HOUSE OF DESIGN

Course - Information Modeling and Web technologies

Master Degree in Digital Humanities and Digital Knowledge

Unibo - University of Bologna

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Documentation

1. Project Overview

House of Design is a project stemming from the study in the Information Modelling and Web Technologies course. Through this project, we aim to create an **engaging, informative website** that showcases the artistic and practical value of interior design objects. The project features **19 selected pieces,** created by **six well-known designers** who have shaped the history of industrial design. These pieces are thoughtfully placed in **a purpose-designed house**, aiming to elevate the perception of interior design and celebrate it as a powerful art form that enhances our spaces. By situating these objects within a real-world context, we demonstrate their practical value beyond museum displays, reinforcing interior design's role as a significant form of art.

1.1 Conception

Some critics view the industrial production system as the "death of art," suggesting that this change marks the end of traditional craft techniques disconnected from industrial production. However, this shift simply represents a new phase in art, one that reshapes culture (which now includes mass culture), society (becoming increasingly industrialised), and consequently, art itself.

This exhibition, drawn from **Triennale's permanent collection**, contextualises iconic design pieces within a household setting, allowing them to communicate, provoke reflection, and connect past and future. These pieces, more than mere objects, are **cultural artefacts** that **have shaped** our relationship with time, space, and daily essentials, underscoring how interior design creativity enriches **everyday life**. Reflecting this, our project balances usability with aesthetic appeal, aiming to create a website that is both functional and visually refined, just as these design objects are crafted to be both ergonomic and beautiful in everyday use.

ARTISTIC EXPRESSION — INTERIOR DESIGN — EVERYDAY LIFE
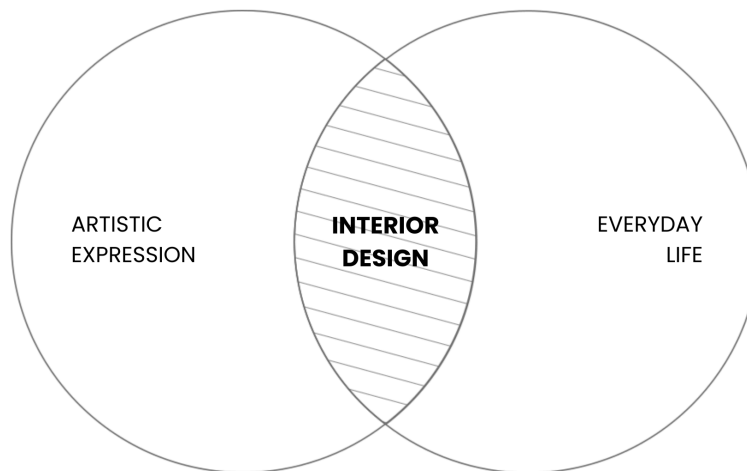
1.2 Objects and Designers

We selected **19 pieces** from Triennale's permanent collection, spanning **from the 1950s to the 1990s**, to illustrate how the evolution of design is not merely about aesthetics but also reflects changing relationships with time and space. Over the decades, design adapted to faster routines, greater efficiency, smaller living spaces, and the integration of technology.

The selected pieces were created by **six visionary designers**—Enzo Mari, Vico Magistretti, Ettore Sottsass Jr., Achille Castiglioni, Marco Zanuso, and Joe Colombo—who have profoundly shaped the history of industrial design. These designers faced a central dilemma of modern capitalist societies: whether to integrate into the technological-industrial system or retain their intellectual autonomy. The designers we chose embraced industrial production without compromising on quality, pursuing independent aesthetic. Their work embodies the deep relationship between design and artistic movements, such as Enzo Mari's engagement with Kinetic Art or Ettore Sottsass and Joe Colombo's ties to Radical Architecture.

Moreover, these artist-designers played a **pivotal role in post-war Italy**, transforming it into a laboratory of experimentation and innovation, rebuilding a market and intellectual class that had fallen behind. Their contributions underline how design can transcend functionality to influence culture, economy, and society.

The selected objects showcase how items that were once considered luxurious status symbols, such as televisions and washing machines, have become accessible essentials with central roles in our daily lives. These pieces embody not just design innovation but also cultural shifts, illustrating how creativity and functionality can coexist to meet the needs of modern living.

Room	Object	Designer	Usage	Decade
Living room	**Antropus** (chair)	Marco Zanuso	Furniture	1950s
	Algol 11 (tv)	Marco Zanuso	Appliances	1960s
	Day Night (sofa bed)	Enzo Mari	Furniture	1970s
	Alogena 626 (lamp)	Joe Colombo	Lights	1970s
	Enorme (telephone)	Ettore Sottsass	Appliances	1980s
Kitchen	**Capitello** (table)	Enzo Mari	Furniture	1970s
	Morocca (chair)	Vico Magistretti	Furniture	1980s
	Carmencita (coffee pot)	Marco Zanuso	Appliances	1980s
	Brera (lamp)	Achille Castiglioni	Lights	1990s
Bathroom	**Automatic C5** (washing machine)	Pietro Gerenzani	Appliances	1960s
	Linda (sink)	Achille Castiglioni	Appliances	1970s
	Shiva (vase)	Ettore Sottsass	Decoration	1970s
Study	**Leonardo** (table)	Achille Castiglioni	Furniture	1950s
	MOD. 281, *Acrilica* (lamp)	Joe Colombo	Lights	1960s
	Optic (clock)	Joe Colombo	Appliances	1970s
	16 Pesci (toy)	Enzo Mari	Decoration	1970s

	Olivetti M24 (computer)	Ettore Sottsass	Appliances	1980s
	Joy (library)	Achille Castiglioni	Furniture	1980s
	Tonietta (chair)	Enzo Mari	Furniture	1980s

1.3 Project Goals

The project's main objective is to develop a digital experience that complements physical exhibits, enhancing the **educational value** of a collection through a website and a digital tool to enrich the exhibition experience. This experience aims to:

- **Contextualize objects** within a domestic space outside of a museum environment
- Emphasize the **aesthetic and practical value of interior design**
- Showcase the craftsmanship, creativity, and **historical relevance** of diverse design styles

Our goal is to make design accessible and engaging, providing universal access to heritage and promoting interaction with design as an art form.

1.4 Storytelling and Narrative Development

To achieve **universal accessibility** and **meaningful engagement** with heritage, we've developed various narrative perspectives and layers of description. Users can experience the exhibition from different perspectives through distinct **storylines**:

- **History**
- **Designers**
- **Usage**
- **Space**

We've structured the **narrative in layers**, from introductory to detailed, allowing a wide range of audiences, from children to non-experts, to explore and enjoy the exhibition. Interactive click buttons enable users to access additional information and deepen their experience as desired.

1.5 Target Users

The project is designed to make exhibitions more interactive, immersive, and educational, **accommodating diverse users** across age groups, expertise levels, and available time:

- **Young audiences**: we've integrated short texts, interactive click buttons, and image carousels to maintain interest and engagement.
- **General visitors**: those seeking a cultural experience without extensive expertise can choose among narratives and engage at their own pace.
- **Enthusiasts and professionals**: for those interested in detailed exploration, we provide in-depth insights into design history, designers, spatial organisation, and detailed views of the 19 objects, making the site suitable for research.

1.6 Benchmarking

To achieve our goals, we explored both Italian and international museum contexts, as well as relevant brands and manufacturers, given the focus on industrial design. We looked at prominent design museums abroad—such as **Designmuseum Danmark**, the **Design Museum in London**, and the **Design Museum of Chicago**—to understand how these institutions curate exhibitions, particularly their approaches to showcasing permanent collections.

On the brand side, our analysis focused primarily on Italian companies, given the direct connection to our objects and designers. This exploration helped us consider object placement within a home setting, drawing inspiration from influential names in Italian interior design that have shaped the industry, including **Brionvega**, **Memphis Milano**, and **Oluce**. This approach allowed us to appreciate and incorporate the legacy of these iconic design productions into our project.

2. Content Structure

2.1 Site Architecture

The site architecture is designed to guide users through the exhibit; each page is structured to support an **intuitive** and **immersive** experience.
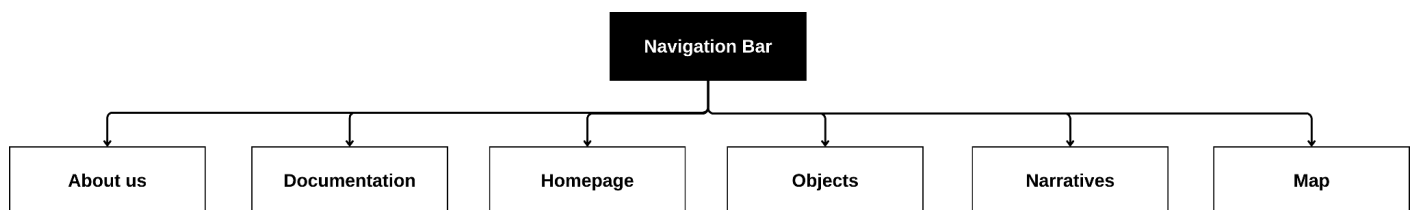
While browsing the website, users can easily access other sections through a fixed menu at the top of each page. We focused on clear and intuitive navigation, making sure that the navigation menu is easy to find on both desktop and mobile so that all users can access the information they need without difficulty, and used descriptive menu names that clearly convey each section's content.

The internal linking ensures that no page feels isolated, making the entire site seamlessly **interconnected**. Each link includes descriptive anchor text, making it clear where the links will take the reader.

Navigation

Header and Navigation

The website features a simple, **user-friendly** navigation bar at the top. On the left side, it provides links to the *About Us* and *Documentation* pages, while the right side contains links to the main content areas (e.g., Narratives, Objects, Map). The central positioning of the logo on most devices helps anchor the navigation, offering a balanced visual design.

```
                        ┌──────────────────┐
                        │  Navigation Bar  │
                        └──────────────────┘
     ┌───────────┬───────────┬───────────┬───────────┬───────────┬───────────┐
┌─────────┐ ┌─────────────┐ ┌──────────┐ ┌─────────┐ ┌───────────┐ ┌─────────┐
│About us │ │Documentation│ │ Homepage │ │ Objects │ │ Narratives│ │   Map   │
└─────────┘ └─────────────┘ └──────────┘ └─────────┘ └───────────┘ └─────────┘
```

Homepage

A hero carousel visually introduces the exhibit, highlighting key objects in the collection. The content below the hero section introduces different topics or narratives related to the exhibit. At the bottom of the page, a map is integrated to show the location of the exhibition.

Narratives Page

The four narratives unify the objects under **thematic groupings**, including a timeline showcasing the history of the objects in the exhibit, a carousel displaying short bios of the designers behind the objects, an object classification section that organises the objects by their function and use, a final spaces section, describing and illustrating each room of the exhibit.
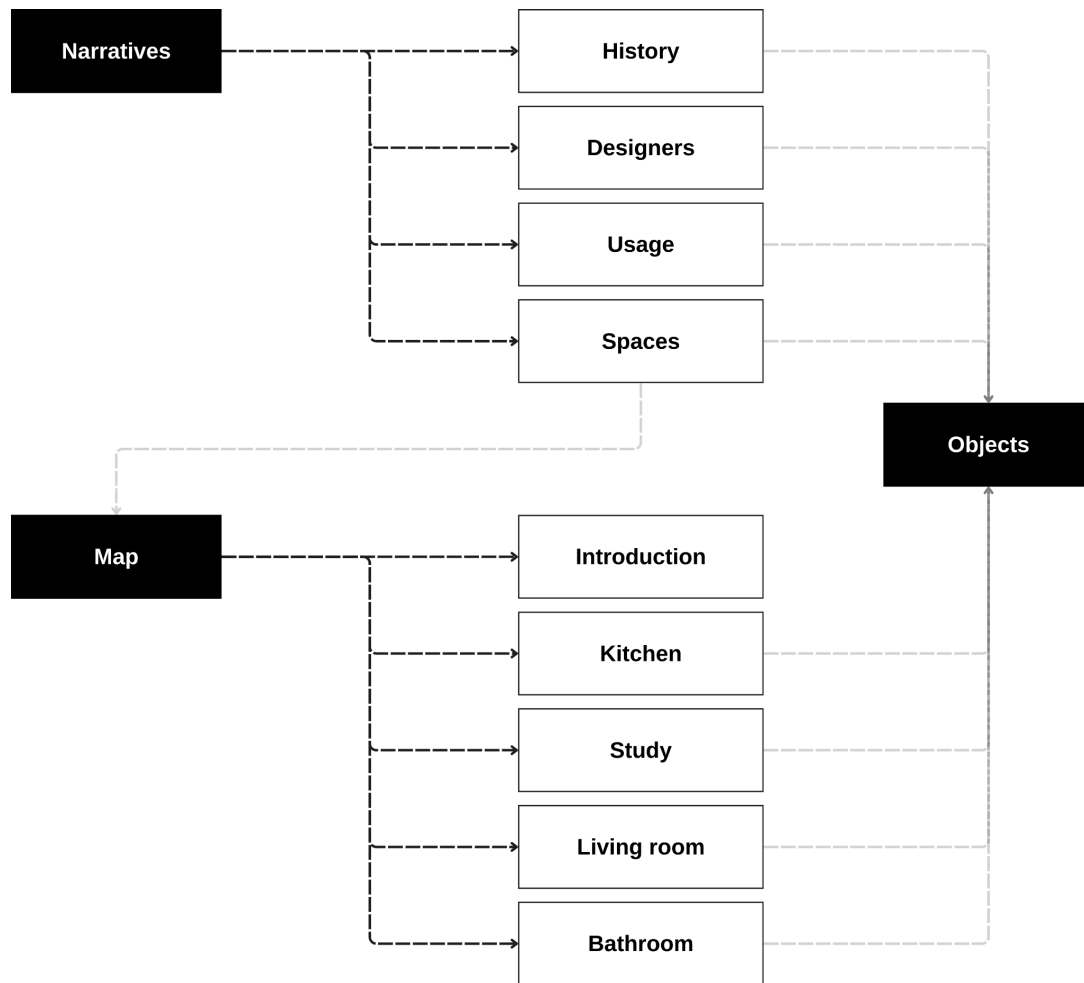
Objects Page

The Objects Page presents detailed metadata and descriptions of each object. It starts with a brief introduction that sets the tone for understanding the object.

Multiple images are present, including wireframes from various angles and real-life pictures.

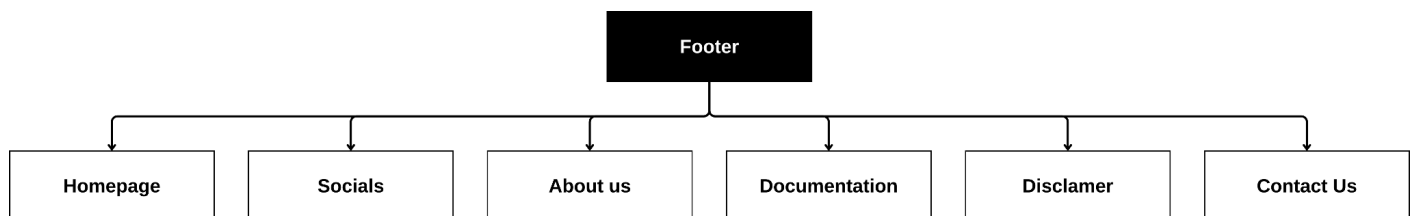Descriptions vary in length, and users can control their experience by expanding the text with a *"See More"* button.

Map Page

A clickable map lets users explore the layout of the exhibit, indicating which objects are housed in each room.

```
┌──────────────┐                    ┌──────────────────┐
│  Narratives  │----------------→   │     History      │- - - - - - - ┐
└──────────────┘      │             └──────────────────┘              ╎
                      │             ┌──────────────────┐              ╎
                      ├---------→   │    Designers     │- - - - - ┐   ╎
                      │             └──────────────────┘          ╎   ╎
                      │             ┌──────────────────┐          ╎   ╎
                      ├---------→   │      Usage       │- - - - ┐ ╎   ╎
                      │             └──────────────────┘        ╎ ╎   ╎
                      │             ┌──────────────────┐        ╎ ╎   ╎
                      └---------→   │      Spaces      │        ╎ ╎   ╎
                                    └──────────────────┘        ╎ ╎   ↓
                                             ╎                ┌──────────────┐
                        ┌ - - - - - - - - - -┘                │   Objects    │
                        ↓                                     └──────────────┘
┌──────────────┐                    ┌──────────────────┐            ↑
│     Map      │----------------→   │   Introduction   │            ╎
└──────────────┘      │             └──────────────────┘            ╎
                      │             ┌──────────────────┐            ╎
                      ├---------→   │     Kitchen      │- - - - ┐   ╎
                      │             └──────────────────┘        ╎   ╎
                      │             ┌──────────────────┐        ╎   ╎
                      ├---------→   │      Study       │- - - - ┤   ╎
                      │             └──────────────────┘        ╎   ╎
                      │             ┌──────────────────┐        ╎   ╎
                      ├---------→   │   Living room    │- - - - ┤   ╎
                      │             └──────────────────┘        ╎   ╎
                      │             ┌──────────────────┐        ╎   ╎
                      └---------→   │     Bathroom     │- - - - ┴ - ┘
                                    └──────────────────┘
```

Footer

The footer offers standard navigation options, including links to the site's social media accounts (e.g., Instagram, Facebook). Additional navigation links are provided for convenience.

```
                            ┌──────────────┐
                            │    Footer    │
                            └──────┬───────┘
   ┌──────────┬──────────┬─────────┼─────────┬──────────┬──────────┐
   ↓          ↓          ↓         ↓          ↓          ↓          ↓
┌────────┐┌────────┐┌─────────┐┌──────────────┐┌──────────┐┌────────────┐
│Homepage││ Socials││About us ││Documentation ││Disclamer ││ Contact Us │
└────────┘└────────┘└─────────┘└──────────────┘└──────────┘└────────────┘
```

3. Design Elements

The site has been designed to be an educational and immersive experience for visitors interested in interior design, with a tone that conveys **professionalism** and **curiosity**.

Personality

Minimalistic	The visual layout, dominated by **clean lines**, ample white space, and a **balanced combination** of images and text, has been chosen to convey a minimalist and sophisticated personality.
	This aligns well with the modern, refined nature of an interior design exhibit, where the focus is on the objects rather than overly decorative web elements.
Organized	The site's design prioritises **clear structure** and organisation, especially with its emphasis on narratives and room-based grouping.
Inviting	The design combines high standards with subtle interactive elements—like carousels, interactive maps, and varied text formats—to encourage **exploration**. This approach balances **accessibility** with **elegance**, fostering curiosity while aligning the site's aesthetic with the exhibit's refined, modern theme.

Archetypes

The Explorer	Emphasises discovery, adventure, and the desire to explore new territories
The Creator	Focuses on innovation, creativity, and expressing individuality
The Magician	Portrays transformation, enchantment, creating extraordinary experiences

The design of the website embraces a minimalistic aesthetic characterised by structured, clean lines and generous white space. Content is presented in an engaging yet understated way, paired with some animated elements to add movement and interactivity, such as carousels and animations. This approach combines simplicity with dynamic touches, creating a visually balanced experience.

3.1 Layout

The layout has been designed to follow a loose **F-pattern** to help ensure that crucial information stands out and easily lets users get an overview and focus on relevant sections without feeling overwhelmed.
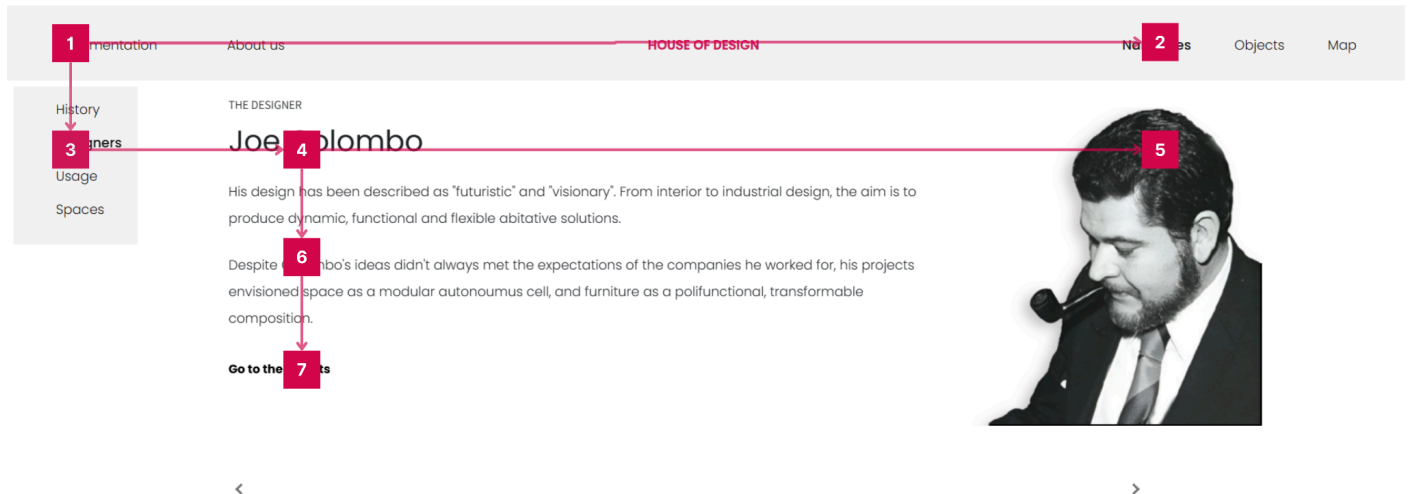
Horizontal Scanning

    The navigation bar at the top is likely one of the first areas users will scan horizontally, following the F-pattern

Left-Aligned Text and Information

    The **primary information** is aligned toward the **left**, which is ideal for vertical scanning; the images are aligned towards the right. Visual elements will usually draw the eye first, then lead users to the textual details, encouraging both horizontal and vertical scanning.

The layout divides content into **blocks**, where users can quickly identify key elements. This segmented design allows users to scan efficiently, capturing essential information without needing to read every word.

3.2 Logo

Primary logo

The House of Design logo is a text-based representation of the exhibit that uses the accent typeface, *Glacial Indifference* in bold. The size (*16px*), font weight (*700*) and colour (*accent colour, UA Red*) chosen are optimal both for readability and style: it's large enough to be easily **legible** but still light enough to fit in the **minimalistic** aesthetic that characterises the entire website.

HOUSE OF DESIGN

The colour of the logo is switched to white where necessary to maintain legibility on dark backgrounds and pictures.

HOUSE OF DESIGN	HOUSE OF DESIGN
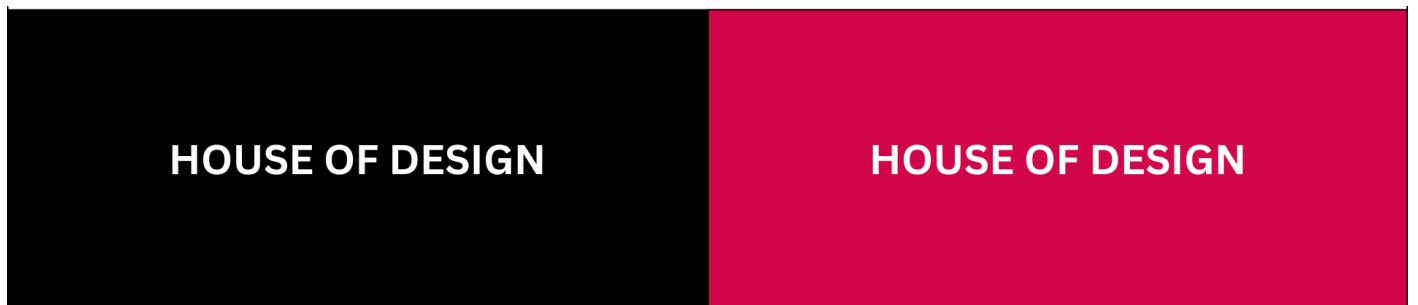
colour variations

Secondary logo

The secondary logo combines the letters *"HOD"* (Glacial Indifference in bold)*,* acronym for *"House of Design"*, with a simplified outline of a house to represent both the brand and an abstract concept of a house. The consistent spacing (8mm) reinforces the **clean**, **modern**, and intentional design style.

The use of the secondary logo is reserved for screen sizes equal or lower than *768px,* and it's therefore designed mostly for phones. Like for the primary logo, the colour of the design is adjusted to suit different backgrounds; a colour variant of the logo is at all times visible in the footer.

House of Design

Abstract representation of a house
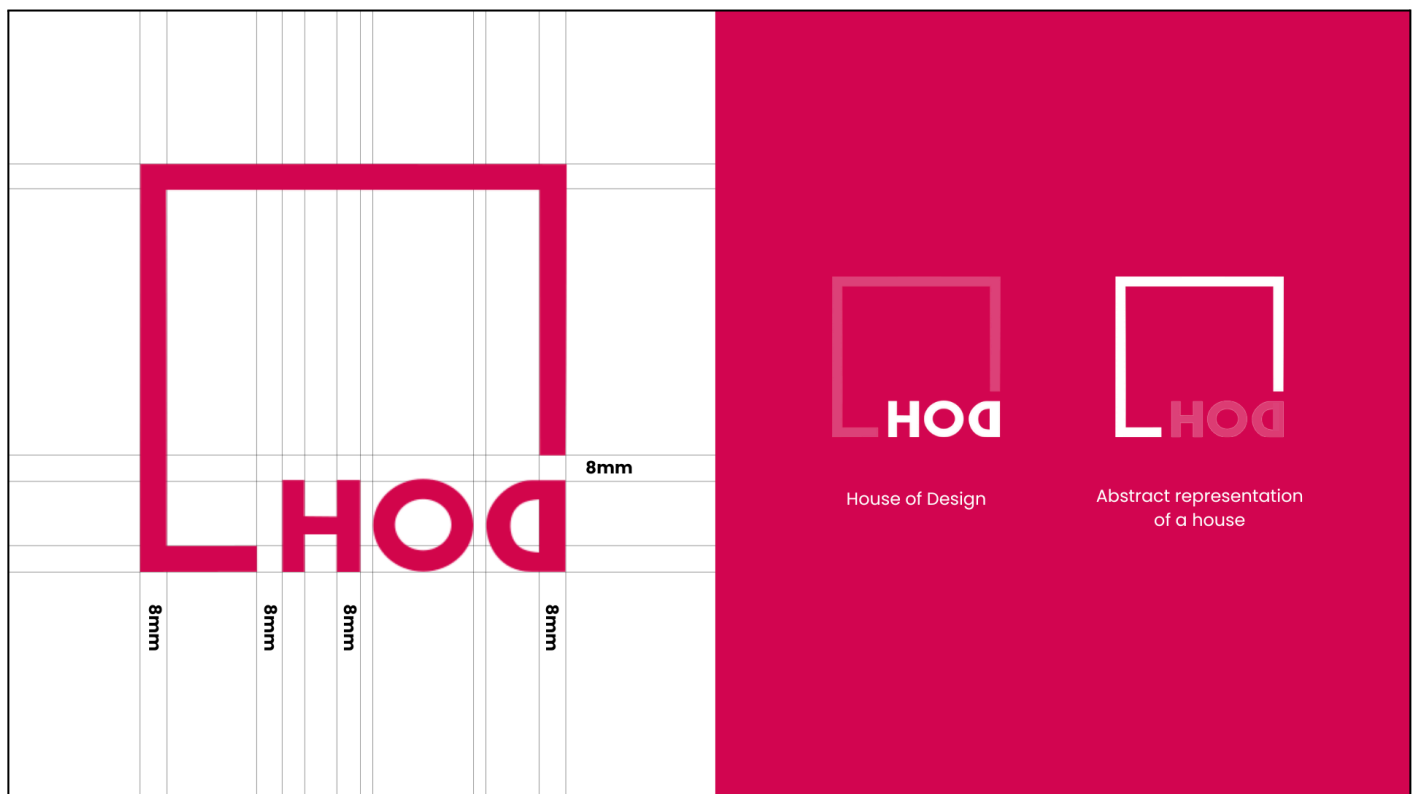
3.3 Colours

Inspired by popular colour theories used in interior design, we applied the *60–30–10 rule* to create our colour palette.

Benefits
- Emphasises key elements
- Creates visual balance and consistency
- Simplifies the design process

COLOUR	NAME	HEX CODE	RGB CODE	CMYK CODE
	White	#FFFFFF	255, 255, 255	0, 0, 0, 0
	Black	#000000	0, 0, 0	0, 0, 0, 100
	UA Red	#D6054E	214, 5, 78	0, 98, 64, 16

Primary Colour: White
Serves as a neutral background, enhancing readability and making content stand out.

Secondary Colour: Black
Complements the primary colour, used for text and typography to ensure legibility.

Accent Colour: UA Red
One of the most prominent colours in all the objects
Adds contrast and emphasis to key elements without overwhelming the overall design.

Shades of Grey, used in the timeline, scrollbars, and footer to subtly differentiate these elements without distracting from the main content.

COLOUR	NAME	HEX CODE	RGB CODE	CMYK CODE
	Light Silver	#D9D9D9	217, 217, 217	0, 0, 0, 15
	Spanish Gray	#989898	152, 152, 152	0, 0, 0, 40
	Sonic Silver	#777777	119, 119, 119	0, 0, 0, 53

3.4 Typography

Primary Typeface: Poppins

Inspired by the Bauhaus movement, Poppins is a geometric sans-serif typeface that combines simplicity and elegance, providing a clean and modern aesthetic.

Why Poppins: Known for its legibility and versatility, Poppins brings a modern, friendly feel with a touch of sophistication, making it suitable for both headings and body text.

Usage: This typeface is used for most of the website content, including the body, navbar, footer, titles, and subheadings.

Source: Downloaded from Google Fonts.

Licence:

Copyright: 2020 The Poppins Project Authors (https://github.com/itfoundry/Poppins)

Licence: SIL Open Font Licence, Version 1.1, with details available at https://openfontlicense.org.

Secondary Typeface: Assistant

Assistant is a versatile sans-serif typeface designed for readability, with clean and modern letterforms.

Why Assistant: Selected for its ability to stand out in uppercase, Assistant adds visual interest to subtitles and complements the primary typeface.

Usage: Used for subtitles in uppercase, enhancing visual hierarchy.

Source: Downloaded from Google Fonts.

Licence:

Copyright: 2020 The Assistant Project Authors (https://github.com/hafontia/Assistant) and 2010 The Source Sans Pro Authors (https://github.com/adobe-fonts/source-sans-pro).

Licence: SIL Open Font Licence, Version 1.1, also available at https://openfontlicense.org.

Accent Typeface: Glacial Indifference

Glacial Indifference is a geometric sans-serif typeface inspired by Bauhaus design, merging historical design influences with a contemporary feel.

Why Glacial Indifference: With its clean, modern lines and high legibility, Glacial Indifference has been chosen to create emphasis in the main title and logo.

Usage: Used for the main title and logo, displayed in uppercase for added impact.

Source: Downloaded from Font Squirrel.

Licence:

Licence: SIL Open Font Licence, Version 1.1, available at
https://www.fontsquirrel.com/license/glacial-indifference.

Example of use

Assistant

Poppins

THE DESIGNER

Joe Colombo

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas ut arcu tellus. Curabitur porttitor venenatis arcu at lobortis. Vestibulum dictum tempor tellus, facilisis vulputate odio posuere nec.

Go to the object

3.5 Sizing and weight

HIERARCHY	FONT	WEIGHT	SIZE
H1 Headline	Glacial Indifference Poppins	400	2.5 rem | 40 px
H2 Headline	Assistant	400	1 rem | 16 px
Body	Poppins	300	1 rem | 16 px
Buttons	Poppins	300	1 rem | 16 px

3.6 Spacing

The spacing throughout the website is carefully designed to ensure visual balance, readability, and functionality. A combination of Bootstrap utilities, custom CSS rules, and structural HTML elements has been used to achieve this.

Navbar

The spacing is minimal and consistent: horizontal padding (2.5em) is used to align the header's contents (logo and links) neatly within the viewport, while the `class="items_left"` and `class="items_right"` ensure links are aligned on either side of the logo.

Footer

The footer aligns links, icons, and text using inline-block spacing. Padding and margins on `<a>` tags and `<i>` elements provide adequate spacing, maintaining an uncluttered layout

Bootstrap Containers

A container-fluid class with zero margin and padding (`m-0 p-0`) is used to optimize screen usage. Rows and columns follow the Bootstrap grid system, with `col-md-2` for the sidebar and `col-md-10` for the primary content. This ensures balanced proportions and easy navigation.
OBJECT PAGE

Margins and Paddings

Recurrent margins and paddings have been used throughout the website to create a uniform look and feel throughout the design and avoid visual clutter.

All elements start with padding and margin set to 0, ensuring that spacing is applied intentionally and consistently throughout the site. The main content is separated from the fixed header (margin-top: 6.25rem;), preventing overlapping while maintaining proportionality in the layout. Many sections use percentages for spacing, (frequently 7%, 3% and 5%.) so that the layout can gracefully adapt to varying screen sizes.

Text spacing is managed through padding within `<p>` and `<h1>` elements, ensuring readability and consistency across the design. Margins and paddings are used strategically to emphasize key elements, such as the footer and header, while preserving visual hierarchy and ensuring an organized appearance.

Recurring percentages: 7% is used for larger separations, such as section margins (to center the content on the screen and align it precisely with the navigation bar. This creates a clear distinction between sections, improving visual hierarchy; 5%: is used for moderate spacing, such as internal paddings or margins around content containers; 3%: is reserved for tighter spacing(e.g., between lines of text or between an image and corresponding text).

Fixed units are used for elements where **precise control** is needed (e.g., border widths, icons) to maintain **consistent appearance** across devices while relative units (% and em) ensure flexibility and **adaptability** to varying screen sizes, especially for margins and paddings.

3.7 Images

We opted to use 3D renders for the images of the objects to provide a **complete view** of each item from multiple angles. This allowed us to visualise the objects together in a 3D-rendered environment, showing how they integrate in a **concrete setting**.

The wireframe render presents each object in a *"scientific" format*, focusing on its **structural details** that are typically not visible, emphasising the object's design process and construction. This approach is particularly useful for those engaged in in-depth study, such as PhD students, who may need a detailed view of an object's composition and framework.

While the wireframes emphasise form and design without the distraction of colour, full-colour images are provided separately to capture the visual richness of each piece.

3.8 Additional elements

Links
The functionality for managing narratives and object navigation is handled through multiple functions in the "narratives.js" file, leveraging URL parameters, global variables, and dynamic updates to ensure seamless interaction.

1. **Redirecting to Specific Objects:** Links redirect to an object's page with a specific narrative and item using global variables ("currentNarrative", "currentValue", "items") and functions.
2. **Key Functions:**

- **prepareNarratives:** Filters and sorts items based on the selected narrative and value, then initializes display via "showInfo" with the first filtered item.
- **displayNarrativeFromURL:** Parses URL parameters to set the narrative and item.
  Defaults to predefined values if parameters are missing or invalid. Updates global variables and calls "prepareNarratives" to display items dynamically.
- **updateURL:** Updates the browser's URL without reloading the page using "history.replaceState()", reflecting the current narrative and item.

3. **Workflow:**
   - On page load, "displayNarrativeFromURL" processes URL parameters or defaults.
   - Based on parameters, "prepareNarratives" filters items for display with "showInfo".
   - User interactions, such as selecting new narratives or items, trigger "updateURL" to sync the browser's state

4. **Internal Links:** Links with the class "goToObj" facilitate navigation within the application, maintaining consistent styling and functioning as internal redirects.

This system ensures efficient navigation and state management using global variables, URL parameters, and dynamic updates.

Buttons

The button designs follow a consistent and intentional approach, using visual hierarchy, color, and interactivity to enhance usability and draw attention to key actions
In primary buttons the **accent colour** is used either as the **default** state or on **hover** to stand out against the rest of the design.

In secondary buttons, the hover state shifts to a **black background** with white text, creating a sleek, professional appearance that complements the page's overall tone. This differentiation ensures that secondary buttons are noticeable but do not overshadow primary actions, preserving the **visual hierarchy**.

Buttons - narratives page

Primary button – 0.9rem

Go to the objects   default

Go to the objects   hover

Secondary button – 13px

Tell me more   default

Tell me more   hover

Buttons - objects page

Primary button – 13px

Tell me more   default

Tell me more   hover

Secondary button – 13px

Tell me more   default

Tell me more   hover

Arrows

The arrows are designed for navigation on the **Narratives Page**. The **thin black lines** maintain the minimalist aesthetic that characterizes the website, harmonizing with the button designs. This simplicity ensures they do not distract from the content while remaining intuitive and functional.

Arrows - designers' narrative

Arrows – 3px

‹   ›   default

4. Functionality

4.1 Responsive Across Devices

The design and layout of the website have been developed to accommodate various screen sizes and devices, ensuring a seamless experience for users across desktops, tablets, and mobile devices. This is achieved by leveraging:

- **Media Queries**: CSS media queries are used to customize the styles based on device characteristics such as screen size, resolution, or orientation.

- **Flexible Grid System**: grid and layout system adaptable to screen dimensions are used, supporting a responsive and fluid arrangement of content.

- **Scalable Components**: the components and elements adjust dynamically to the viewport, with margins, paddings, and font sizes scaling appropriately.

- **Scalable Font Sizes**: the font sizes are defined using relative units such as em and rem, allowing them to adjust proportionally based on the parent or root element. This ensures legibility on smaller screens while maintaining a balanced hierarchy on larger displays.

- **Responsive Images and Media**: images or media are resized appropriately to the viewport, ensuring both performance and visual quality.

- **Timeline - History Narrative**: The timeline is designed for responsive adaptability, using a vertical layout on mobile and a horizontal layout on desktop. The mobile layout is prioritized and then adapted for desktop.

4.2 Animations and features

Homepage - Logo animation

The animation is a dynamic effect applied to the logo on the webpage, designed to enhance user engagement and create a visually appealing introduction. The logo initially appears in the center of the viewport and as the user scrolls down, it begins to shrink, gradually scaling down in size until the logo reaches the navigation header, where it is pinned in place, remaining visible at the top of the screen.

This effect was created following a tutorial by *Codegrid*, and using GSAP and ScrollTrigger.

Purpose: The animation serves to create a more interesting and engaging title card, grabbing the user's attention as they begin scrolling through the page.

Homepage - Horizontal scroll

Adapted from a tutorial by *snorklTV*, this animation uses *GSAP* (GreenSock Animation Platform) and *ScrollTrigger* to pin a container allowing it to scroll horizontally as the user scrolls vertically through a section of the page.

The animation distance is dynamically calculated based on the width of the content (`.scrollee`) and the viewport, ensuring responsiveness. It starts when the top of the pinned container (`.scroller`) reaches the top of the viewport and stops when the calculated scroll distance is fully traversed.

The `getScrollAmount` function computes how far the content needs to move horizontally by subtracting the visible width of the viewport (`window.innerWidth`) from the full width of the content (`scrollee.scrollWidth`). The result is a negative value representing the remaining width to be scrolled, causing the content to move left (negative x-direction).

The scroll distance is proportional to the difference between the total width of `.scrollee` and the width of the viewport.

Purpose: The animation highlights the general goals of the project by interrupting the standard flow of the website, grabbing the attention of the user.

Homepage - Counter animation

The counter animation is an interactive effect that dynamically counts up to 19 highlighting the number of objects present in the exhibit. The count-up effect happens incrementally when the element comes into the viewport, giving a visually engaging sense of progression.

The animation begins when the target element (the div containing information about the project) is scrolled into full view). Once triggered, the counter starts incrementing until it reaches the predefined maximum value. To ensure accessibility the counter is hidden to screen readers with the `aria-hidden="true"` attribute, while the *div* that contains the final count is hidden visually, but accessible to screen readers.

Purpose: The incremental change creates a sense of progression and interactivity in a visually appealing way.

Narratives - Carousel

This carousel slider, inspired by **Lun Dev Code**, allows users to explore different designers by clicking "Previous" and "Next" buttons. These buttons trigger the `moveSlide()` function, which takes `-1` (previous) or `1` (next) as direction values.

The `moveSlide()` function updates the `currentItem` variable to navigate through the carousel in a continuous loop, ensuring it cycles back to the first item after the last, and vice versa. The `updateCarousel()` function then calculates the appropriate horizontal translation percentage for the carousel container (`designers`) based on the `currentItem` value. It applies a `transform: translateX()` style to smoothly shift the container, making the current item visible.

The `updateCarousel()` function also adjusts each item's properties to enhance visibility and interactivity:
- z-index: Brings the active item to the foreground.
- opacity and pointer-events: Ensures that only the active item's `.intro` content is visible and interactive, while other items are hidden.

Purpose: creates a more engaging and interactive experience for users, allowing them to learn about designers dynamically and fits seamlessly into the horizontal layout of the narrative page, avoiding unused white space.

Interactive Timeline

Users can explore a timeline that connects historical periods and design objects through images and concise or detailed descriptions. The timeline is designed to adapt seamlessly to different screen formats, with a horizontal layout for desktop and a vertical one for mobile. For responsiveness, we prioritised the mobile layout and then adapted it for the horizontal view. This way, the core structure relies on a flexible grid system, specifically using CSS's `grid-template-columns` to define the columns' line names and sizes.

1. **Horizontal Scroll (Desktop Timeline)**
    - The horizontal scroll is less commonly used, adding a unique, modern touch to the design.

- ○ It provides a visually engaging experience and is well-suited for sequential storytelling. Each year or event can be explored in a natural order.
- ○ Navigation arrows allow users to progress along a clear path, preventing them from getting lost in the timeline.

Suitable for:
- ○ A more linear, visual experience, particularly effective if there are fewer events, encouraging users to explore in a more directed way.
- ○ Users primarily on desktop, where horizontal scrolling feels more intuitive.

2. **Vertical Scroll (Mobile Timeline)**
   - ○ Vertical scroll is a familiar, intuitive format. Most websites follow this pattern, making it a comfortable experience for users.
   - ○ Greater flexibility: more events can be added without worrying about limited space. Users can simply scroll down to explore events.
   - ○ Mobile-friendly: vertical scrolling is more manageable on mobile devices, where users are accustomed to scrolling down.

Map

A generator, [Image Map Generator](#), has been used to create a `html imagemap` that allows the users to click on different parts of the image and be shown different texts. Each part of the image (e.g., 'bathroom') is associated with a specific room's description, and clicking it triggers the visibility toggle for that room.

Purpose: The map provides an interactive experience for the user, giving all the necessary information without overwhelming the user with a lot of text all together.

4.3 Accessibility

The website has been created following as close as possible the [Web Content Accessibility Guidelines (WCAG)](#)

Typography

Font Size and Line Height: Adequate font sizes for body text, headers, and subtitles have been used, with a minimum font size of 16px for body text. The line height (1.5) has been chosen to allow for comfortable reading.

Legibility: All three fonts, Poppins, Assistant, and Glacial Indifference, are sans-serif fonts, which are generally easier to read on screens than serif fonts. Their clean and modern styles enhance readability across different devices and screen sizes.

Colours

The colour scheme has been selected to meet accessibility standards. All text colours have good contrast, with a contrast ratio of over *4.5:1* for red elements (*Level AA*) and well over *7:1* for primary colours (*Level AAA*). The use of red is reserved for larger or bold text elements to maintain clarity.

To verify colour contrast, we used [Coolors](#), a contrast-checking tool, ensuring each colour pairing meets accessibility standards

Text color	Background color
#000000	#FFFFFF

Contrast

21   Super ★★★★★

Small text ★★★	Large text ★★★

Great contrast for all text sizes.

Quote n. 17

People often say that motivation doesn't last. Well, neither does bathing – that's why we recommend it daily.
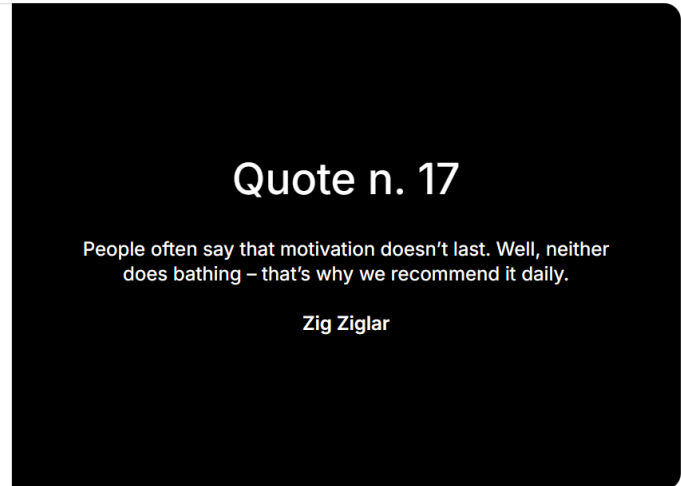
Zig Ziglar

Text color

#FFFFFF

Background color

#000000

Contrast

21	Super ★★★★★
Small text ★★★	Large text ★★★

Great contrast for all text sizes.

Quote n. 17

People often say that motivation doesn't last. Well, neither does bathing – that's why we recommend it daily.

Zig Ziglar

Text color

#D6054E

Background color

#FFFFFF

Contrast

5.26	Good ★★★☆☆
Small text ★★☆	Large text ★★★

Good contrast for all text sizes. **Click to enhance**

Quote n. 17

People often say that motivation doesn't last. Well, neither does bathing – that's why we recommend it daily.

Zig Ziglar
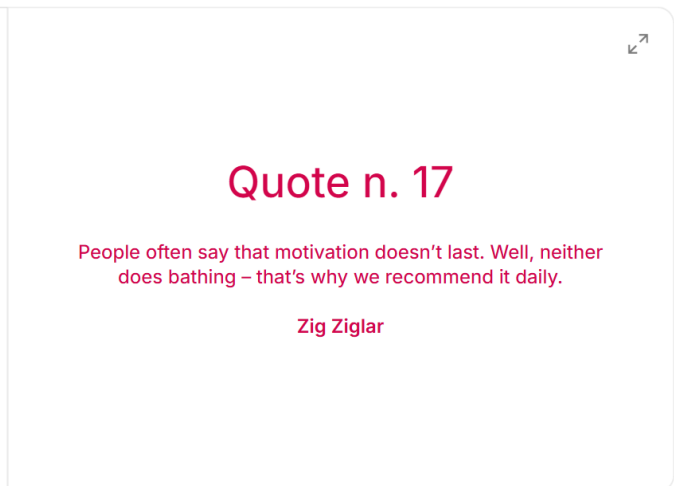
The palette was chosen carefully to be colorblind-friendly. The difference in the red shade doesn't present particular problems as it is still clearly different from the two primary colours. When red is used for interactive elements like links or buttons, accompanying explanatory text further clarifies its function.

5. Workflow

The workflow for this project was divided into five stages: **Research**, **Planning**, **Design**, **Implementation**, and **Testing**, ensuring a systematic approach to creating the website.

Research

The project began with an in-depth **research phase**, focusing on identifying the **target audience** and understanding their objectives when visiting the website. We analyzed how design objects reflect changes in aesthetics, technology, and society, forming the conceptual backbone of the project. This phase also involved studying the Triennale's collection to select **19 iconic objects** that tell a cohesive story about the evolution of design.

Planning

During the planning stage, we crafted a **narrative structure** that connected the selected objects and their historical context. This involved defining the different **pages of the website**, determining their specific objectives, and outlining how they would link to one another to create a smooth user experience. Special attention was given to ensuring that the website would balance storytelling and functionality.

Design

The team then defined the **visual identity** of the website, choosing colors, typography, and other design elements that reflect the themes of the project. Using Figma, we created **high-fidelity wireframes** for each page, incorporating responsive design principles to ensure usability across all devices.

Implementation

Each team member was assigned specific pages or sections to develop based on the wireframes. This phase involved translating the design into a functional website while maintaining consistency in layout and features.

Testing

Extensive **testing** was conducted to ensure the site was fully functional, responsive, and accessible. The website was reviewed for usability, ensuring it met the needs of the target audience and aligned with the project's objectives.

This comprehensive workflow allowed for the smooth development of a visually appealing and user-friendly website that conveys the narrative of design evolution effectively.

5.2 Member contributions

Mohamed Iheb Ouerghi

Development
Homepage, narratives (usage), linking (Pages)

Documentation - Chapter 3 (3.8 Additional Elements - Links)

Niccolò Molinati

Design
About us, objects; aid in designing homepage and logos.

Development
Objects, About us, Homepage (Charts)

3D models
M24, Enorme, Shiva, Capitello, Carmencita, Brera; searching, exporting and fixing models found online.

Virginia D'Antonio

Design
Narratives (designers, history, usage), logos

Development
Narratives (designer, history)

Documentation - Chapter 1, Chapter 5

Giorgia Umana

Design
Homepage, objects, narratives (designers, usage, spaces), map
logos

Development
Narratives (designer, spaces), map, documentation, homepage (animations and charts section)

3D models
Day night, 16 pesci, Linda, Capitello, Automatic C5, rooms

Documentation

5.3 Tools

Tools: List the technological tools used to support web design (e.g., Bootstrap for graphics, Figma, existing HTML template, GitHub for publishing, social widgets).

Design	**Figma** - wireframes and general design of the pages
	Inkscape - logo and graphics
	Canva - graphics
	Mockups-design - poster mockup
3D Models	**Blender**
Typography	**Google Fonts**, Font Squirrel
Graphics	**Bootstrap** - navigation tabs, accordion, carousel
Libraries	**GSAP** - Scrolltrigger
	Chart.js - graphs
Publishing	**GitHub**

5.3 Testing Process

We conducted thorough testing to ensure the website's functionality, accessibility, and overall performance. The testing process included the following:

- **Website Functionality Tests:** we manually checked all **links**, **graphic effects**, and **animations** to confirm they work as expected and provide a smooth user experience.
- **HTML Validation:** we validated the website's code using the **W3C Markup Validation Service** (https://validator.w3.org/nu/) to identify and address any HTML errors or inconsistencies.
- **Accessibility Testing - Tab Key Testing**: we manually tested keyboard navigation by using the **Tab key** to verify that all interactive elements are reachable in a logical order and that focus indicators are visible. This ensures the website is accessible to users who rely on keyboard navigation.
- **Performance and Accessibility Audit with Lighthouse:** we utilized **Google Lighthouse** to evaluate the website's performance, accessibility, SEO, and best practices. The audit provided actionable insights to further optimize the site.

These tests allowed us to confirm that the website performs well, adheres to accessibility standards, and delivers a functional and user-friendly experience.

Credits

The purpose of this web site is to explore various types of typography and layout style for museum pages, as an end-of-course project for the "Information Modeling and Web technologies" course of the Master Degree in Digital Humanities and Digital Knowledge of the University of Bologna, under prof. Fabio Vitali. The documents contained in this web site have been selected for their length and complexity from Wellcome Collections. Their publication here is not intended to be an alternative or replace their original locations. Full attributions are found in the Documentation page.

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3d models

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