**Front-End Development Report**

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# Introduction

This report documents my work at TNK Technologies Ltd. developing a front-end e-commerce website called "House of Perfumes". House of Perfumes is designed to be online platform, selling perfumes and gift sets for both genders. Its primary goal is to design an intuitive and visually appealing shopping experience that allows customers to effectively browse products and make informed purchasing selections. The website is designed to be fully responsive and accessible, ensuring compatibility across variety of devices and screen sizes. It enables customers to browse product listings, easily navigate across pages, and access customer service resources. The purpose of this task is to create a functional and user-friendly front-end interface that provides an engaging e-commerce experience.

# Branding

The design of House of Perfumes was carefully considered to create a visually appealing and professional look that aligns with the brand identity. The website follows a primarily black and white theme, which conveys simplicity and professionalism. After researching various perfume websites, it was evident that this colour scheme is widely adopted due to its timeless appeal and ease on the eye.

The brand slogan, "House of Perfumes Where Moments Turn to Memories", was crafted to highlight the emotional connection associated with fragrances. Perfumes have the power to evoke memories and emotions, making them more than just a product but an experience. This slogan reinforces the idea that each purchase from House of Perfumes is more than just a transaction. it’s about capturing moments through scent.

The logo was designed in Canva using a combination of #1a0841 (dark purple) and #ffad5a (golden yellow) to create a sense of luxury. These colours are complementary on the colour wheel, thus ensuring they contrast well on the logo.

The colour scheme for the website incorporates #cec4e8 and #f4f0fe (both light purples) as the primary colours for light mode and #1a0841 for dark mode. This selection ensures that the website remains visually distinct in both viewing modes while maintaining readability.

## Surveys

Surveys will be distributed to potential users of the perfume e-commerce website. The questions will focus on preferred website aesthetics, such as colour schemes, layout, product categorization and features like an FAQ. These surveys can be completed in less than 10 minutes, thus making them accessible for a larger audience.

Surveys are effective for understanding user preferences on elements critical to a perfume website, such as how users want to explore products or view scent descriptions. They offer valuable quantitative data from a broad audience, allowing us to identify trends like which layouts are most appealing or what makes shopping for perfumes online easier. Compared to interviews, surveys reach a wider pool of users quickly, making it the most suited option for the users.  ADD REFERENCES

## Interviews

Interviews will be conducted with the client to have a better understanding of their branding goals and desired user experience. These interviews will last approximately 2 hours and will cover essential topics such as showcasing high-quality images, reflecting the luxury feel of perfumes and ensuring ease od navigation for customers.

Interviews with the client will help provide insight into the client’s preferences. This is helpful as for a perfume website, there is a focus on strong branding and visual appeal. They allow for follow-up questions, ensuring the final website aligns with the brand’s identity. In comparison to surveys, interviews provide more in-depth, tailored insights, making them best suited for understanding the client’s specific needs and vision.

## Prototyping

A basic prototype of the perfume website will be created. it will focus on key pages such as the homepage and product listing. This prototype will primarily focus on the basic design layout, including placeholders for elements like images of perfumes bottles as this will provide a general visual representation of the site.

A prototype will ensure the client and potential users can visualise the perfume website’s design and flow before full development. This is particularly important for e-commerce perfume sites, where visuals and smooth navigation are critical for user satisfaction. In comparison to other techniques such as document analysis, prototyping provides clear input to adjust and optimize the design.

# Web Technologies

House of Perfumes was created using a combination of HTML, CSS and JavaScript. IT also incorporated additional frameworks and libraries which enhanced the functionality and design of the website. HTML was used to create the website, incorporating semantic elements like <header> and <footer>. <div> elements were primarily used to organise the website layout. Additionally, Bootstrap was integrated to assist with the structure and styling, complementing the box model approach used for layout design.

CSS was applied through an external stylesheet to maintain styling consistency across the website. The box model was used to design the layout. This ensured that spacing and alignment were handled efficiently. Moreover, Bootstrap’s predefined classes were used to streamline responsiveness and styling.

JavaScript ensure that the website was interactive. This was implemented for a dark mode toggle, form validation on the sign-up page and contact us form as well as dynamic pricing adjustments on product pages based on quantity and the size selected. Leaflet.js was incorporated to create an interactive map, allowing users to locate the physical store. The combination of these technologies ensured that the website provided a seamless, engaging and functional user experience

These technologies were chosen for their efficiency and compatibility. HTML, CSS, and JavaScript form the foundation of front-end development. Bootstrap streamlined the design process, while Leaflet.js enhanced functionality by providing seamlessly integrated mapping features without excessive resource consumption. These technologies worked together to produce a structured, visually appealing and interactive e-commerce platform.

# Responsiveness

Users tend to view websites on their mobile devices, thus ensuring House of Perfumes was a responsive website was crucial. This was done through media queries which is essential for adapting layouts to different screen sizes. House of Perfumes has been tested across different resolutions, including mobiles, desktops and laptop screens to ensure proper display and functionality.

Media queries were used to modify styling depending on screen size, allowing elements to scale dynamically. There were some challenges with image responsiveness as certain images didn’t adjust to the media queries correctly. An example of how this was fixed was through Canva. I was able to create a second feature photo on Canva that fit the size requirements and worked better on smaller devices.

The website currently includes two breakpoints at \_\_\_px and \_\_\_px to ensure smooth adjustments between different device sizes. These responsiveness techniques allow the website to provide a cohesive and accessible experience, ensuring usability across all screen sizes.

# Accessibility

Discuss the aria labels. Explain how they are like an invisible accessibility tag. This allows a screen reader to know what state the page is or what state the HTML elements are in not just what’s on the page.

House of Perfumes was designed to be accessible for all users. I added alt text to all images, which ensured screen readers can describe product images and banners. The navigation menu includes ARIA attributes for the mobile toggle button, ensuring screen readers can identify whether the menu is expanded of collapsed. All forms within the website have proper labels and placeholders for clarity, along with validation messages for user guidance.

The website maintains high contrast ratios, using #1a841 for dark mode and #cec4e8 as well as #f4f0fe for light mode, ensuring readability. A dark mode toggle provides a comfortable viewing option for users with light sensitivity. All headings are well sized and clearly distinguishable, thus making it easier for users to navigate and identify sections. All text across the website is displayed in readable fonts, avoiding overly decorative styles that could impact readability.

The website is mobile-friendly and adapts seamlessly to different screen sizes. It has been tested across multiple browsers, ensuring functionality on Chrome, Safari and Edge.

# Design Choices and Justification

## Nav bar

The navbar uses Bootstrap for responsiveness, with a collapsible menu for better usability. ARIA attributes improve accessibility for screen readers. Custom CSS ensures brand consistency with colours, hover effects and active link highlights. JavaScript highlights the active page and enables dark mode which is stored in “localStorage” for persistence. The login and sign-up buttons are right-aligned better UX, keeping them easily accessible without crowding the navigation links. This was applied on all pages except the login and sign up page.

## Carousel

Bootstrap’s carousel was used for a responsive and interactive slider without any extra JavaScript. The picture element optimises images for desktop and mobile. The built in arrow controls improve usability by enabling easy navigation. The alt attribute enhances accessibility by describing images to screen readers and helping search engines understand content. This was applied on the home page.

Body of home page (index.html)

## About us & Menu cards

The About Us section uses Bootstrap’s grid system to align text and images in a structured layout. The image is responsive, ensuring proper scaling across devices. The text is cantered for readability, and the section maintains a clean, balanced design. The menu cards use <a> tags for navigation, allowing users to click and access different product pages without JavaScript. Bootstrap’s card components ensure consistency, while the CSS styling centers content and adjusts background colours based on light or dark mode for better contrast. The alt attributes improve accessibility by describing images for screen readers. These were applied on the home page.

## Footer

The footer provides quick access to important policies and location details using <a> tags to link documents and external pages. CSS centers the text, adds spacing, and applies a hover effect for better navigation. Dark mode styling ensures readability by adjusting background and text colours. This keeps the footer simple, accessible and visually consistent with the rest of the site. This was applied on every page, however the login and sign up page had a simpler footer.

## Product listings

Bootstrap’s grid system organises products in a responsive layout, with each product inside a card component for consistency. The <a> tag with URL parameters works with JavaScript to dynamically load product details, eliminating the need for multiple individual product pages, thus saving time. The <h1> heading at the top improves SEO by clearly defining the page’s main topic, making it more discoverable by search engines. CSS ensures uniform image sizes, centered content and dark mode compatibility for readability. This was applied on the for her, for him and gift sets page.

## Product individual page

The product page uses JavaScript and URL parameters to dynamically display product details, reducing the need for separate HTML pages and making the site easier to maintain. Size selection and quantity adjustments update the price in real time, thus improving user experience. The "Add to Basket" button stores items in” localStorage”, enabling for a seamless cart management. Bootstrap’s grid system keeps the layout responsive across all devices, ensuring the product image and details are well-aligned. CSS styling centers content, ensures consistent spacing, and adapts to dark mode for accessibility. This was applied on each product for her, for him and the gift sets, however the gift sets page didn’t have a size selection option.

## Cart

The cart page uses JavaScript and “localStorage” to manage items dynamically, ensuring the cart remains saved even if the user leaves and returns, preventing accidental data loss. The bootstrap table layout ensures a structured and responsive design, making product details easy to read. Updating quantities directly in the cart enhances user control and the remove button improves cart management.

## Contact us form

The HTML includes required fields to ensure essential information is provided, preventing empty submissions. Basic validation helps capture clean data by restricting input formats. The CSS ensures a clear layout for readability. The JavaScript ensures that user input is captured and logged, confirming that the form works before implementing full validation or backend integration. I placed the JavaScript directly in the HTML file to prevent console errors on unrelated pages, ensuring it only runs where needed without affecting other sections of the site.

## FAQ

The HTML uses Bootstrap’s accordion to display FAQs in a structured, collapsible format, reducing clutter and improving readability. Bootstrap’s built-in JavaScript handles expand/collapse functionality, removing the need for custom scripts. ARIA attributes are automatically included by Bootstrap, ensuring accessibility for screen readers. The CSS customises colours to match the website’s theme and ensures proper contrast in dark mode, maintaining a consistent and user-friendly experience.

## Interactive map

Leaflet.js provides a simplistic, flexible, and efficient mapping solution without an API, making it quick and easy to implement. The HTML structure keeps the map organized and CSS ensures it remains properly sized across devices. JavaScript handles the map’s display and interaction, integrating OpenStreetMap tiles and a custom marker to enhance usability

## Login form

The HTML uses required attributes to ensure all fields are filled, preventing incomplete submissions. type="email" enforces correct email formatting, reducing invalid entries. The CSS centers the form and applies a blurred background for a clean, professional look. The JavaScript checks credentials before redirecting, and stores login status in "LocalStorage" to keep users logged in across pages. This approach ensures a secure, efficient and a user-friendly login process.

## Register form

The register form uses JavaScript validation for better security, preventing users from bypassing validation via the browser console. Flexbox keeps the form centered across screen sizes, ensuring responsiveness. The blurred background improves readability without covering the design and the button styling makes interaction clear and intuitive.

# Testing

# Future Implementation and Improvements

The project currently focuses on front-end development, however there are several features that could be implemented in the future with back-end integration to enhance the House of Perfumes shopping experience. The development of a full checkout system would allow users to successfully purchase perfumes on the House of Perfumes website. This would entail establishing a secure payment gateway and ensuring that order details are stored and processed efficiently.

Currently the contact us form is designed with front-end. However, backend functionality would ensure that customer queries regarding perfumes or general assistance are received and addressed promptly. Furthermore, a backend-system for user authentication in the login and sign-up process would improve security. This would involve securely storing all accepted usernames and password in the backend database, ensuring that only authorised users can access their accounts.

These future improvements would significantly enhance House of Perfumes, transforming it into a more efficient and user-centric e-commerce platform.

# Conclusion

Brief of how everything went

# References

# Appendix

Nav bar A screen shot of a computer program

AI-generated content may be incorrect.

A screen shot of a computer program

AI-generated content may be incorrect.A screen shot of a computer program

AI-generated content may be incorrect.HTML

A black screen with white text

AI-generated content may be incorrect.**A screenshot of a computer program

AI-generated content may be incorrect.**CSS

A computer screen shot of a program code

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JavaScript

Carousel

A screenshot of a computer program

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Body of home page

A computer screen with text on it

AI-generated content may be incorrect.Html

A black screen with green text

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Footer

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Product Listings

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AI-generated content may be incorrect.HTML

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Additional product cards follow the same structure for each page (for her, for him and gift sets).

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A screen shot of a computer program

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Additional products follow the same structure for each product (for her, for him and gift sets).

Product Individual page

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AI-generated content may be incorrect.JavaScript

Cart

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AI-generated content may be incorrect.CSS

A computer screen shot of a program code

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AI-generated content may be incorrect.JavaScript

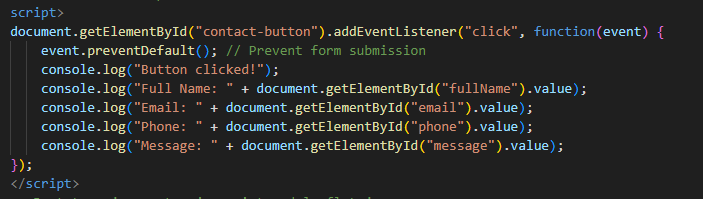
Contact Us Form

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JavaScript

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A computer screen shot of a program code

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AI-generated content may be incorrect.CSS

Interactive map

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AI-generated content may be incorrect.CSS

A computer screen shot of a program

AI-generated content may be incorrect.JavaScript

Login form

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Testing

Test table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test Number | Test Type | Test Description | Text Expectation | Test Outcome |
| 1 | Ensure the website is working across different browsers. | I will open the website on Google Chrome, Safari and Microsoft Edge to check compatibility. | The website should function correctly on all tested browsers | The website functioned correctly on all tested browsers |
| 2 | Ensure the website is working across different devices | I will view the website on a laptop, mobile phone and a desktop to verify the responsive design | The website’s layout should adapt correctly. | The website layout adapted correctly. |
| 3 | Check the functionality of the navigational links to see if they take the user to the appropriate page. Ensure the functionality of the logo.  Check if the navigation link corresponding to the current page is highlighted as active. | Clicked on all menu items and buttons to confirm they direct users to the correct pages. Click on the logo. Click on the different links to see if the active link changes colour | There should be no broken links, and all links should direct the user to the appropriate page. The logo should direct the user to the home page once clicked.  When the script runs, the navigation link matching the current page’s URL should have the "active" class applied. | There were no broken links found, and all links directed me to the appropriate page. I clicked on the logo and it directed me to the home page. The correct navigation link gets the "active" class, ensuring proper page highlighting. |
| 4 | Check the dark mode toggle is working properly. | Enabled and disabled dark mode across different pages to verify consistency | Dark mode should apply correctly across all pages. | Dark mode applied correctly across all pages. |
| 5 | Check the hamburger menu shows and works properly when the screen is smaller than 992 px. | Check the hamburger menu can be viewed and accessed when the screen is smaller than 992 px. | The hamburger menu should appear once the screen is smaller than 992 px and the user should be able to access and use the nav bar once they click on it. | The hamburger menu appeared once the screen was smaller than 992 px and I was able to access and use the nav bar once I clicked on it. |
| 6 | Check if the carousel functions correctly. | Click on the arrows of the carousel to go to the next and previous image | There should be a smooth transition between the images as the user clicks on the arrows. | There was a smooth transition between the images when I clicked on the arrows. |
| 6 | Check the menu cards work on the home page | Click on the menu cards to see what happens. | It should direct me to the appropriate page. | It directed me to the appropriate page once I clicked on the menu cards. |
| 10 | Check the footer PDF links work | Click on the links in the footer to see if its corresponding PDF shows up | The corresponding PDF should show up once the links in the footer are clicked. | I was able to view the PDF’s when I clicked on the links in the footer. |
| 11 | Check the for him, for her and gift sets product pages are working | Click on the products within these pages to see if it opens its corresponding product individual pages | The products within these product pages should open their corresponding product individual pages. | I was able to open the product individual pages by clicking on the products in the product pages. |
| 12 | Check functionality of size) if applicable), quantity and add to basket button in the individual product pages | Click on the different sizes, adjust quantity and add the product to basked. | The price should adjust depending on the different sizes and quantity. A message should pop up saying “Added 1 item(s) to the basket.”, once the user clicks on the add to basket button. | The price adjusted as I adjusted the size and quantity. A message popped up saying “Added 1 item(s) to the basket.”, once I clicked on the add to basket button. |
| 13 | Check the functionality of the cart page | Add a gift set, male and female product to the cart. Adjust the quantity in cart and remove it from the cart. | The products should appear on the cart page. The total price should adjust as the quantity is adjusted. The product should disappear from the cart page all together once the remove button is clicked. | The products appeared on the cart page. The total price adjusted as the quantity adjusted. The product disappeared from the cart page all together once the remove button was clicked. |
| 14 | Check the functionality of the contact us form. | Enter in the correct details. Enter missing details. Enter false details. Click the send email link and press the submit button. | The user must enter a first name, or an error message will pop up. The user must include an @ in the email or an error message will pop up. The user must enter a valid phone number, or an error message will pop up. Once the user clicks on the send email link, they should be directed to a page where they can directly email the company. If all details are filled out and valid, the submit button can be clicked and all the details will show up on the console log. | I didn’t enter a first name and an error message popped up. I didn’t include an @ in the email and error message popped up. I didn’t enter a valid phone number, and an error message popped up. Once I clicked on the send email link, I was directed to a page where I could directly email the company. When all details were filled out and valid, I clicked the submit button and all the details showed on the console log. |
| 15 | Check the functionality of the FAQ | Clicking on each FAQ accordion item button should expand the corresponding answer section. | When clicked, the FAQ item should expand, and its content should be visible. | When clicked, the FAQ item expanded, and its content was visible. |
| 16 | Check the functionality of the interactive map | Click on the plus and minus button to zoom in and out of the map | The map should zoom in and out as the user clicks the plus and minus buttons | The map zoomed in and out as I clicked the plus and minus button. |
| 17 | Check the functionality of the login page | Enter missing details, invalid details, false details and correct details. Click the “Click here” link | An error message should pop up with any missing fields. An error message should pop up with invalid details. An error message should pop up with false details. Once the user logs in with the correct details, they should be redirected to the home page with their account. It should say “Welcome, [admin@example.com](mailto:admin@example.com)!” and an option to logout.  If the “Click here” link has been clicked, it should direct the user to the register page. | An error message popped up with missing fields. An error message popped up with invalid details. An error message popped up with false details. Once I logged in with the correct details, I was redirected to the home page with my account. It said “Welcome, [admin@example.com](mailto:admin@example.com)!” and an option to logout.  When the “Click here” link was clicked, it directed me to the register page. |
| 18 | Check the functionality of the register page. | Enter missing details, invalid details, false details and correct details.  Click the “Click here” link | An error message should pop up with any missing fields. An error message should pop up with invalid details. An error message should pop up with false details. A “Thank you for signing up!” message should pop up once all fields are filled with valid details and the register button had been clicked.  If the “Click here” link has been clicked, it should direct the user to the login page. | An error message popped up with missing fields. An error message popped up with invalid details. An error message popped up with false details. A “Thank you for signing up!” message popped up once all fields were filled with valid details and the register button was clicked.  When the “Click here” link was clicked, it directed me to the login page. |

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A screenshot of a web page

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Colour palette

A group of squares with different colors

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