the right to call on the services of a debt recovery company. All legal expenses will be payable by the client.
4. Certain countries apply withholding at source on the amount of invoices, in accordance with their internal legislation. Any withholding at source will be paid by the client to the tax authorities. Under no circumstances can My Company become involved in costs related to a country's legislation. The amount of the invoice will therefore be due to My Company in its entirety and does not include any costs relating to the legislation of the country in which the client is located.
5. My Company undertakes to do its best to supply performant services in due time in accordance with the agreed timeframes. However, none of its obligations can be considered as being an obligation to achieve results. My Company cannot under any circumstances, be required by the client to appear as a third party in the context of any claim for damages filed against the client by an end consumer.
6. In order for it to be admissible, My Company must be notified of any claim by means of a letter sent by recorded delivery to its registered office within 8 days of the delivery of the goods or the provision of the services.
7. All our contractual relations will be governed exclusively by law.

Figure 13 Terms and Conditions

About Us TM2

This Page gives the user information about the business. The page talks about the services and products that the website and the business have to offer. Additionally, this page also shows the user the four team members and their roles in this project.

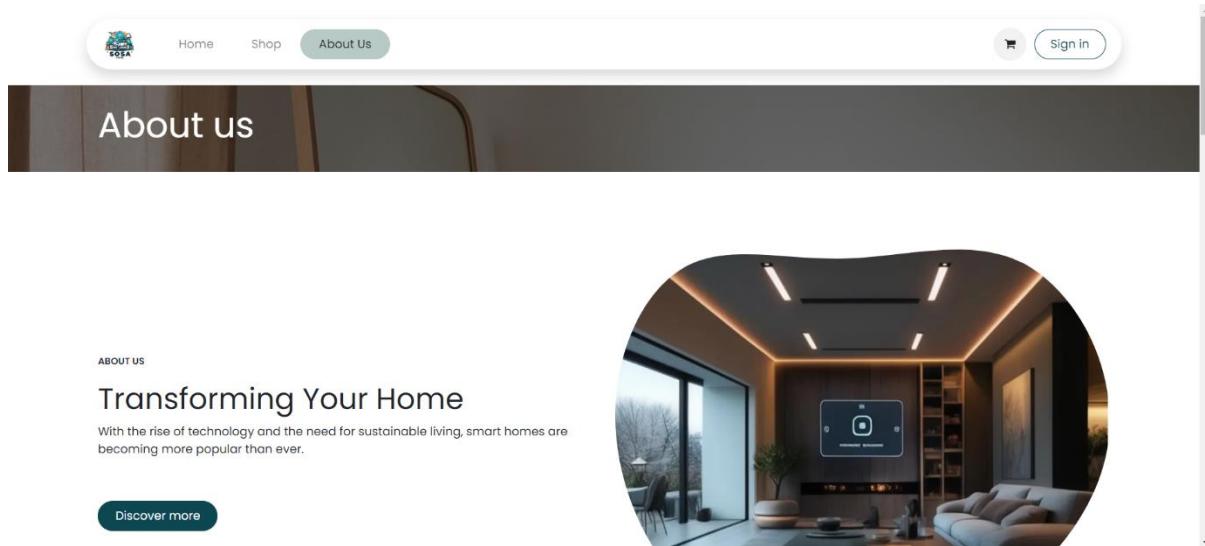


Figure 14 About Us page.

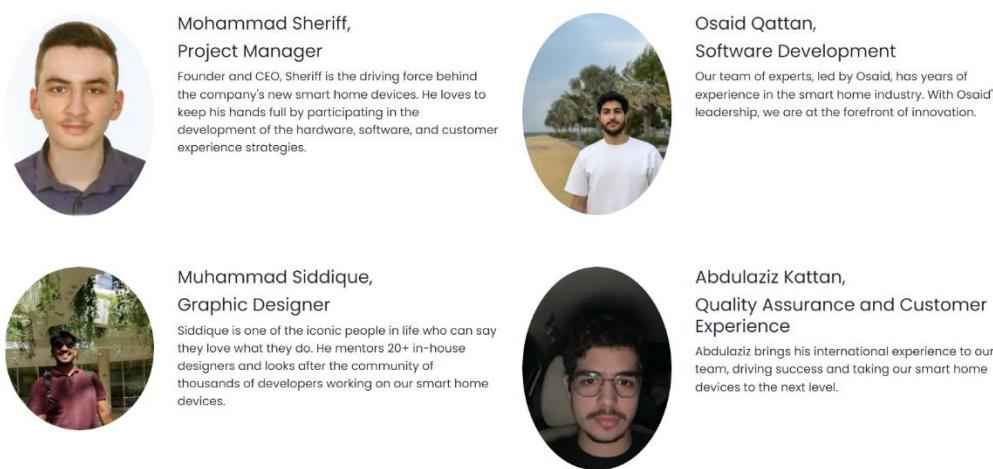


Figure 15 Project Team Members on the About Us page

My Wishlist TM2

This page is designed for users to be able to add a product that they wish to purchase in the future. For example, the user may have seen a product that they wish to purchase but they do not currently have the budget for it. They may add these products to the wishlist and then continue shopping for other items. Additionally, the wishlist offers an option to directly add to cart instead of opening an item and then adding to cart.

	Nest Thermostat 4th Gen Programmable Smart Wi-Fi Thermostat - Charcoal	369.00 AED	Add to Cart
	Melfi WiFi Programmable Room AC Smart Thermostat MATRIX Energy Saving FCU Central Air Conditioner Touch Controller 95-240VAC with Alexa Echo Google Home IFTTT 3 Speed Fan with Auto & Child Lock	350.00 AED	Add to Cart

Figure 16 Wishlist.

Cart TM2

The cart page gives the user an in-depth overview of the items that they have added and the quantities of each of the items. The user is able to see the total price, including taxes, shown on this page. Moreover, the user may choose to edit the quantities of the products that they have added to their cart. They may choose to remove the item as well by reducing the quantity of said item to zero. the user may then proceed to the checkout page or the payment page using the buttons provided to them.

Subtotal	377.00 AED
Taxes	18.85 AED
Total	395.85 AED

Gift card or discount code... [Apply](#)

[Pay with Demo](#)

[Checkout >](#)

or

< [Continue shopping](#)

Figure 17 Cart Overview

Checkout Pages TM2

There are 3 parts to the checkout stage. The first step of the checkout page is to add the customer's shipping details. This page prompts the user to enter all details correctly. If any of the details are in the wrong format or they have not been filled out, the user is not allowed to go to the next page and a red highlight, marks where the user needs to make the changes.

The screenshot shows a 'Shipping address' form with several input fields. A red error message at the top states 'Some required fields are empty.' The fields include:

- Full name:** smartsosa (highlighted in red)
- Email:** osoaid.kattan@gmail.com
- Phone:** +971 (highlighted in red)
- Street and Number:** AD
- Apartment, suite, etc.:** UAE, AD
- City:** AD
- Zip Code:** AE
- Country:** United Arab Emirates
- State / Province:** State / Province...

Buttons at the bottom include '< Discard' and 'Save address >'.

Figure 18 Shipping Address

After the user completes the shipping details correctly, they are directed to the Confirm Order page. On this page the user can see a summary of the items that they are about to purchase, the total price of the items, their billing and shipping addresses, and their choice of payment method.

The screenshot shows the 'Confirm order' page with the following sections:

- Billing:** Rue des Bourlettes 9, 23, 1367 Ramiilles, Belgium
- Shipping:** AD, UAE, AD, AD AE, United Arab Emirates
- CHOOSE A DELIVERY METHOD:** Standard delivery (Free)
- CHOOSE A PAYMENT METHOD:**
 - Demo (test data) selected
 - Payment Details: XXXX XXXX XXXX XXXX
 - Payment Status: Successful
 - Save my payment details checkbox
- Order summary:**

4 item(s) - 395.85 AED	
Delivery	0.00 AED
Subtotal	377.00 AED
Taxes	18.85 AED
Total	395.85 AED
- Gift card or discount code...** input field with **Apply** button
- Pay now** button
- or**
- < Back to cart** button

Figure 19 Confirm Order

The last page that user is directed to is the invoice page. Here the user is shown a summary of the purchase that they have made. If the user wishes to acquire a more detailed invoice. They may click on the print button which generates a detailed and precise invoice that the user may either print out or save as a pdf document.

The screenshot shows a web-based invoice summary. At the top left, it says "Thank you for your order." and "Order S00010". There is a "Print" button. Below this, there is a section for "Payment Information" with a note that says "Your payment has been successfully processed." In the bottom right corner, there is a "Order summary" box containing the following details:

Order summary	
4 item(s) - 395.85 AED	
Delivery	0.00 AED
Subtotal	377.00 AED
Taxes	18.85 AED
Total	395.85 AED

Figure 20 Invoice Summary

The screenshot shows a detailed invoice PDF. It includes the following sections:

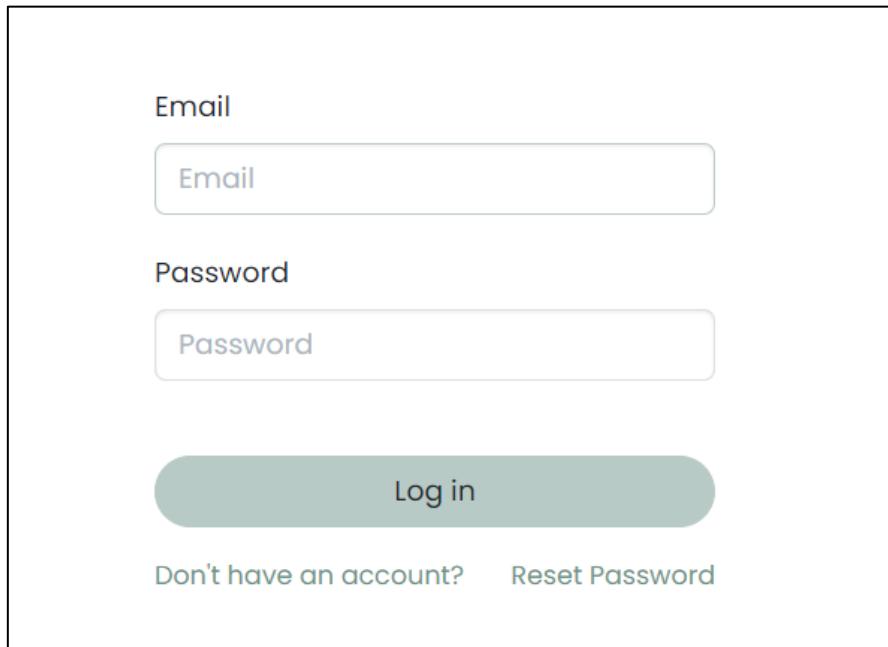
- Invoicing Address:** smartcosa, AD, UAE, AD, AD AZ 000000, United Arab Emirates
- Shipping Address:** smartcosa, Sosa test adress, AD, UAE, AD, AD AZ 000000, United Arab Emirates, +971561091235
- Order # S00002**
- Order Date:** 04/20/2024
- Description** **Quantity** **Unit** **Taxes** **Amount**
- Indoor Security Camera 1080P Full HD WIFI Video Calling PT Camera,AI Auto Tracking,2.8inch HD Display and two-way video calling, Human/Pet AI Ideal for Baby Monitor/Pet Camera/Home Security APP:im CAM 1.00 83.00 VAT 5% 83.00 AED
Units
- Standard delivery 1.00 0.00 0.00 AED
Units
- Untaxed Amount** 83.00 AED
- VAT 5%** 4.15 AED
- Total** 87.15 AED

At the bottom, there are links for "Terms & Conditions: <https://smartsosa.odoo.com/terms>" and "Payment terms: Immediate Payment".

Figure 21 Invoice Detailed in pdf format.

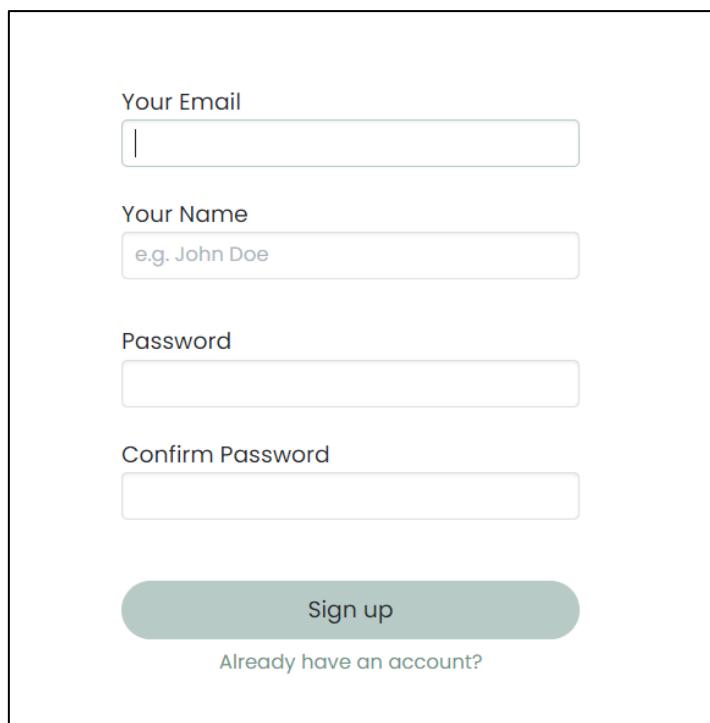
Log in TM2, TM4

On this page the user can sign into their saved account, or they may create an account by entering the required details. Additionally, if the user has forgotten their password, they may enter their email into the website which sends a link to the users email and allows the user to change or update their password.



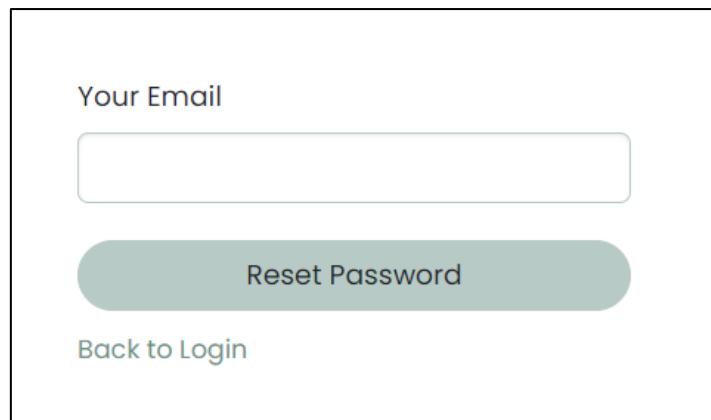
The form consists of a white rectangular box with a black border. Inside, there are two input fields: one labeled "Email" with a placeholder "Email" and another labeled "Password" with a placeholder "Password". Below these is a large green rounded rectangle containing the text "Log in". At the bottom left is the text "Don't have an account?" and at the bottom right is "Reset Password".

Figure 22 Login credentials.



The form consists of a white rectangular box with a black border. It contains four input fields: "Your Email" (placeholder: "|"), "Your Name" (placeholder: "e.g. John Doe"), "Password" (placeholder: " "), and "Confirm Password" (placeholder: " "). Below these is a large green rounded rectangle containing the text "Sign up". At the bottom left is the text "Already have an account?".

Figure 23 Create new Account.



The image shows a simple web form titled "Forgot Password". It contains a text input field labeled "Your Email" and a green "Reset Password" button. Below the button is a link "Back to Login".

Figure 24 Forgot Password

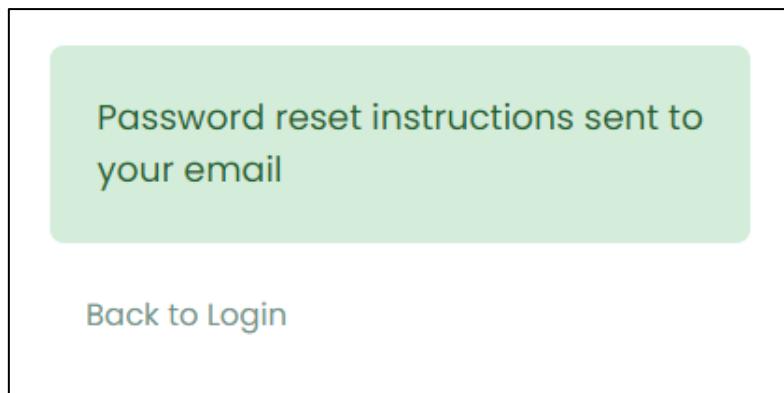


Figure 25 Forgot Password Instructions

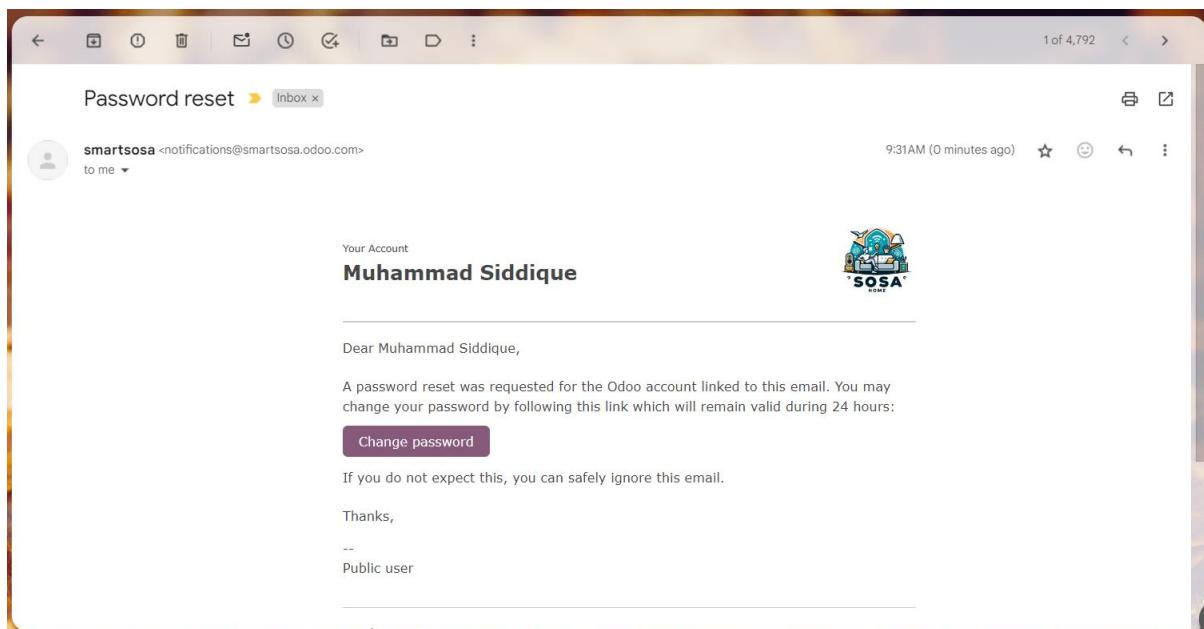


Figure 26 Email Instructions to reset/update password.

My Account TM2

The account page allows the user to

- Browse through their previous purchases.
- Download invoices.
- Edit, delete, or add the payment information that is saved on their account.
- Add, remove, or modify the addresses saved on their account.
- View a brief description of their account details.

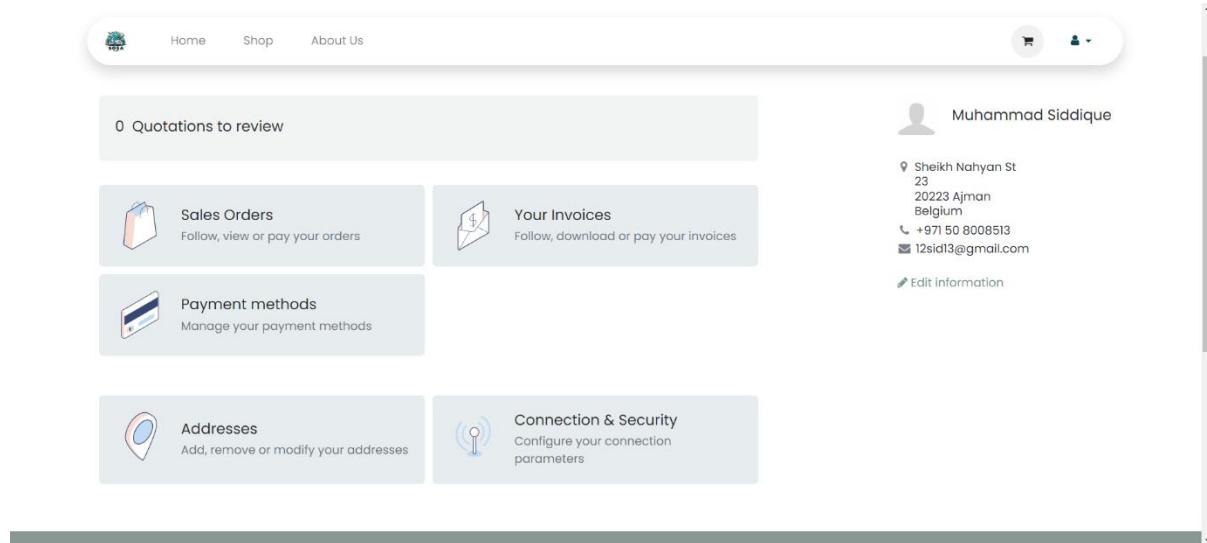


Figure 27 My Account Page

Design Explanation & Justification

The next section will tackle the design ideas behind this project and the reasoning for everything based on the sentence above. Website navigation will be user friendly, such that every meaningful component of the website will enjoy more attention.

Since responsiveness was the number 1 feature on the website, emphasis was given to it. Today's internet mobile browsing being the generally prevalent trend, an inevitable paramount point was that our web application had to be easily navigated on all mobile devices with user-friendliness.

Homepage Design TM4

The colour scheme that was chosen for this web application consists of shades of dark blue, white, and seaweed colour which shows the ocean wave feel. This very specific colour palette is responsible for building trust and professionalism. Hence the users are attracted, and it creates a visually appealing environment for them.

The objects present in the home page have been deliberately kept to a minimum as the only thing of importance to the user remains throughout the page. This ensures that the user is able to easily navigate throughout the homepage and is satisfied with their browsing experience.

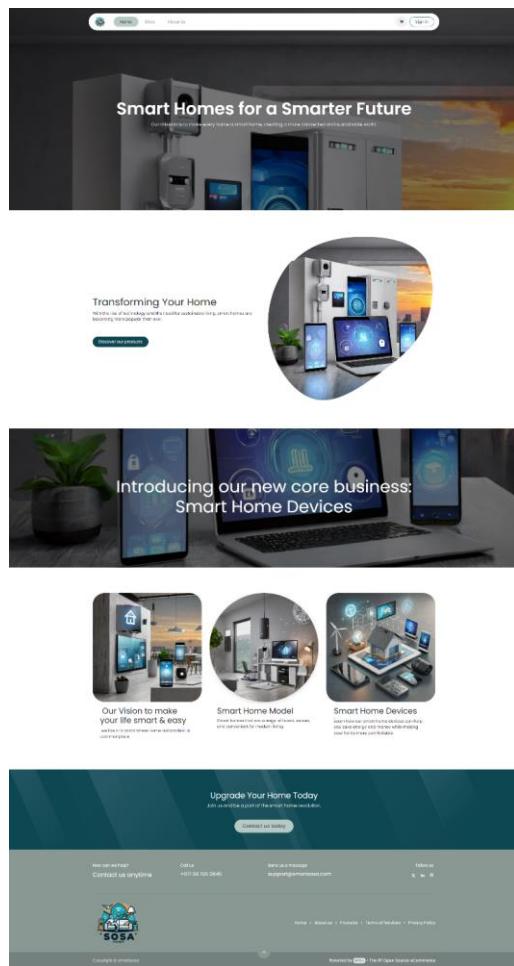


Figure 28 Entire Home Page

Logo TM4

"SOSA" is the designed logo for a company that offers products in smart home devices. The logo is written in highly stylized and outstanding font of the brand's name "SOSA." The letters in SOSA are derived from the initials of the project members, Sheriff, Osaid, Siddique, Abdulaziz.

The image in this logo shows a person sitting on the sofa in the living room. The person is holding a light bulb of a yellow color in his hand, a sign of discovery or a smart home unit placed in an environment of a light bulb. The room features different types of furniture, including a bed, table and beautiful artworks on the walls, that resembles a happy home life.



Figure 29 SOSA Home Logo

Navigation Bar TM4

The 'tailored' navigation bar is a horizontal bar which is on the topmost part of a website. It is mainly made up of the white background which is accentuated by black text. The navigation bar consists of five links to various sections of the site: SOSA home logo, Home, Shop, About Us, Cart, and Login. It is built through the help of resources provided by Odoo.com. The navigation bar crafted is rendered to be having a slim and flexible design which operates well on mobile devices. It is made such that any screen size or orientation change would be user-friendly thanks to this compatibility that guarantees a uniform and optimized experience. Finally, the navigation bar is creatively structured and intuitive coupled with the smartly chosen labels that are short and significant offering a natural guidance along the way without overwhelming the users.



Figure 30 Navigation Bar

Transforming Your Home
With the rise of technology and the need for sustainable living, smart homes are becoming more popular than ever.

[Discover Our Products](#)

**Introducing our new core business:
Smart Home Devices**

Our Vision to make your life smart & easy
we live in a world where home automation is commonplace

Smart Home Model
Smart homes that are energy-efficient, secure, and convenient for modern living.

Smart Home Devices
Learn how our smart home devices can help you save energy and money while making your home more comfortable.

Figure 31 Middle of the home page

As the user scrolls through the page, the navigation bar doesn't disappear but instead it becomes a smaller version of itself and remains at the top of the page while scrolling. By clicking on the "Discover Our Products" option, the user is taken directly to our shop. Our page provides an in-depth look into transforming homes in the age of advanced technology and the growing demand for sustainable living. We are proud to present our new core business: Smart Home Devices. Our goal is to make their lifestyle easier and more enjoyable in a world where home automation is prevalent. We invite users to explore their smart home model, which is designed to provide energy-efficient, cost-effective, and secure living spaces, ensuring comfort. This summary encapsulates our page and vision for the future, aimed at serving our users.

Shop TM4

The shopping page is the front of the virtual store, and it welcomes users to explore the products they want to buy all through the categories in place. Extreme measures have been taken to achieve this objective of smooth interaction as well as pleasing, easy to use interface.

The product search section, immediately taking the spotlight on the page, helps consumers to narrow down their choice by price range and letter arrangement. As well, the system has an advanced filter making it possible to customize search features very easily and use them to refine the search in a way that suits an individual's specific needs and preferences.

In our quest for simplicity and effectiveness, we have carefully created a layout free of clutter, so the most relevant information is placed at the forefront, with a pleasing aesthetic that remains as well. Every product is featured with the highest quality images, making users appreciate every detail of the look, how well it is made, and the uniqueness of each item which is presented to them.

In addition to this, we take a step further to provide the best of class service at our physical offices. Users are welcome to navigate through our online shelves while benefiting from a carefully picked variety of products that are specifically designed to satisfy a wide range of tastes and preferences. Dedicating our efforts to customer satisfaction, we commit ourselves to assist, guide and serve users from the first step until the end. It is our goal to make online shopping a smooth and rewarding journey.

Briefly, the buying page is an embodiment of our unwavering dedication to ensure that our customers enjoy the best possible shopping experience which is a combination of functionality and looks that are not only user-friendly but also visually appealing.

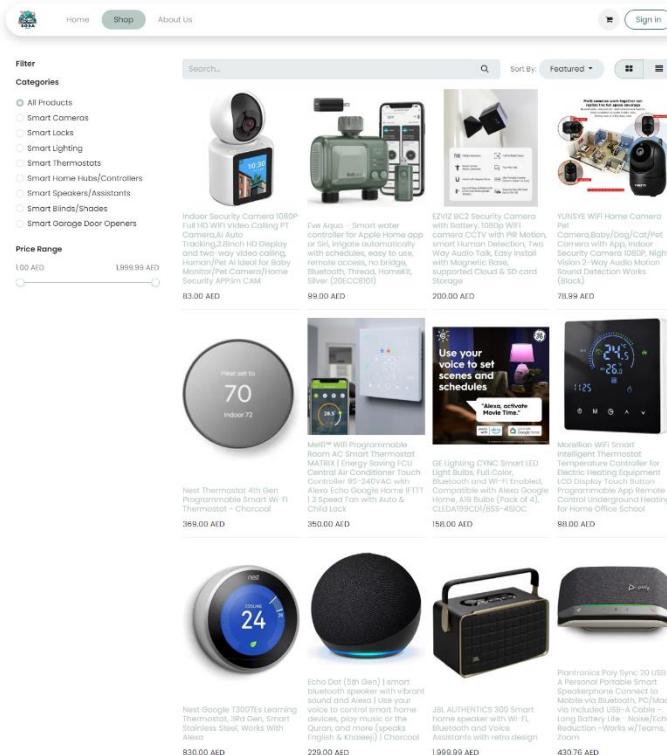
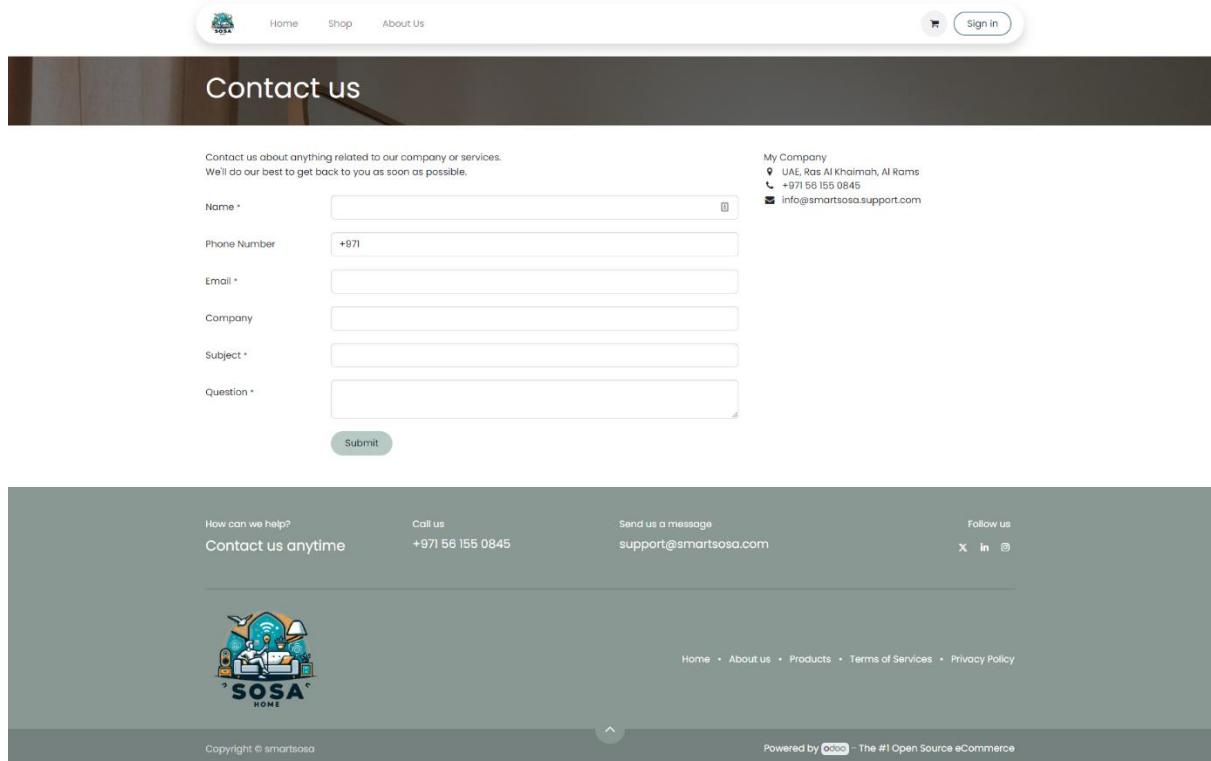


Figure 32 Shop Design Justification

Contact Us TM4

The Contact Page has been kept simple, with two main sections within it:

- Contact Information (Company Location, Phone Number and Email Address)
- Email Form - a simple email form which is easy to use for quick messages.



The screenshot shows the 'Contact us' page of the SmartSOSA website. At the top, there's a navigation bar with links for Home, Shop, and About Us. On the right side of the header is a shopping cart icon and a 'Sign in' button. The main title 'Contact us' is centered above a dark banner. Below the banner, there's a form for users to contact the company. The form fields include Name*, Phone Number (+971), Email*, Company, Subject*, and Question*. To the right of the form, company details are listed: My Company, UAE, Ras Al Khaimah, Al Roms, +971 56 155 0845, and info@smartsosa.support.com. A 'Submit' button is located at the bottom of the form. At the bottom of the page, there's a footer section with links for 'How can we help?', 'Contact us anytime', 'Call us +971 56 155 0845', 'Send us a message support@smartsosa.com', and 'Follow us' (with icons for X, LinkedIn, and Instagram). The footer also features the SmartSOSA logo, copyright information (Copyright © smartsosa), and a note about Odoo (Powered by odoo - The #1 Open Source eCommerce).

Figure 33 Contact Us Page Design Justification

Cart Features TM3 , TM4

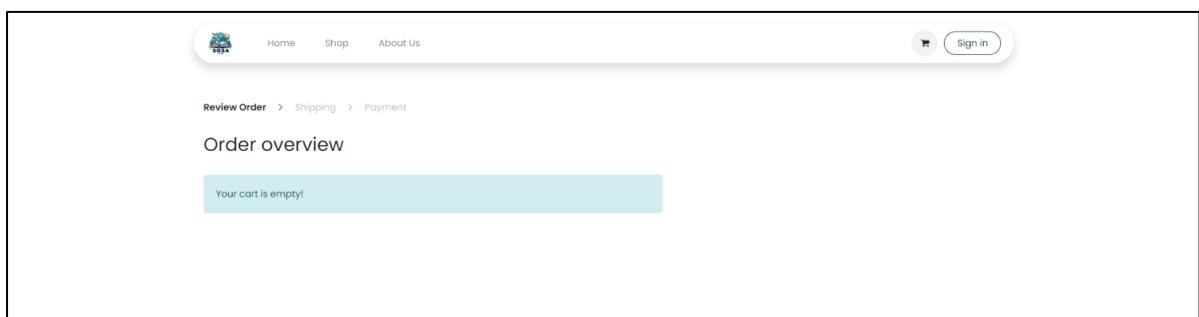


Figure 34 Empty Cart

To add the product to the cart the user has two options, they may hover over the item in the shop and click on the cart icon, which opens up a small window on their screen to adjust the quantity of said item.

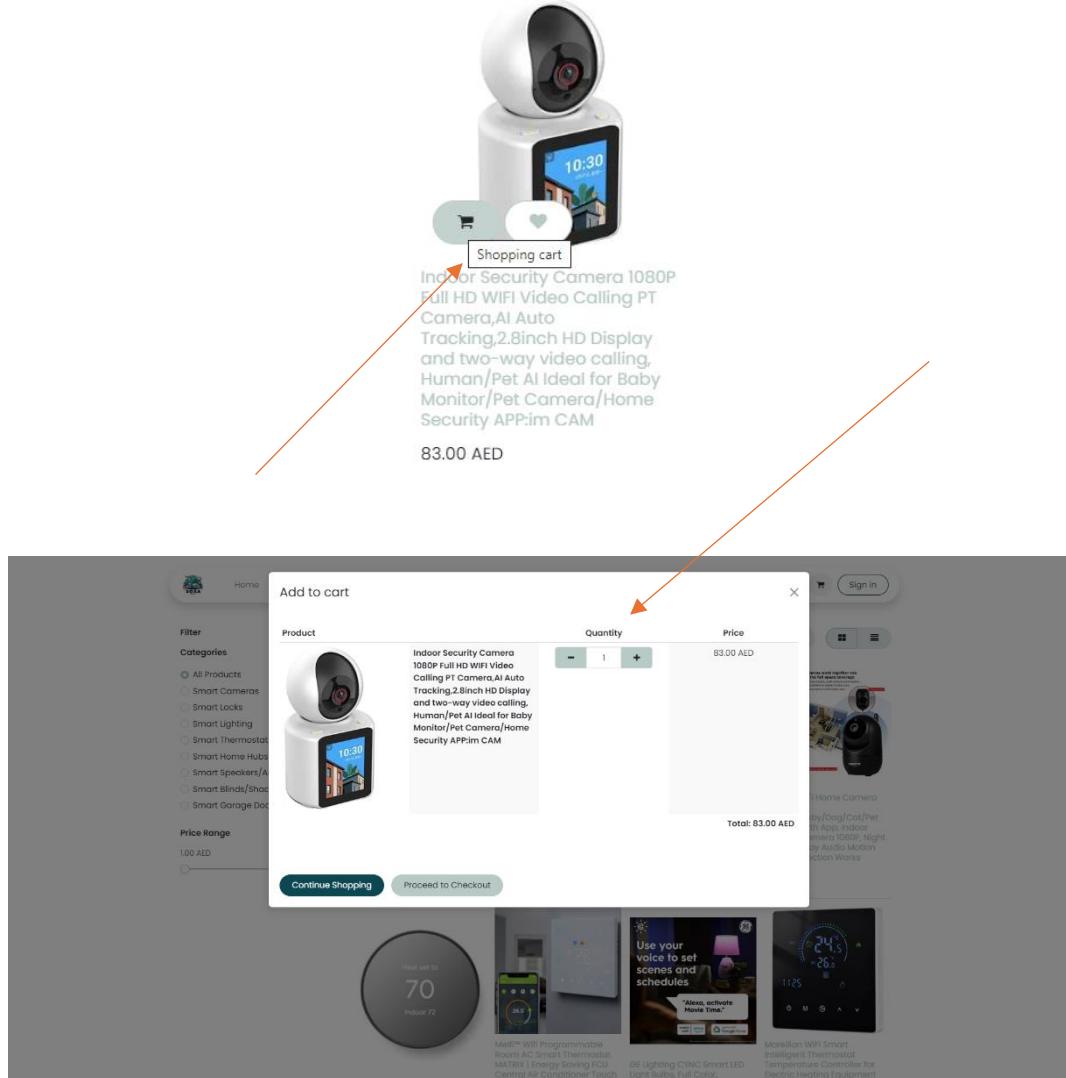


Figure 35 Add to Cart Option 1

The other option is to click on the item and open the item on a new page. This page shows the detailed explanation of the product and allows the user to change the quantity of the product before they add it to their cart.

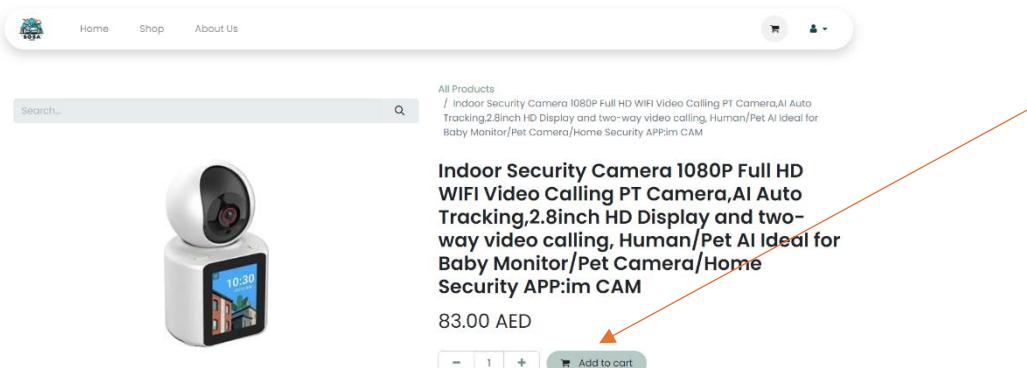


Figure 36 Add to Cart Option 2

To remove an item from the cart the website displays a small remove button as seen in the picture below. Additionally, the user may also reduce the quantity of the item to zero, hence removing the item from their cart.

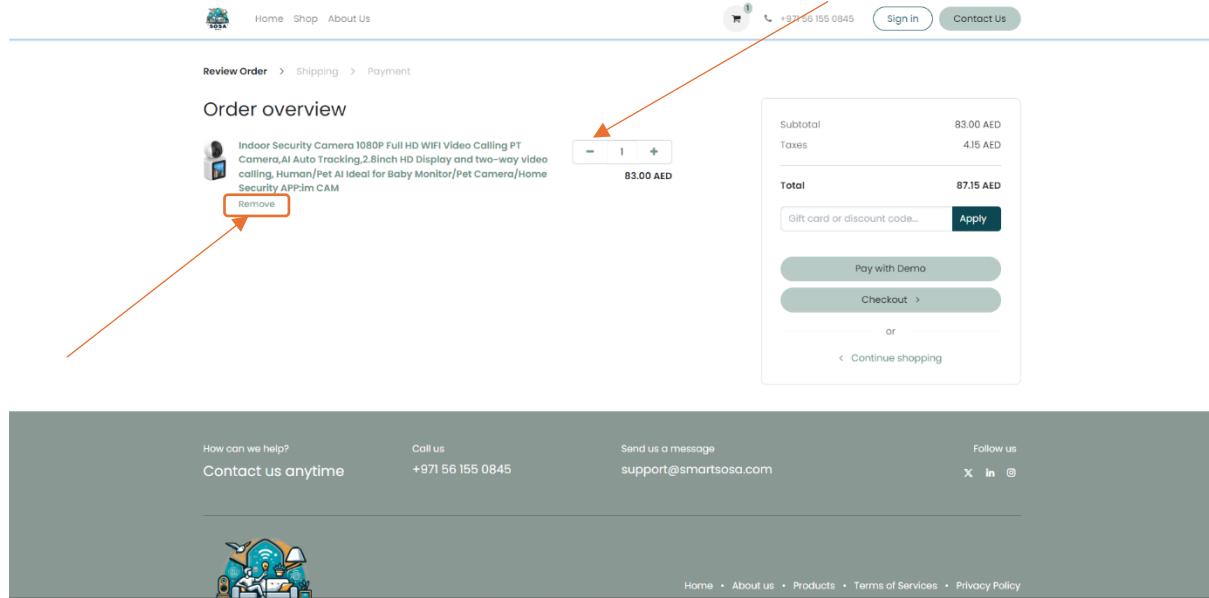


Figure 37 Removing Item From Cart

Checkout TM3

When the user wants to check out, they will get different screens depending on whether they are logged in or not which also means that users can check out and order without creating an account.

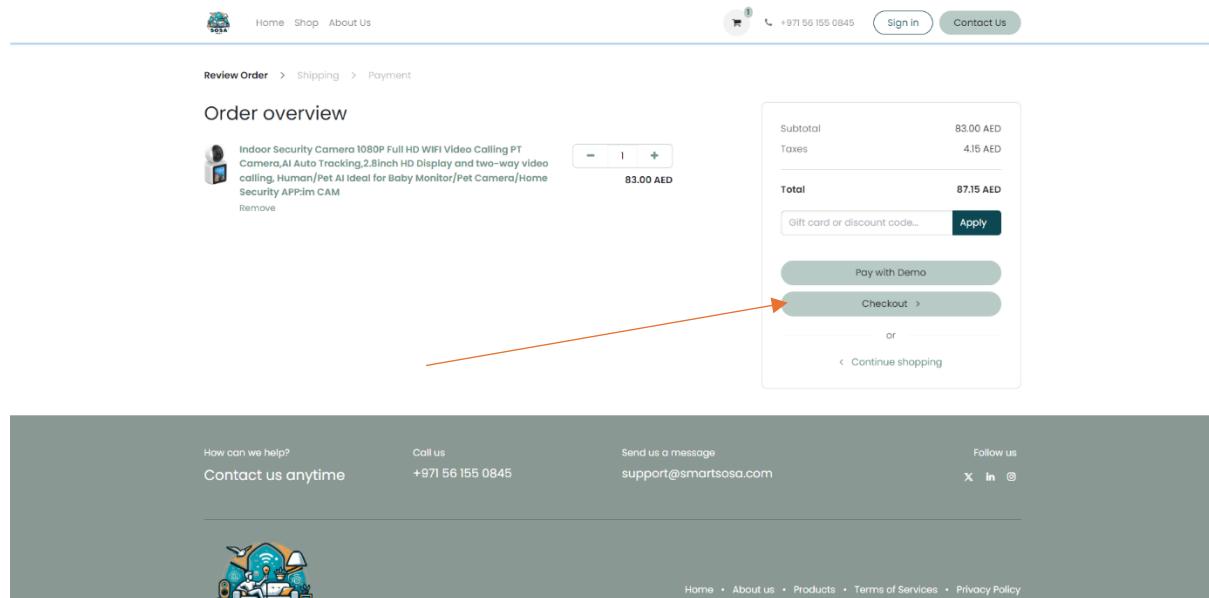


Figure 38 Checkout Button

In the case shown below the user is not logged into their account. This requires the user to fill out the shipping details and enter an email address to which the invoice of the entire transaction will be sent to.

The screenshot shows a checkout process on the smartSOSA website. The top navigation bar includes links for Home, Shop, About Us, and Contact Us. A sign-in link is also present. The main content area displays a form titled "Fill in your address or Sign in". The form fields include:

- Full name (text input)
- Email (text input)
- Phone (text input)
- Company Name (text input)
- VAT (text input)
- Street and Number (text input)
- Apartment, suite, etc. (text input)
- City (text input)
- Zip Code (text input)
- Country (dropdown menu, currently United Arab Emirates)
- State / Province (dropdown menu, currently State / Province..)
- Ship to the same address

At the bottom left is a "Discard" button, and at the bottom right is a "Continue checkout >" button.

Figure 39 Checkout without logging in.

And if the user is logged in and doesn't have any saved addresses, they'll get the same screen to fill the same information but if the user has a saved address, they will be transferred to the payment page and the shipping page will be skipped. On this screen the user is required to input their card details here and the hit the "Pay now" button.

The screenshot shows a payment options screen on the smartSOSA website. The top navigation bar includes links for Home, Shop, About Us, and Contact Us. A sign-in link is also present. The main content area displays a "Confirm order" message and an "Order summary" table. The table shows:

Order summary	
1 item(s) -	87.15 AED
Delivery	0.00 AED
Subtotal	83.00 AED
Taxes	4.15 AED
Total	87.15 AED

Below the table is a "Gift card or discount code..." input field and an "Apply" button. To the right is a large green "Pay now" button. Arrows point from the "Pay now" button to the "Payment Details" section and the "Order summary" table.

Figure 40 Payment Options

Once the user clicks on the pay now button the payment gets processed successfully and the user will be directed to the Invoice Page. On this page the user will get a print button through which they can print the order receipt.

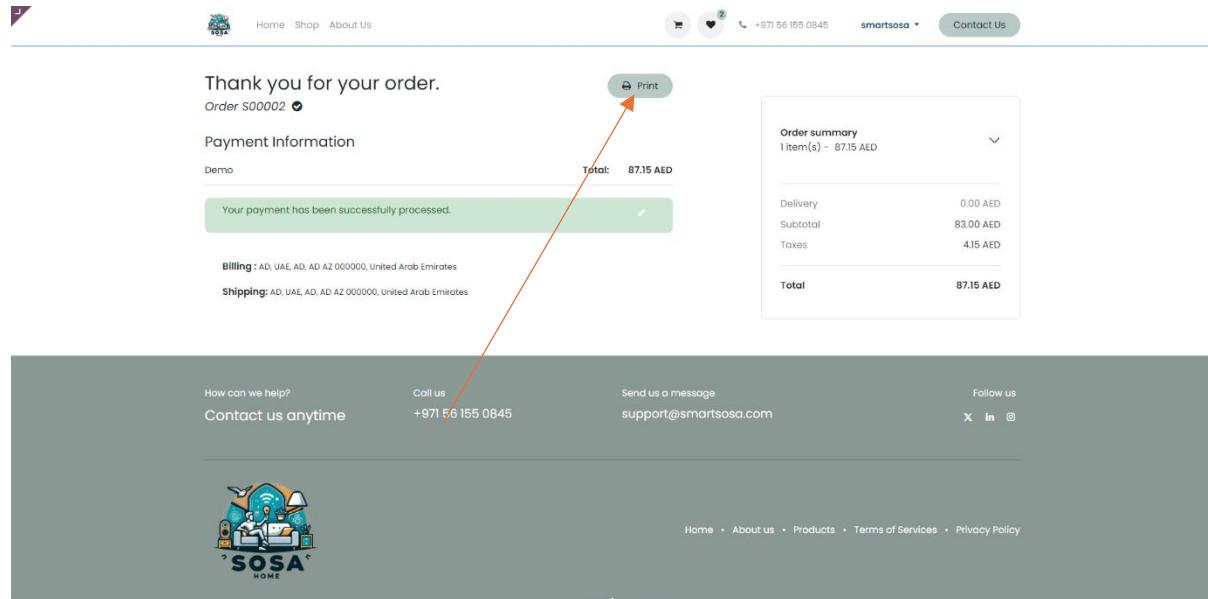


Figure 41 Invoice Page Design Justification

After successful payment an email will be sent to the customer with an invoice detail for his purchase. The Invoicing module is indeed crucial by providing users with the ability to create and manage invoices for their transactions. This is its main characteristic because it enables users to receive an invoice for their purchases easily and automatically without much difficulty.

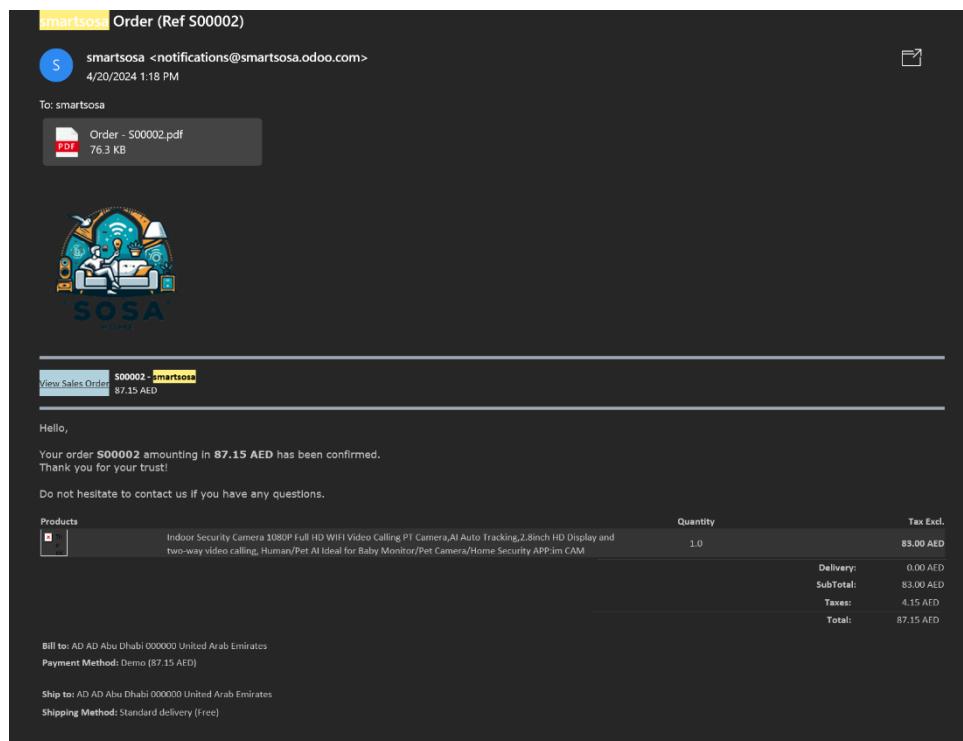


Figure 42 Invoice of sale in email

Features

Wishlist TM1

The Wish-list is the component that has a special function of putting on a list the things that a user would like to buy later. The main feature of this implementation is its functionalism, that is, the user will be able to add items to the cart and the cart will continue to hold them, until the user decides to buy them.

This screenshot shows a product listing page from smartsosa.odoo.com. At the top right, there is a 'Wishlist' icon with a red box around it, indicating it's the active tab. Below the header, there are filters for 'Categories' (All Products, Smart Cameras, Smart Locks, Smart Lighting, Smart Thermostats, Smart Home Hubs/Controllers, Smart Speakers/Assistants, Smart Blinds/Shades, Smart Garage Door Openers) and 'Price Range' (40.72 AED to 1,999.99 AED). The main content area displays four products:

- Indoor Security Camera 1080P**: Full HD WiFi Video Calling PT Camera, AI Auto Tracking, 2.8inch HD Display and two-way video calling, Human/Pet AI Ideal for Baby Monitor/Pet Camera/Home Security APP:im CAM. Price: 83.00 AED.
- Eve Aqua – Smart water controller**: for Apple Home app or Siri, irrigate automatically with schedules, easy to use, remote access, no bridge, Bluetooth, Thread, HomeKit, Silver (20ECC8101). Price: 99.00 AED.
- EZVIZ BC2 Security Camera**: with Battery, 1080p WiFi camera CCTV with PIR Motion, smart Human Detection, Two Way Audio Talk, Easy Install with Magnetic Base, supported Cloud & SD card Storage. Price: 200.00 AED.
- YUNSYE WiFi Home Camera**: Pet Camera,Baby/Dog/Cat/Pet Camera with App, Indoor Security Camera 1080P, Night Vision 2-Way Audio Motion Sound Detection Works (Black). Price: 78.99 AED.

Each product card includes an 'Add to Wishlist' button. The 'Add to Cart' button is located at the bottom right of the page.

Figure 43 Wishlist Functionality

When you're viewing the Wishlist you can easily add one by one to the cart or add all of them together by clicking on the checkbox

This screenshot shows the 'My Wishlist' page. At the top right, there is a 'Cart' icon with a red box around it, indicating it's the active tab. Below the header, there is a checkbox labeled 'Add product to my cart but keep it in my wishlist'. The main content area displays three items in the wishlist:

	Indoor Security Camera 1080P Full HD WiFi Video Calling PT Camera, AI Auto Tracking, 2.8inch HD Display and two-way video calling, Human/Pet AI Ideal for Baby Monitor/Pet Camera/Home Security APP:im CAM Remove	83.00 AED	Add to Cart
	Melfi WiFi Programmable Room AC Smart Thermostat MATRIX Energy Saving FCU Central Air Conditioner Touch Controller 95~240VAC with Alexa Echo Google Home IFTTT 3 Speed Fan with Auto & Child Lock Remove	350.00 AED	Add to Cart
	Echo Dot (5th Gen) smart bluetooth speaker with vibrant sound and Alexa Use your voice to control smart home devices, play music or the Quran, and more (speaks English & Khaleej) Charcoal Remove	229.00 AED	Add to Cart

The 'Add to Cart' buttons are highlighted with a red box. The 'Add to Cart' button is located at the bottom right of the page.

Figure 44 Wishlist Add to Cart Feature

Search TM3

The website consists of a search bar feature where users can search for items they want or anything they want on the website. Also, the search bar can be accessible on any page on the website.

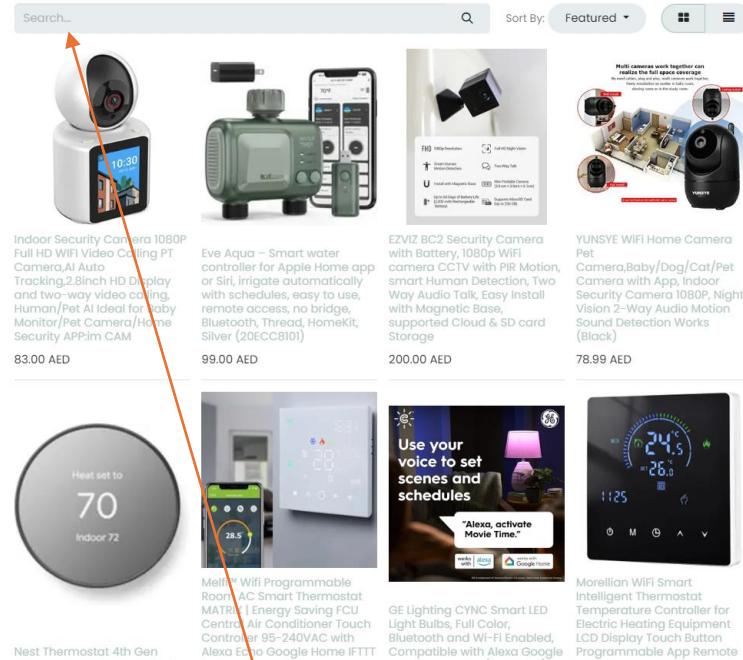
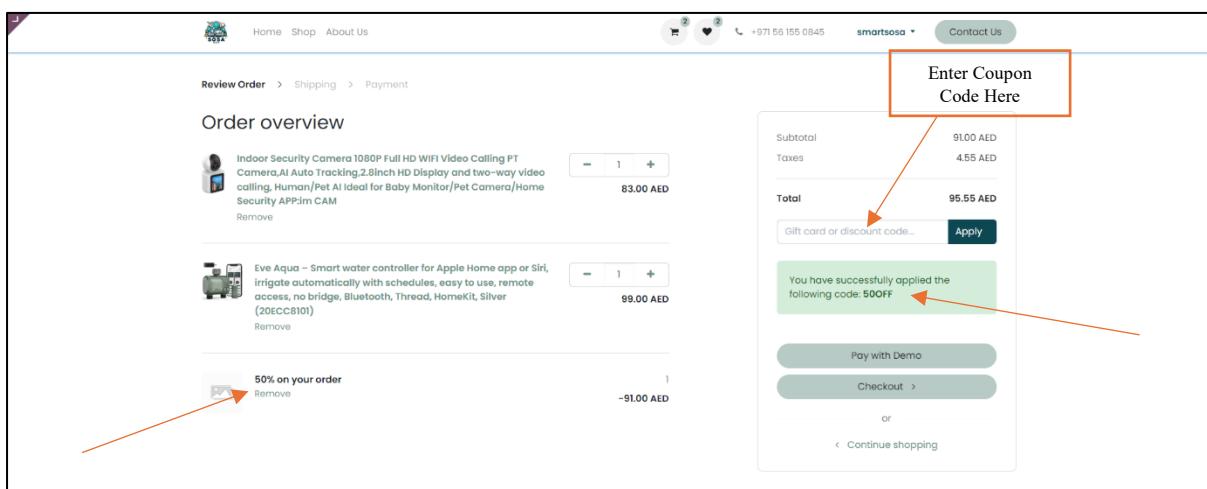


Figure 45 Search bar Feature.

Coupons TM3

The website also offers the user to add coupons and gift cards on the checkout page. There are specific promo codes that need to be entered to provide a discount to the user. One of the discount codes is “50OFF”. Upon entering this code the user gets a 50% discount on their total bill.



Admin Panel TM3

In the admin panel the admin can add new products and modify the name, price and description of the products existing in the shop. The admin needs to log in to the website using their login credentials. Then the admin can enter the shop and modify or add new products.

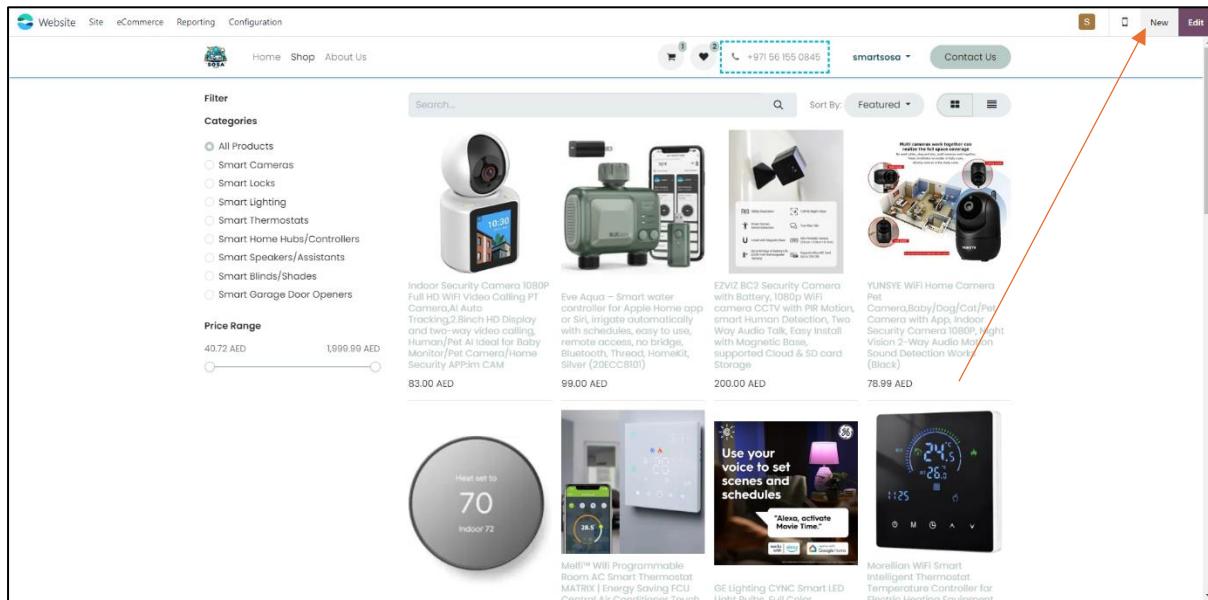


Figure 46 Administrator Access to website

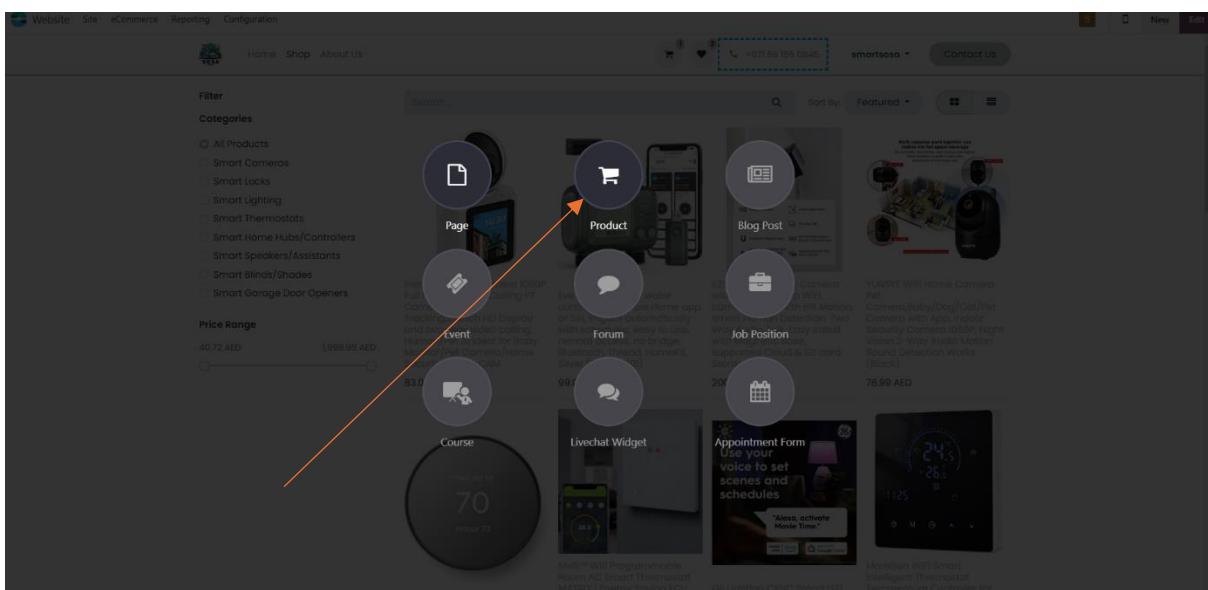


Figure 47 Admin Adding new Product

Once the admin clicks to add a new product, the admin needs to fill in the product information and then they can click on the save button and the product information will be saved in the database.

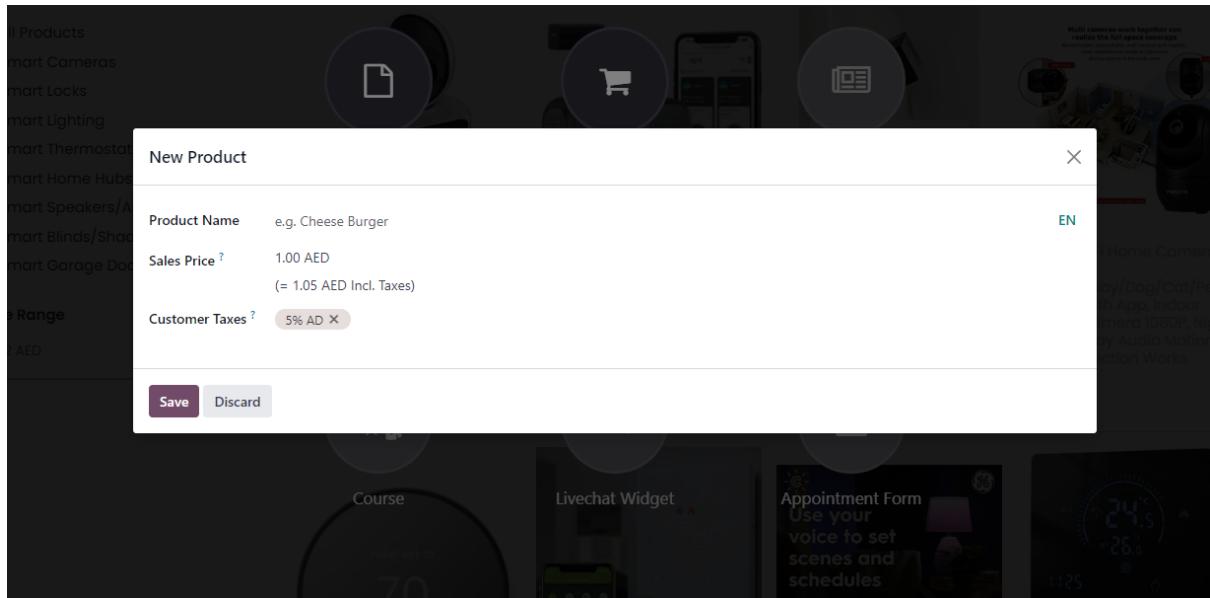


Figure 48 New Product Information

After that the admin will be directed to another page where they can add images, set a price, and write a description for the product. The admin can add multiple photos of the product, and they are given a simple page to fill out the details and the description of the product. Once the admin has finished filling out all the required information, the product is saved into the database without a specific category.

Once the admin has saved all the information, they must click the product button to alter the category of said product.

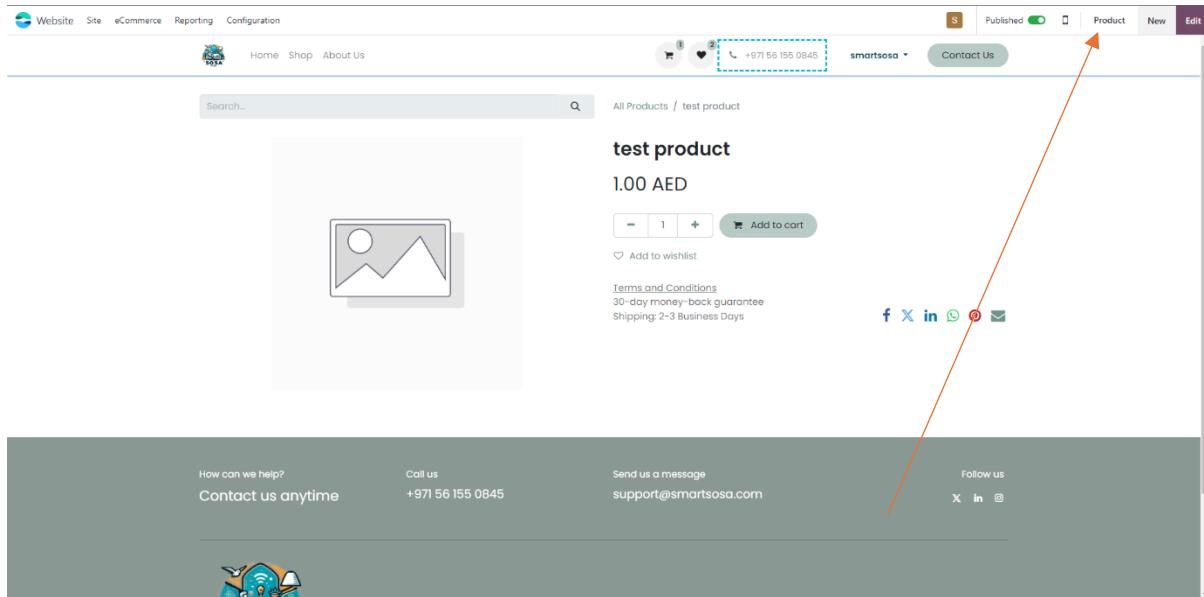


Figure 49 Saved Product details page

The admin is then redirected to where the item is stored on the database. Through the database the admin can manage and modify the details of all the products that are available in the shop. They may also change the category of each product by accessing the sales tab of the product.

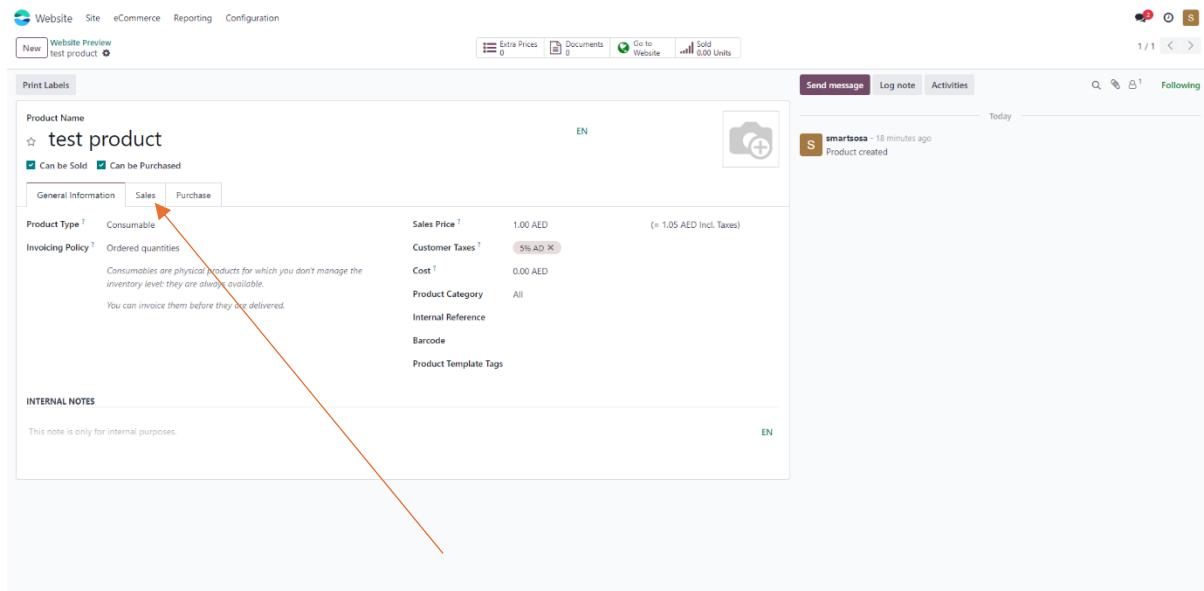


Figure 50 Product Database

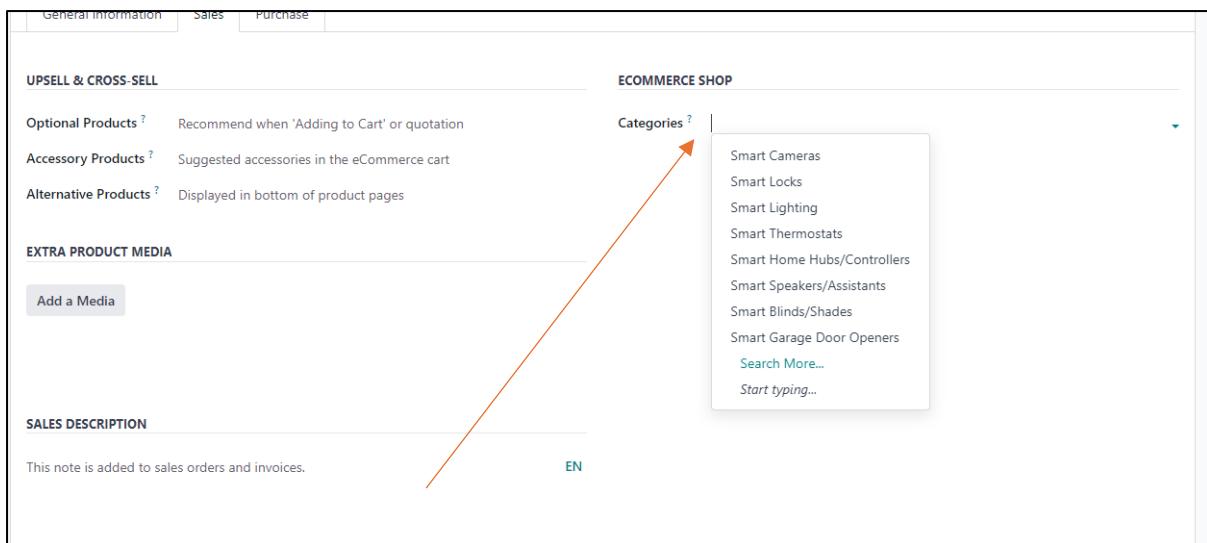


Figure 51 Product Database Sales tab

The admin can also create discount codes and through the website. These discount codes are also stored in a separate part of the database.

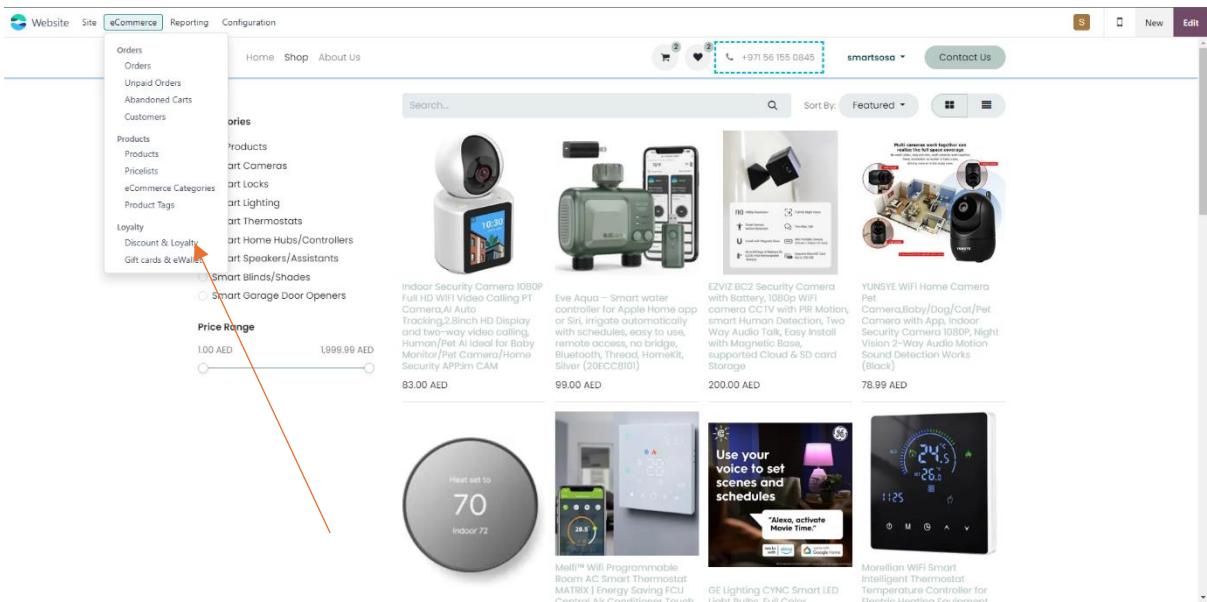


Figure 52 Creating a discount Code

The admin is then directed to the discount & loyalty database. On this page the admin can see the existing codes or add a new code

Program Name	Program Type	Items
Promotional Program	Promotions	0 Promos
10%	Coupons	2 Coupons
Discount coupons	Discount Code	1 Discounts

Figure 53 Discount & Loyalty Database

On the editing page, the admin is given options to change the name and type of the program. For an ecommerce website the program type chose is discount code. Once the admin sets the rules of the program they may add this program to the data base.

Program Name: Test coupon

Program Type: Discount Code

Rewards:

- 10.00% discount
- Applied to: Aeotec Smart Home Hub - UK ver...

Figure 54 Discount Code Editing Stage

Once the coupon has been added to the database, the admin can now modify the conditional rules of the discount code. By doing so, the discount code gets generated automatically.

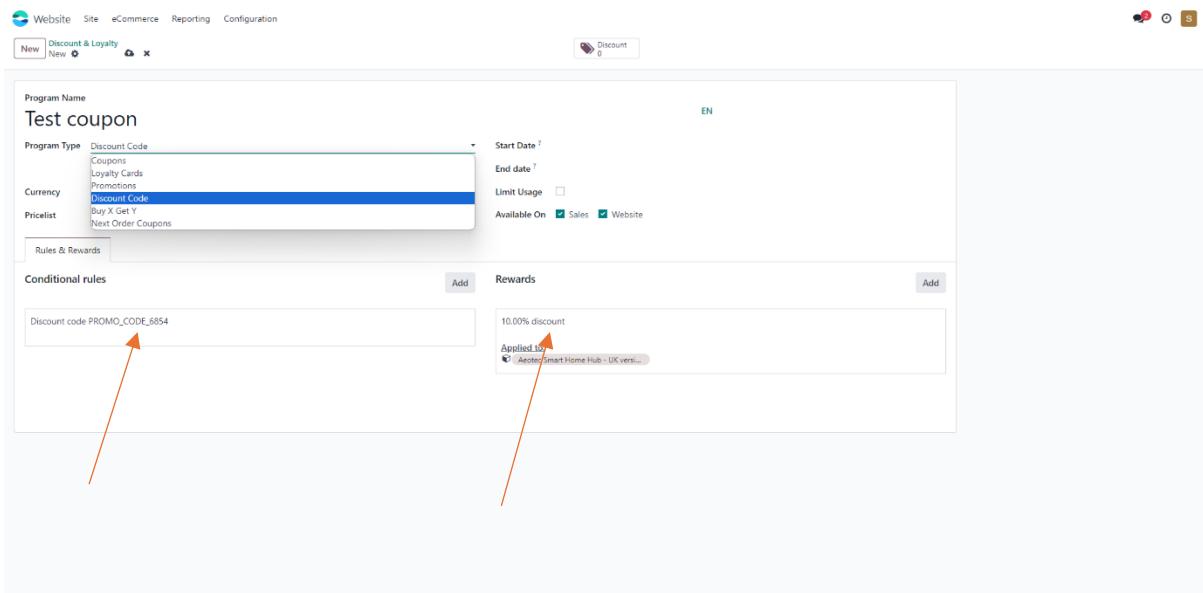


Figure 55 Discount code database features

To modify the conditional rules the admin is redirected to a pop up on the database page. Here they may add conditions for the discount code. For example, the admin may add a minimum product quantity or a minimum purchase amount for a specific discount code to work.

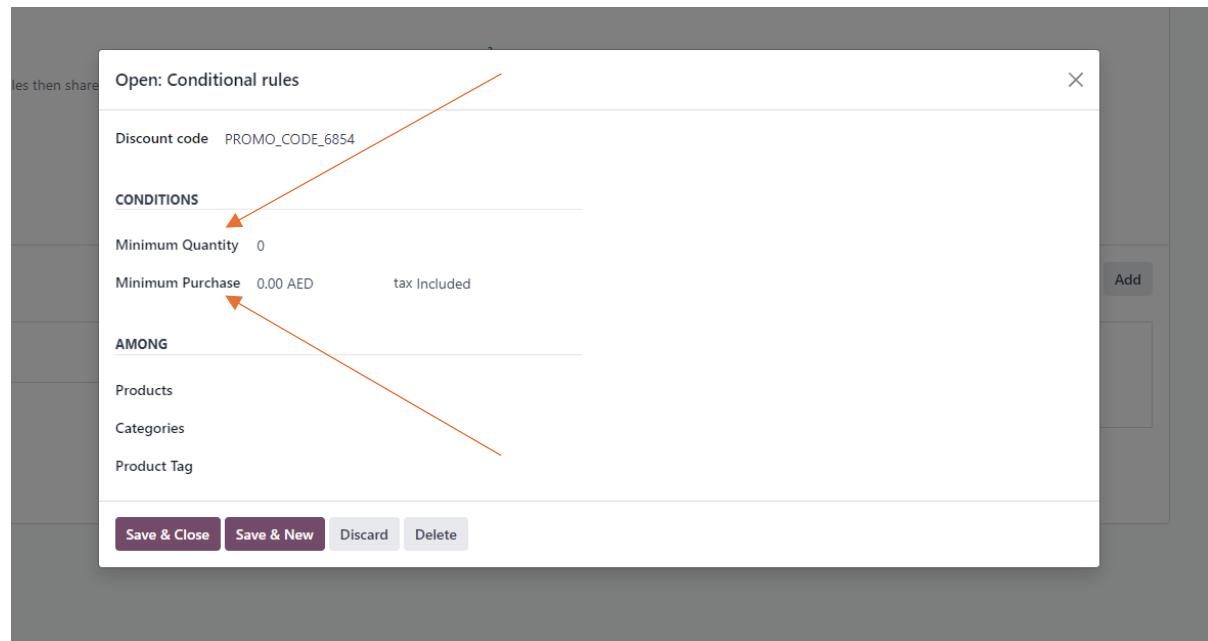


Figure 56 Discount Code Conditional Rules

The admin can also edit the discount percentage and choose which products the discount codes can apply to. The admin can also set a max discount amount.

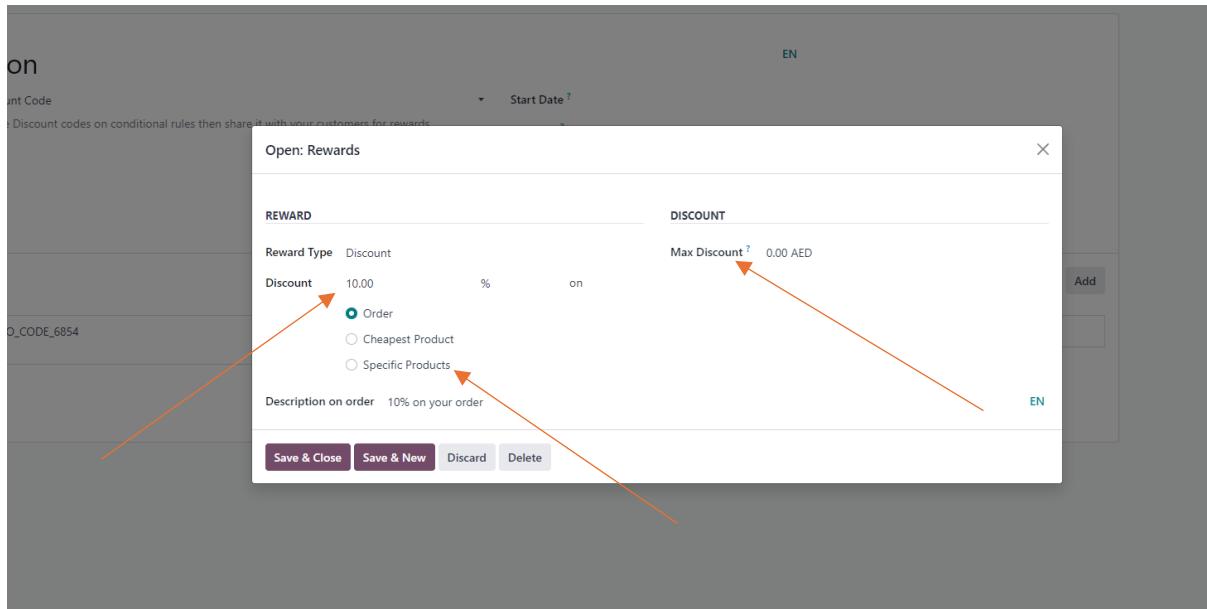


Figure 57 Discount code settings

The admin has access to the sales dashboard. On this page the admin can check for the sales revenue and can open all the invoices for the products sold.

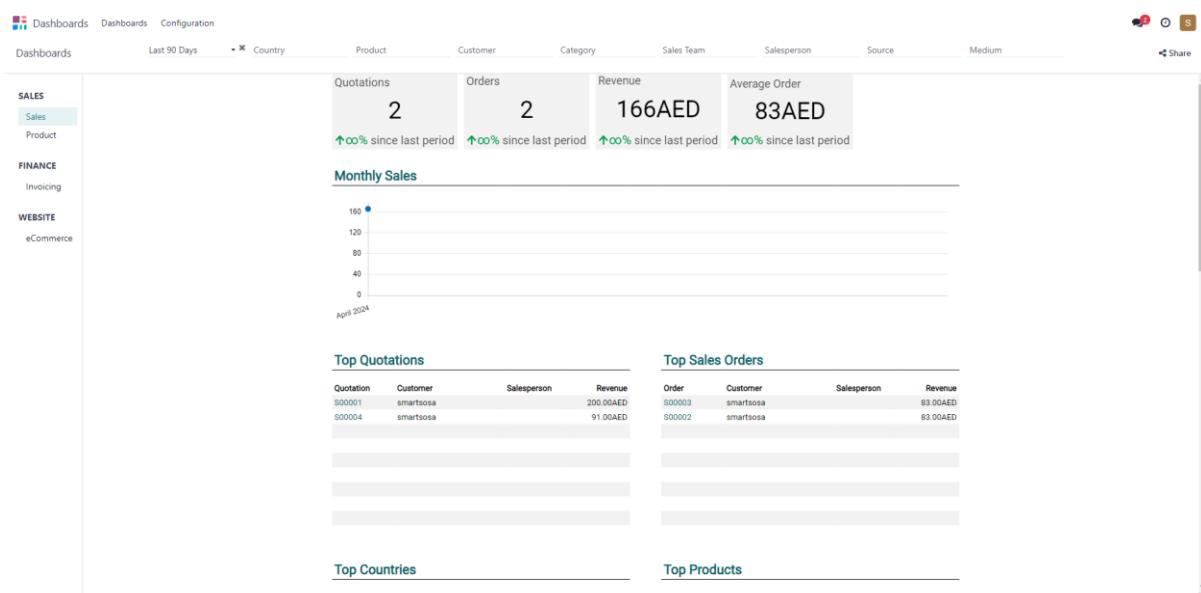
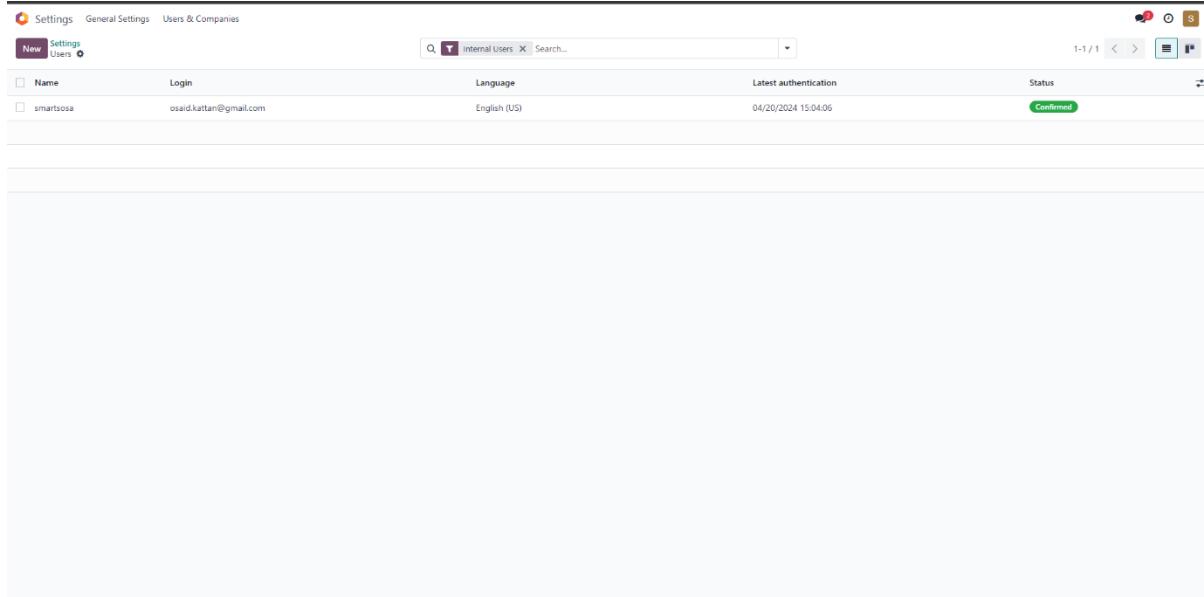


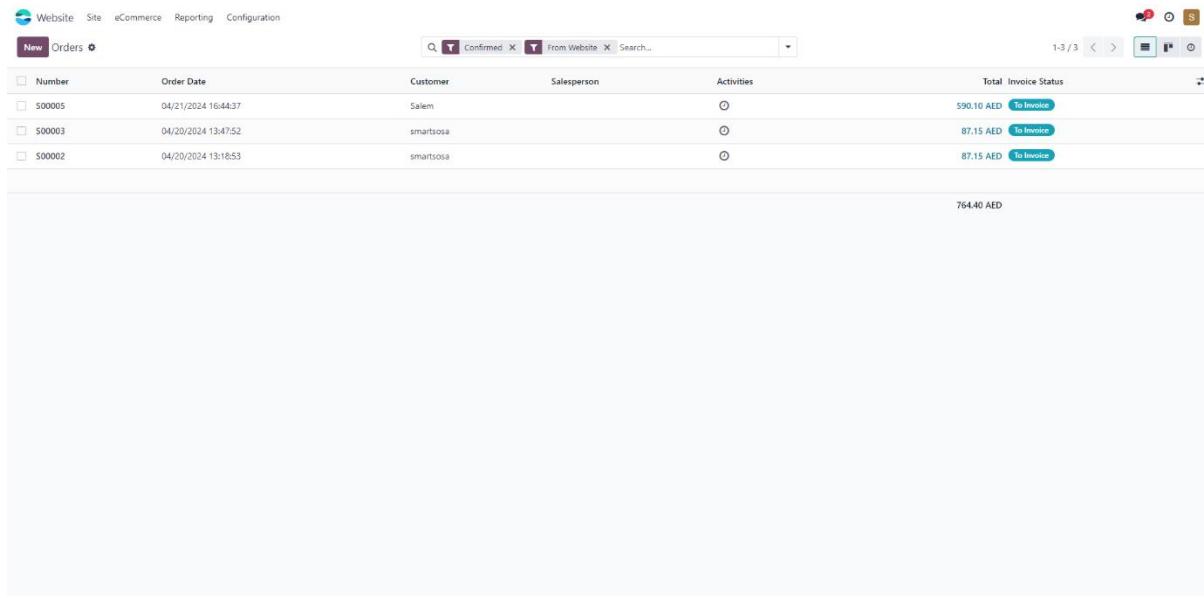
Figure 58 Admin's Dashboard

The dashboard also gives the admin access to a database of the customers. Within these databases the admin can see what items the customers have ordered. This way the admin can ensure whether the shipping is completed or not. The admin also has access to a customer list. However, the admin is only able to see the username and email address of their customers, the password is not visible to the admin to ensure user privacy.



User Profiles				
Name	Login	Language	Latest authentication	Status
smartssosa	osaid.kattan@gmail.com	English (US)	04/20/2024 15:04:06	Confirmed

Figure 59 User Profiles



Number	Order Date	Customer	Salesperson	Activities	Total	Invoice	Status
500005	04/21/2024 16:44:37	Salem			590.10 AED		To Invoice
500003	04/20/2024 13:47:52	smartssosa			87.15 AED		To Invoice
500002	04/20/2024 13:18:53	smartssosa			87.15 AED		To Invoice

Figure 60 Pending Orders

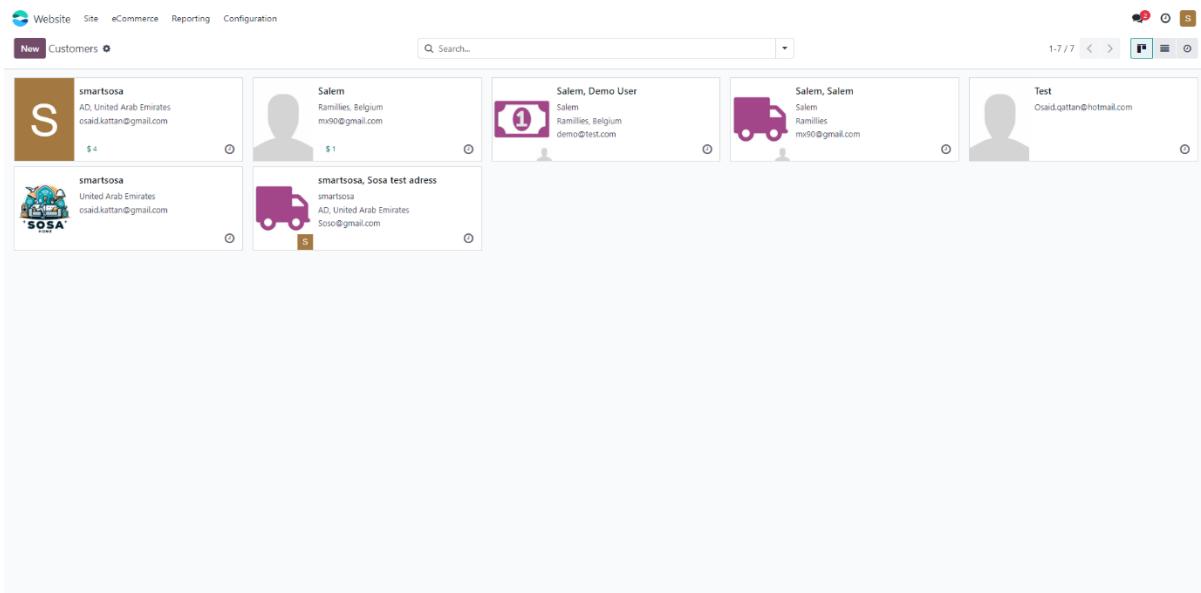


Figure 61 Customer list

The admin also has access to unpaid orders. Rare cases when the customer orders a product and the payment does not go through due to a banking or a separate issue.

Number	Creation Date	Customer	Salesperson	Activities	Total	Status
REF0001	2018-01-01 12:00:00	John Doe	John Doe	1 Order	100.00	Pending
REF0002	2018-01-01 12:00:00	Helen Smith	Helen Smith	1 Order	100.00	Pending
REF0003	2018-01-01 12:00:00	Thomas Davis	Thomas Davis	1 Order	100.00	Pending
REF0004	2018-01-01 12:00:00	David King	David King	1 Order	100.00	Pending
REF0005	2018-01-01 12:00:00	Wanda King	Wanda King	1 Order	100.00	Pending
REF0006	2018-01-01 12:00:00	Helen Johnson	Helen Johnson	1 Order	100.00	Pending
REF0007	2018-01-01 12:00:00	John Doe	John Doe	1 Order	100.00	Pending
REF0008	2018-01-01 12:00:00	Wanda King	Wanda King	1 Order	100.00	Pending
REF0009	2018-01-01 12:00:00	Helen Johnson	Helen Johnson	1 Order	100.00	Pending
REF0010	2018-01-01 12:00:00	Thomas Davis	Thomas Davis	1 Order	100.00	Pending

There is no unpaid order from the website yet

Process the order once the payment is received.

Figure 62 Unpaid Orders

Multiple Device Capability TM2

The website also offers accessibility to users on multiple devices. The user can access the website through their phones or tablets. According to the aspect ratio of the users device, the website will automatically adjust and scale each part of the website to adjust to the users screen.

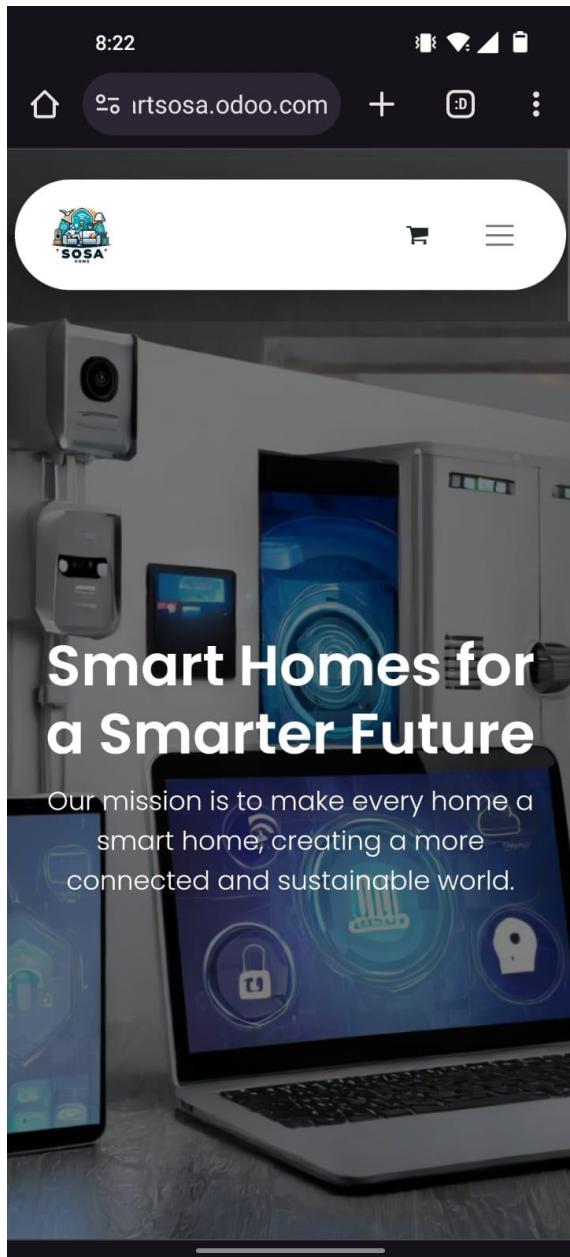


Figure 63 Home Page Phone View

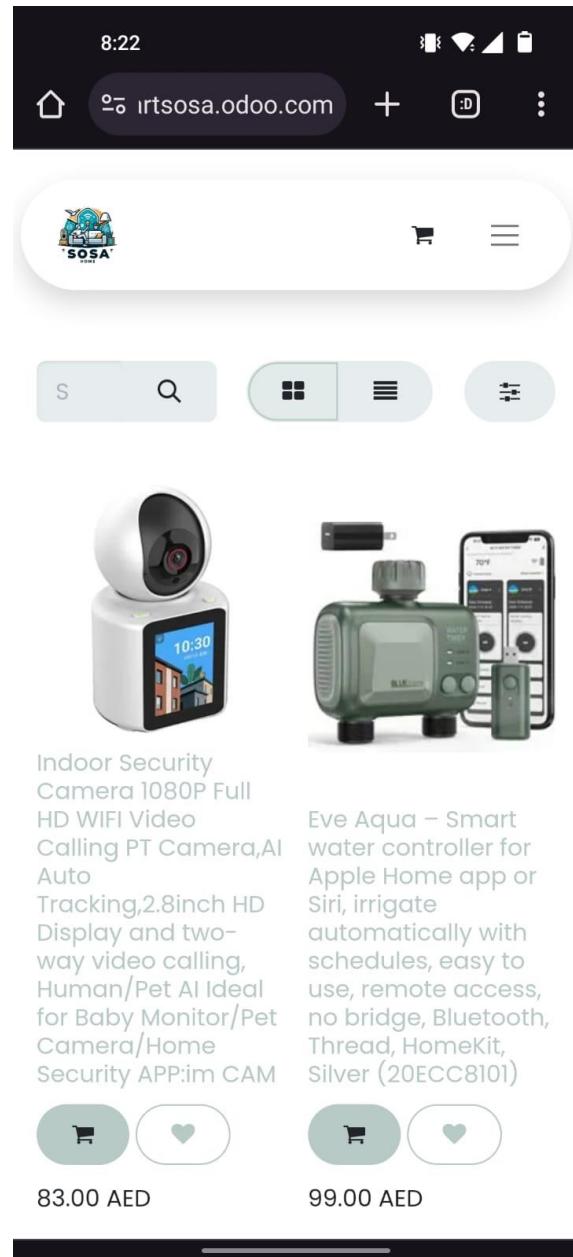


Figure 64 Shop Phone View

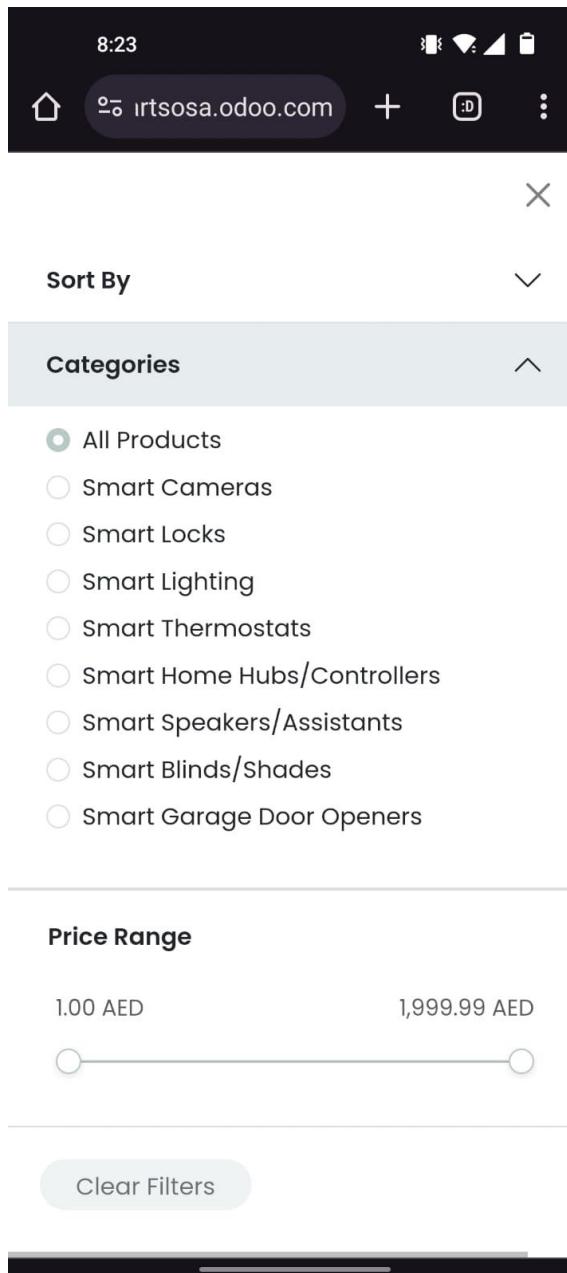


Figure 65 Filters and Category select Phone View

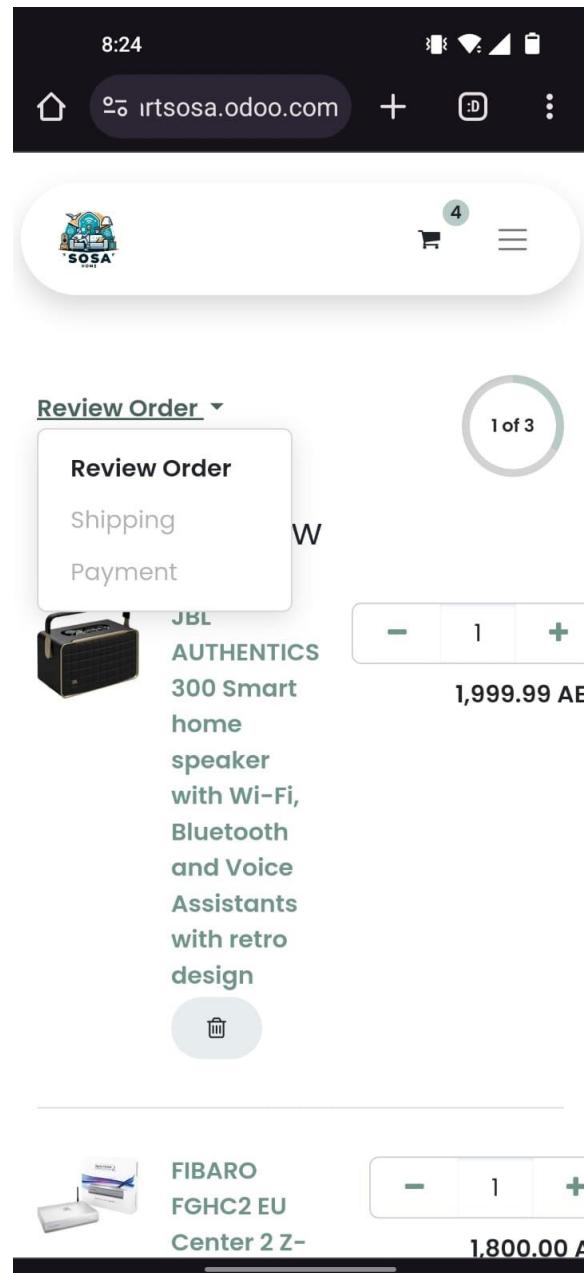


Figure 66 Cart Phone View

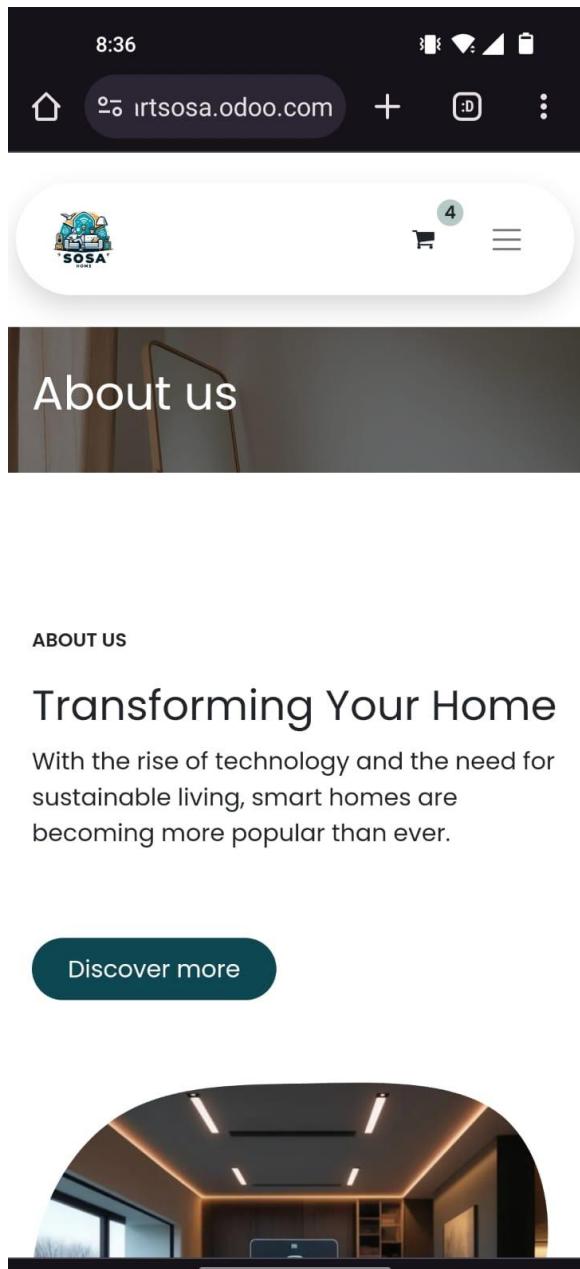


Figure 67 About Us Page Phone View

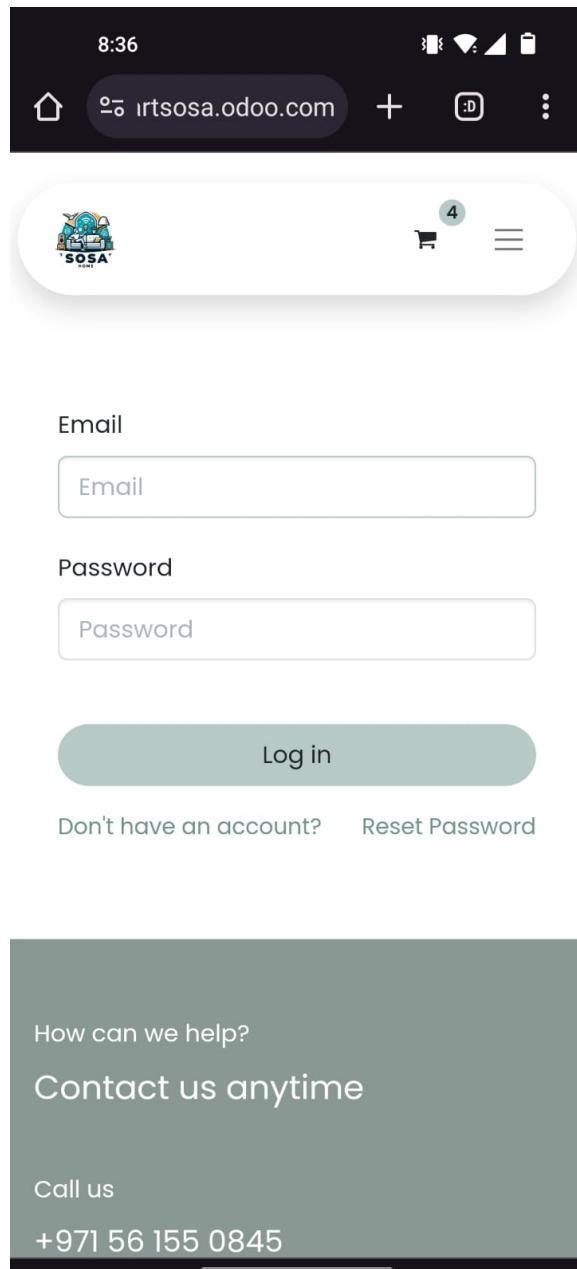


Figure 68 Log in Page Phone View

Group Activity

The team worked closely together to finish the project, meeting once a week to discuss updates, add new components, and come up with new ideas. Apart from these meetings, different software applications were used to promote collaboration and progress.

We also used different cloud platforms such as Google Docs and OneDrive to share files, additionally GitHub was also used to track how the development process was progressing.

Meeting Minutes TM3

Meeting-1 (12th February 2024)

12 February 2024		210 min
<ol style="list-style-type: none"> 1. Planning the division of tasks among team members. 2. Determining the database structure. <ol style="list-style-type: none"> 2.1. Creating a preliminary draft on paper. 2.2. Compiling necessary details for database implementation. 3. Planning the website design approach. <ol style="list-style-type: none"> 3.1. Defining the layout and content for different web pages. 3.2. Outlining the structure of the web application through diagrams. 4. Establishing a weekly meeting schedule. 		

Meeting-2 (19th February 2024)

19 February 2024	240 min
<ul style="list-style-type: none"> 6. Choosing the type of website (e.g., mobile e-commerce platform) 7. Creating the database structure <ul style="list-style-type: none"> 7.1. Defining tables for items and accounts 8. Drafting the design <ul style="list-style-type: none"> 8.1. Reviewing the preliminary code design 8.2. Sketching out additional pages for the draft 9. Initiating the preparation of Assignment 2 presentation <ul style="list-style-type: none"> 9.1. Commencing the development of a Gann Chart 10. Recording ideas for future enhancements <ul style="list-style-type: none"> 10.1. Compiling a wish-list for future features 10.2. Outlining plans for an administrative panel 10.3. Specifying requirements for account management functionalities 	

Meeting-3 (26th February 2024)

26 February 2024	190 min
<ul style="list-style-type: none"> 11. Updating the database. <ul style="list-style-type: none"> 11.1. Adding new tables to accommodate changes. 11.2. Adjusting column types as necessary. 11.3. Modifying table structures to align with the designed pages. 12. Reviewing the designed pages. <ul style="list-style-type: none"> 12.1. Discussing potential implementation methods or modifications. 13. Revising the Gann Chart. <ul style="list-style-type: none"> 13.1. Adjusting dates and assessing risks. 	

Meeting-4 (3rd March 2024)

3 March 2024		250 min
14. Finalizing the presentation. 14.1. Reviewing and editing slides for accuracy and clarity. 14.2. Incorporating the updated Gann Chart into the presentation. 14.3. Including additional slides as needed. 15. Rehearsing the presentation. 16. Finishing the database table connections.		

Meeting-5 (10th March 2024)

10 March 2024		250 min
17. Reviewing existing web pages. 17.1. Making edits to certain pages as necessary. 18. Inserted some fake data into database		

Meeting-6 (17th March 2024)

17 March 2024		180 min
21. Verifying the design of the shopping basket to ensure compatibility with database tables. 22. Addressing issues with session implementation. 23. Exploring potential designs and functionalities for the future admin panel.		

Meeting-7 (24th March 2024)

24 March 2024		210 min
27. Beginning the development of functionality to add and remove items from the basket. 28. Holding discussions regarding the design of the compare page. 29. Reviewing the Gann Chart and project plan for assessment and updates.		

Meeting-8 (1st April 2024)

1 April 2024		220 min
	32. Initiating the development of the "Contact Us" page. 33. Adjusting the navigation bar at the top to accommodate all pages. 38. Updating database information to ensure accuracy and relevance.	

Meeting-9 (12th April 2024)

12 April 2024		260 min
	17. Reviewing the entire website to identify any errors in links and spelling. 18. Conducting a thorough double-check of payment details and fund verification. 18.1. Editing fund information in the database following payment completion. 19. Assessing potential future implementation options. 20. Finalizing the website 21. Finalizing the report to submit	

Conclusion TM1, TM2, TM3, TM4

In the building of our Smart SOSA, our team has been through an adventure that entails the teamwork, innovation, and dedication. Every one of us used our respective knowledge, combining technical abilities with a creative viewpoint to produce a platform that would help improve the way people shop online for smart home items.

From the very beginning, we appreciated the fact that the mission of this project was to be executed by the most efficient way possible and by means of clear communication. The outline of the functions and the creation of an unambiguous project management system promoted teamwork, productivity, and cooperation among the members. This has been a solution that enhanced our adaptability and helped us to direct with intention our web development processes.

Our undertaking had two sets of mandates however – first of all, those of the university and second, the added features that our team envisioned to enhance the user's happiness. Smart SOSA was implemented in a well deliberated process, and its results surpassed the expectations we had. This website entails basic functions comprising the ability to browse products, manage cart, and login, and it also has some advanced features such as a wish list as well as after-sales support and it was developed in a manner that exactly satisfies the needs of our target market.

However, the entire process of development was underlined by our firm determination to be open to new ideas and ready to act accordingly. The meetings that were held regularly allowed us to gather information on progress, solutions to problems encountered, and revision of strategies. Whether it was finalizing database structures, fixing web page designs or making user interface changes, we did it with the same keenness and the understanding that the goal was to make people feel happy about their experience.

Smart SOSA not only hinders upon the professional point of view but also shows the spirit of teamwork and innovation. Through our relationship, the teamwork during the development stage resulted in a product that not only demonstrates our advanced technological capabilities but also speaks to our joint vision of e-commerce's future. As we introduce Smart SOSA to the world we do not do so with arrogance, but rather, we do so with a sense of certainty that it reflects our commitment, creativity, and teamwork.

In Conclusion, Smart SOSA defines more than a web-based app, but it is evidence of how teamwork, innovation, and unyielding passion works together. As we look forward towards the horizon, we ensure to shatter perceived barriers, building on to the good while creating new ones. We are looking forward to where our Smart SOSA takes us to after this journey. We are sure that the future will be full of great things.

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