"Forgotten Porcelain" Digital Museum

In the rapidly developing modern society, many historical collections are gradually being forgotten by the younger generation. This project is an exploration in the form of a "digital museum". This showcases five pieces of porcelain from the Science Museum in London, aiming to redraw public attention to neglected collections. By researching five porcelain collections with different functions and cultural backgrounds, I analyzed deeply into their materials, uses, and historical and cultural information. The "Forgotten Porcelain" Digital Museum, through a digital platform, combines illustrations with 3D modeling to reconstruct the images of the collections and attract more attention from younger generation. The website brings the collections to life through an interactive approach, establishing an emotional connection between users and the collections.

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MA Communication design
Project 3: Objects and narratives #Future Museum

Website design for
"Forgotten Porcelain" Digital Museum

Inspiration:

1. Mindmap
2. 3 Questions I choose
3. 5 Porcelain Collections I choose

Primary research:

1. Collections research
2. Survey
3. Persona
4. PACT & 18-25 young people
5. 300word's task

Secondary research:

1. Porcelain musuem research
2. Data research
3. Interactive research
4. Visual transform
5. Design ideas of wesite
6. Moodboard
7. Visual research

Development:

1. Storyboard
2. Wireframe
3. Website interesting point
4. Color scheme & typeface
5. logo & icon & Illustrations
6. Modeling & AR Interactive
7. Website design
(low and high fidelity model)

Outcome:

1. Final work
2. Reflection

Project 03
Objects and Narratives
#FutureMuseum

Design Lab ART2618
Launch: 20th March
Crits 14th and 15th May 2025

*"Real museums are places where
time is transformed into space"*

– Orhan Pamuk, 2009

Formative Assessment
You will receive formative assessment in the form of discussion and feedback throughout the project. You are also required to attend a formative feedback review in March.

The brief
Utilising your selected collection of objects from the Science Museum, explore imaginative ways to bring the objects to life and tell their stories tailored for a specific audience. Through innovative communication methods, you need to engage a specific audience into an immersive experience, bringing the significance of these artifacts to life in a memorable and impactful way.

Part 1. Preparatory research
Choose a group of objects from the content links. Explore the objects in lots of detail: What was the function? What materials? What narratives do they tell?

The whole collection is available at https://collection.sciencemuseumgroup.org.uk

There 200,000+ objects with images:
https://collection.sciencemuseumgroup.org.uk/search/images

Part 2. Choose a problem statement
to frame your projects and create a speculative product or experience that tells a story of your chosen object. This must be finished to the highest quality.

Things to look at   3/4
Definition of a museum
http://uis.unesco.org/en/glossary-term/museum

Audiences
There are two good sources of information on audiences for cultural experiences:

(1) https://mhminsight.com/culture-segments

(2) https://www.theaudienceagency.org/audience-finder-data-tools/audience-spectrum#Explore_

Further information   2/4
90% of museum collections are not on display but can be found on the links. Consider ways to activate and tell the story of one of these objects. This project will involve rethinking how we use/access the museum content and exploring completely new concepts to amplify and share information. It might be an enhanced experience within the museum or something streamed to a device. Pop-up event, projection-mapped,

Project Staff
Danny Aldred
Andy Lapham
Jennifer McHugh

External Guest
John Stack
(Digital Director of the Science Museum)

Inspiration

Mindmap - porcelain

After visiting the offline museum, I realized although many collections have historical backgrounds, but their display methods are relatively static, and information transmission mainly relies on text. This makes people reluctant to look at them, lacking an emotional connection between people and the collections. This prompted me to consider whether there was a way to enable people to understand the stories behind the collections more actively.

So, I began to analyze what collections through mindmap, comparing their story-telling, visual effects and symbolic meanings. The second mind map shows me choosing five porcelain collections. The forms and patterns of porcelain are very rich, covering multiple fields of life such as religion, family and war. Porcelain is a cultural carrier, but an emotional symbol between people and memory, tradition and identity.

3 Questions I choose

Q1

How might museums increase the reach of their vast collections?

With the help of digital platforms, I have built an "Online Digital Museum" website. I present the porcelain collections that were originally not on display or easily overlooked. This presents users with a visual experience about online access, sharing and interaction. This expands the opportunities for the collection to be seen and disseminated.

Q2

How might the experience of the collection be more playful and delightful?

Digital museums attract users' attention by combining visual effects such as motion design and illustrations, and enhance users' sense of participation through 3D effects and QR code interaction. These make the originally boring collection contents attractive.

Q3

How might museums present their collections in different contexts, for example how might the museum collection be integrated with audiences everyday experiences?

Focusing on "the application of porcelain in different fields", it showcases the connection between the collection and life. I hope to emphasize that porcelain is not only an aesthetic decoration, but a fusion of functionality, history and culture. The types of porcelain collections cover war, family, religion, and ornaments, which evoke sense of "familiarity".

5 Porcelain Collections I choose

I selected five porcelain collections from the categories of war, court, family life and decoration in the London Science Museum. These porcelain collections come from different periods. They represent the multiple roles of porcelain in history and demonstrate people's emotional needs, and aesthetic tendencies. I hope to reactivate the stories and emotions of these collections through interactive and visual effects, and establish a closer connection with the audience.

Rockingham vase

Materials: Porcelain
Made: England
Size: 300 mm x 175 mm x 130 mm, 1.359kg

Biscuit barrel

Materials: porcelain and brass (copper, zinc alloy)
Size: 155 mm x 175 mm x 160 mm, 1.085kg
Details: Cream-coloured porcelain floral biscuit barrel with metal handle, Devonware, by Fielding, Stoke-on-Trent, England, 1918-45

Bowl from Hiroshima

Materials: Porcelain
Made: 1935-1945 in Hiroshima
Size: 100 mm x 170 mm x 190 mm
Details: Porcelain bowl, retrieved from Hiroshima after the atomic bomb explosion, unsigned, Japan, August 1945.

Materials: Porcelain
Made: 1601-1801 in Middle East
Size: 30 mm 154 mm, .164kg
Details: Porcelain dish, with Islamic charm inscription painted in red and black, on white, unsigned, Middle East, 1601-1800

Porcelain dish

Perfume bottle

Materials: Porcelain
Made: 1701-1800 in France
Details: Porcelain perfume bottle, with gold cover, decorated in bright pink and gold, French, 18th century
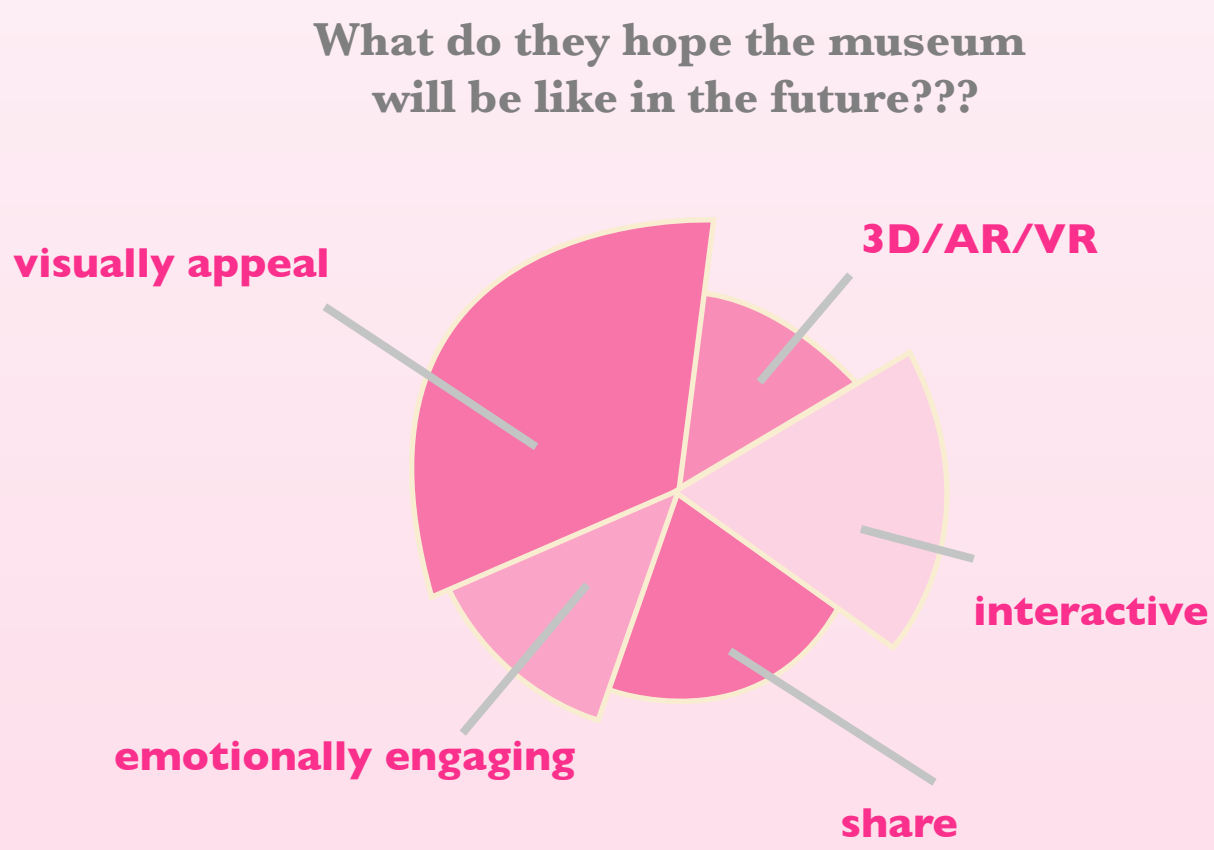
Primary research

Research collections

After researching five porcelain collections, I analyzed and summarized their functions, materials and historical stories behind them. I hope to extend these research results into an online museum, allowing more people to understand the history and significance behind the collections through digital interaction.
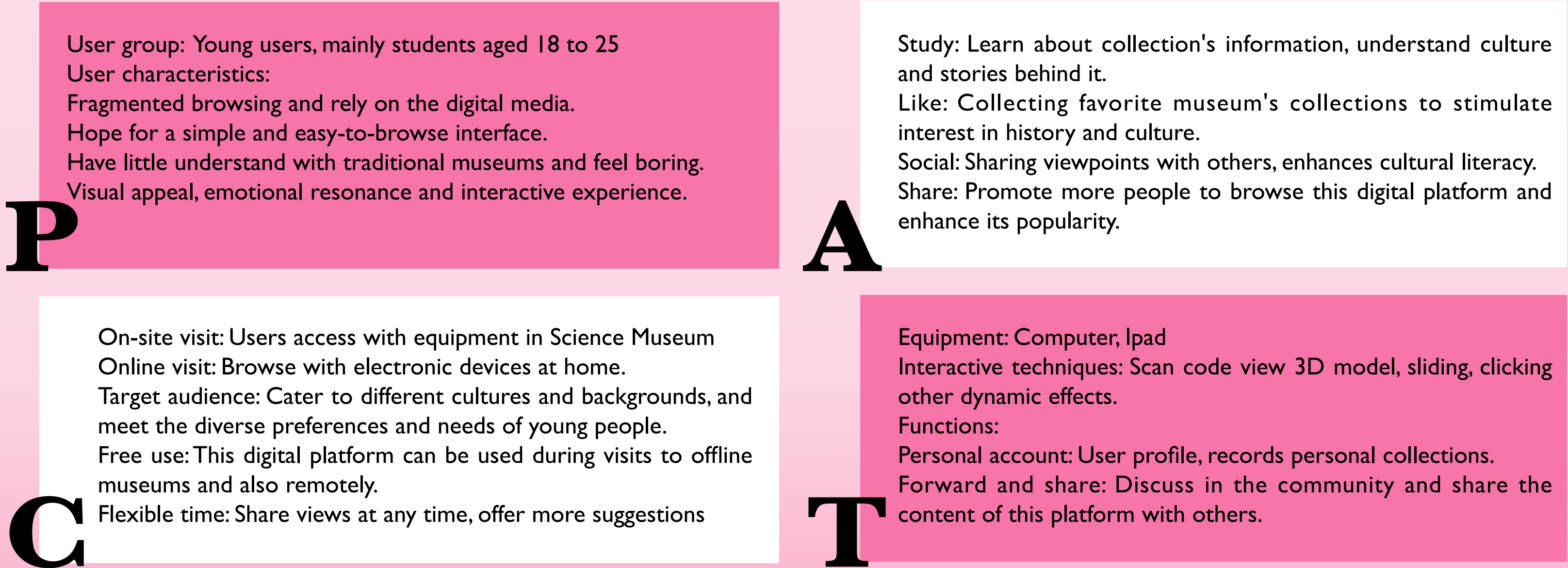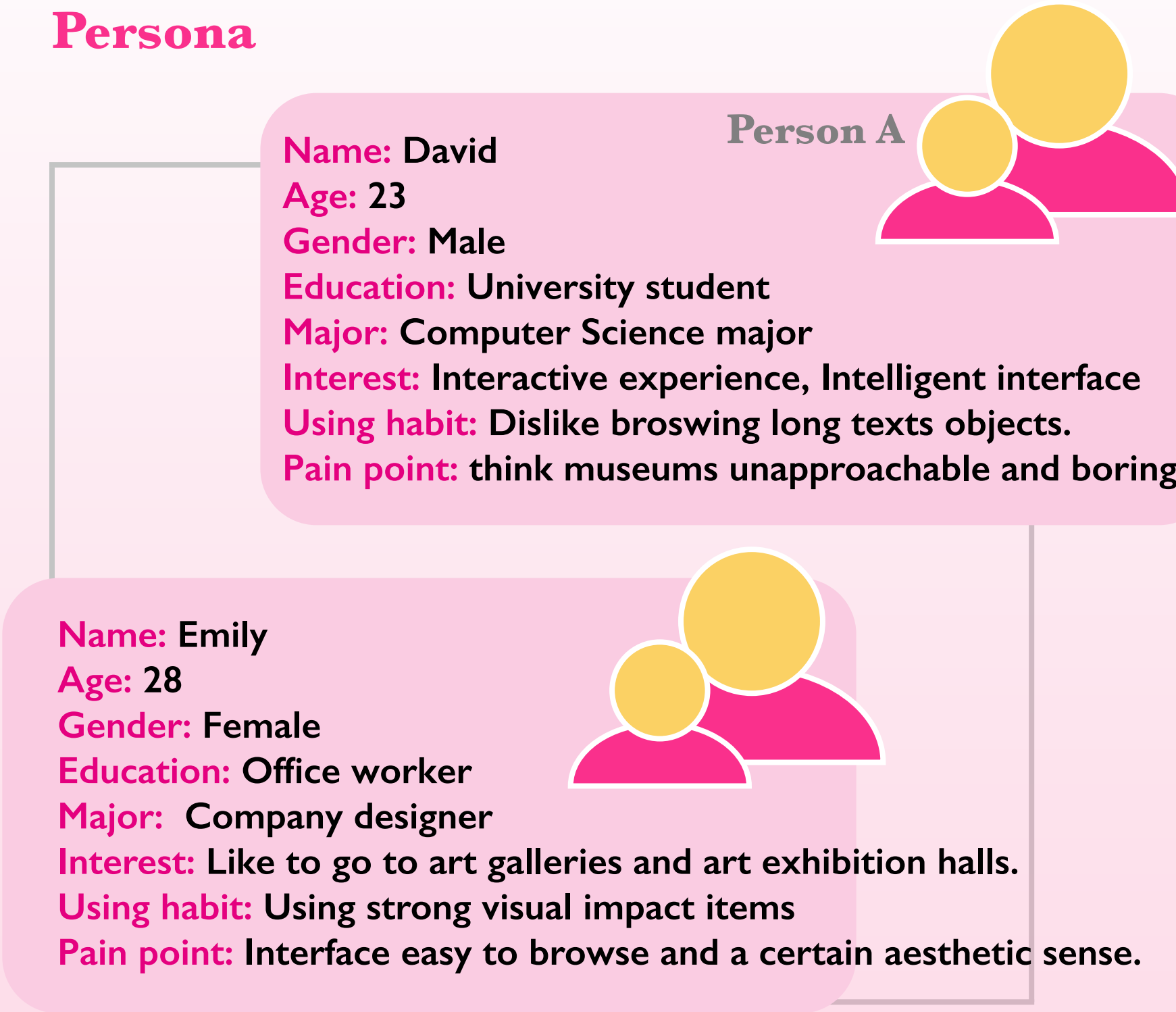
1.Function
- not only a daily necessity but beyond the practical functions of daily life.
- Carrying emotions, symbolizing a specific identity, and reflecting the pursuit of beauty, faith and lifestyle.

2.Material
- smooth glaze surface, hand-painted patterns and metal components.
- understand aesthetics, craftsmanship, material innovations.

3.Narrative
- Historical and cultural elements related to family, religion, disasters, decoration and so on.
- Like a silent narrator, evoke awareness of past life and cultural.

Survey

Through interviews with users of different age groups, I found younger group generally lacks interest of porcelain collections. Due to the rapidly developed Internet, they have no patience to browse museums and they think there is a distance between them and traditional collections.

What do they hope the museum will be like in the future???

- visually appeal
- 3D/AR/VR
- interactive
- share
- emotionally engaging

PACT & 18-25 young people

P
User group: Young users, mainly students aged 18 to 25
User characteristics:
Fragmented browsing and rely on the digital media.
Hope for a simple and easy-to-browse interface.
Have little understand with traditional museums and feel boring.
Visual appeal, emotional resonance and interactive experience.

C
On-site visit: Users access with equipment in Science Museum
Online visit: Browse with electronic devices at home.
Target audience: Cater to different cultures and backgrounds, and meet the diverse preferences and needs of young people.
Free use: This digital platform can be used during visits to offline museums and also remotely.
Flexible time: Share views at any time, offer more suggestions

Persona

Person A

Name: David
Age: 23
Gender: Male
Education: University student
Major: Computer Science major
Interest: Interactive experience, Intelligent interface
Using habit: Dislike broswing long texts objects.
Pain point: think museums unapproachable and boring

Name: Emily
Age: 28
Gender: Female
Education: Office worker
Major: Company designer
Interest: Like to go to art galleries and art exhibition halls.
Using habit: Using strong visual impact items
Pain point: Interface easy to browse and a certain aesthetic sense.

A
Study: Learn about collection's information, understand culture and stories behind it.
Like: Collecting favorite museum's collections to stimulate interest in history and culture.
Social: Sharing viewpoints with others, enhances cultural literacy.
Share: Promote more people to browse this digital platform and enhance its popularity.

T
Equipment: Computer, Ipad
Interactive techniques: Scan code view 3D model, sliding, clicking other dynamic effects.
Functions:
Personal account: User profile, records personal collections.
Forward and share: Discuss in the community and share the content of this platform with others.

During the visit to the Science Museum in London, I observed the interaction between the exhibition space and the audience. In addition to traditional text labels and collection displays, museums also enhance the appeal of information transmission through illustrations, installations, interactive screens. For instance, some exhibition areas use cantonized illustrations to attract young visitors, and electronic screens guide users to learn more through touch operations. I noticed that many exhibits were not strictly classified and placed but were mixed, thereby jointly telling the social picture of a historical period. It enhances the integrity of the historical narrative.

But it's very difficult for me to find a single collection item alone because the venue is too large and lacks clear guiding prompts. During the visit, I also found that although most of the audience were young people, when there was a lot of text introducing the exhibits, they often stayed for a short time or even skipped reading. This indicates that the display design needs to consider the visual expression of information.

Interactive

touch screen,
Scan 3D model,
game experience,
interactive device.

Illustration design,
Comic design,
Strong visual changes,
Color experiment.

Visual effects

Advantage

What I found in museum

Multi-sensory

Provide headphones,
Installation art,
Watch the video,
Dialogue and chat.

text lengthy and boring,
Lack of publicity on digital platforms

Limited dissemination

Disadvantage

Wide range

Too many collections and the venue is large, making it very difficult to find. There are many types of collections, and it's impossible to focus on just one

Secondary research

Porcelain musuem research

To better understand the display methods, narrative strategies, interactive and visual experiences of porcelain in museums, I researched on other porcelain museums. This helps me think about how to better present the content of the collection in my own project, and convey the information to the audience more clearly and attractively.
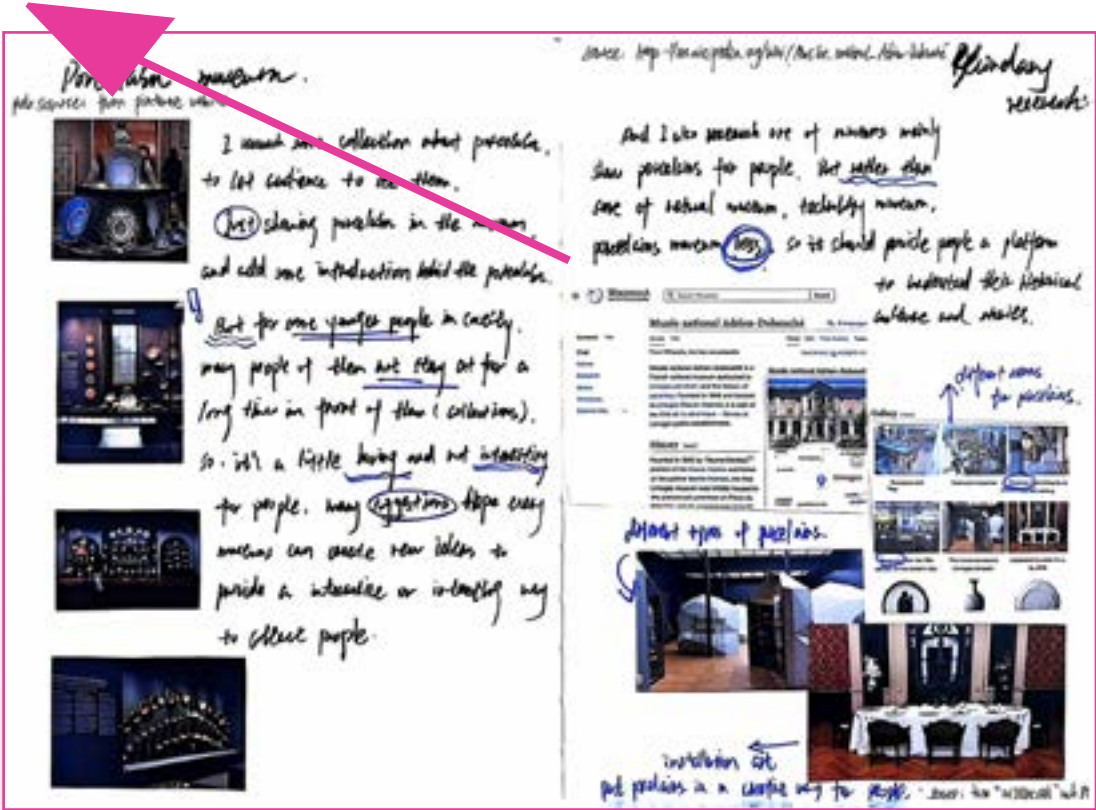
Data research
for digital musuem

I investigated some relevant data to understand the number of times people have visited museums in recent years, and people's expectations for digital museums. I find that although physical museums are still popular, an increasing number of users hope to obtain cultural and historical content more conveniently and at any time through online platforms, especially higher expectations in terms of interactivity and visuals.

Visually60%

more platforms40%

interactive95%

Sharing80%

2014   2017   2020   2023   2025

Expectations for digital platforms   The proportion of times users visit offline museums
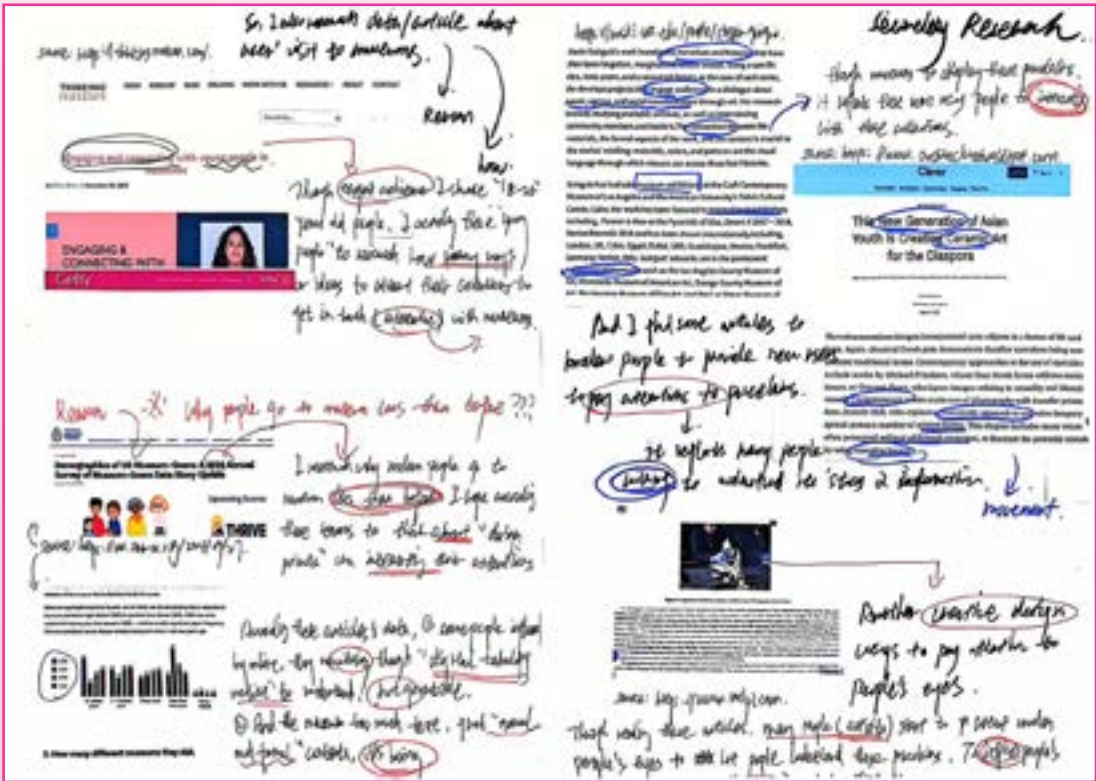
Interactive research

To better enhance users' sense of participation and immersive experience, I researched some interactive functions in museum. For example, users can scan the code to view the 3D model effect and experience the details of the collection more realistically. And people can slide the turntable to interact with the collections, which enhances the fun of the user experience. Compared with simply reading the text, dynamic effects such as users' click operations will obtain a more active and intuitive experience, which shortens the emotional distance with the collection.

Visual transform of porcelain research

I also discovered how artists creatively designed traditional porcelain through colors, lines and visual styles. I think these not only create a new visual language for the original porcelain collection, but also demonstrate the integration of traditional and contemporary aesthetics.
This made me think about how to apply the transformation of visual styles to attract people's attention and understand the information and stories of the collections in a more distinct and vivid way.
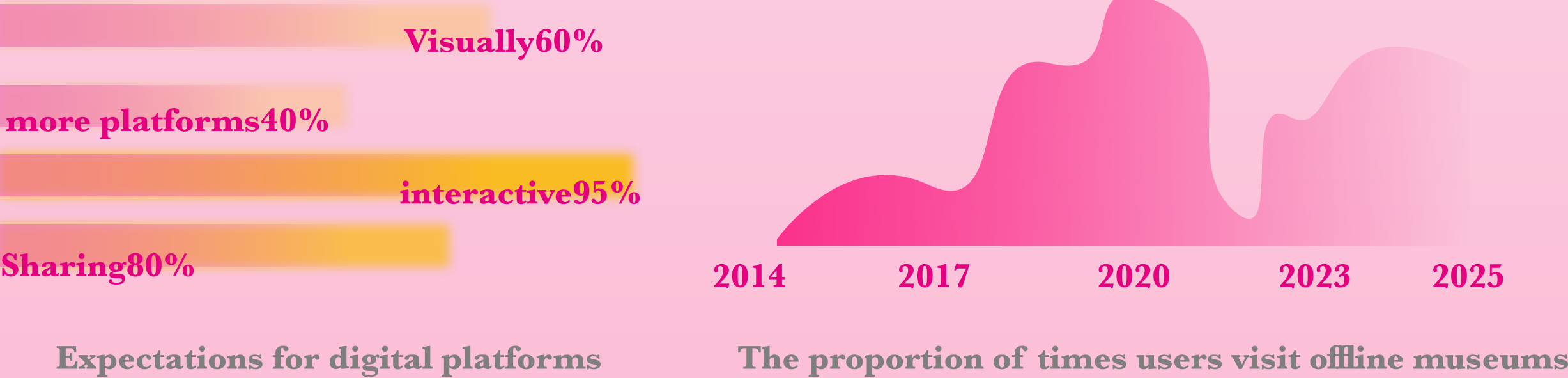
Digital Museum design ideas - web design

I began to plan the design concept of digital museum. I made comparisons on the website and the App platform. Ultimately, I chose web page because it better meets the display needs of the museum and can provide sufficient space to present the graphic and textual information of the collections. Meanwhile, the web page supports viewing the details of the 3D model. People can access it by scanning a code with their mobile phones, making the usage process more convenient.
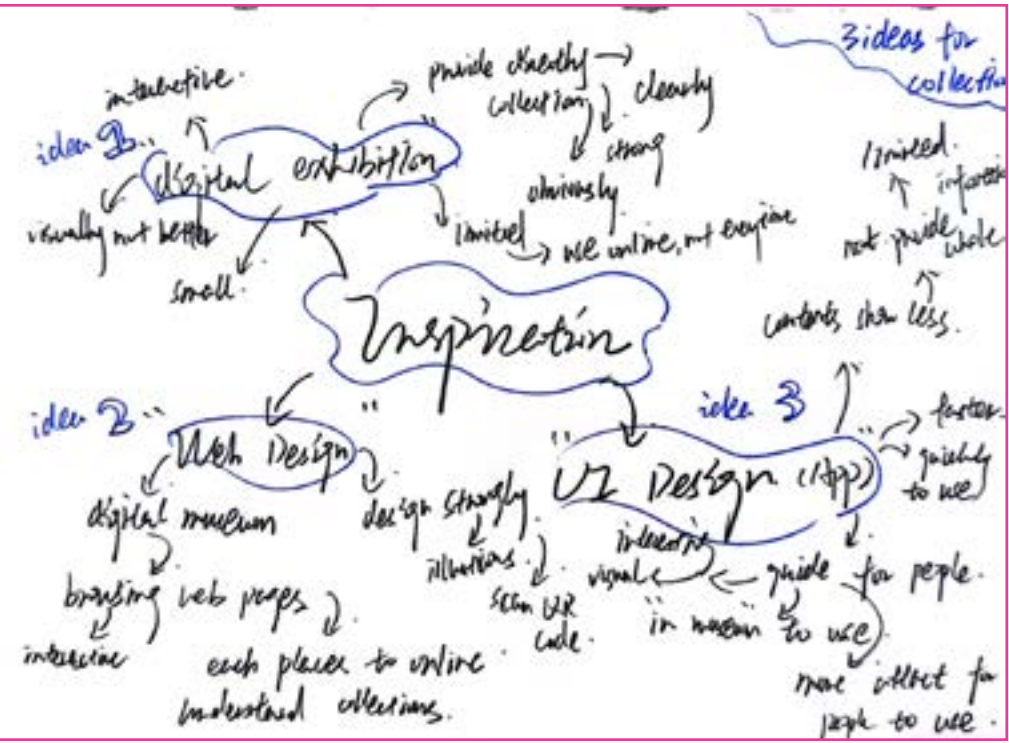
Visual style research

I found inspirations on "Pinterest" website, included web page layout, digital exhibition, illustration design, and 3D modeling.

For layout, I focused on interactive web design, such as the sliding dial, clicking and floating effects, which can enhance the user's sense of participation. For illustration, I researched different visual styles of porcelain, focusing on the variations of lines and colors. Different styles bring about different visual experiences. Soft tones are warmer, while high contrast styles have a stronger visual impact.

And 3D model made me think about how to restore the material and structure of the porcelain collection. I hope that the audience can observe the collections from multiple angles and under different lighting and shadow conditions. The research on the digital exhibition made me realize that in addition to singlepage display, the website can also create a virtual place. This makes people feel more immersed in museum.

Moodboard

Interactive experience

Interactive web
3d modeling

Illustration style

Hand-drawn line sketch
Decorative edge lines

Visual style

Warm-toned gradient
Warm visual atmosphere

Web page layout

Information hierarchy clearly
Combination of text and images
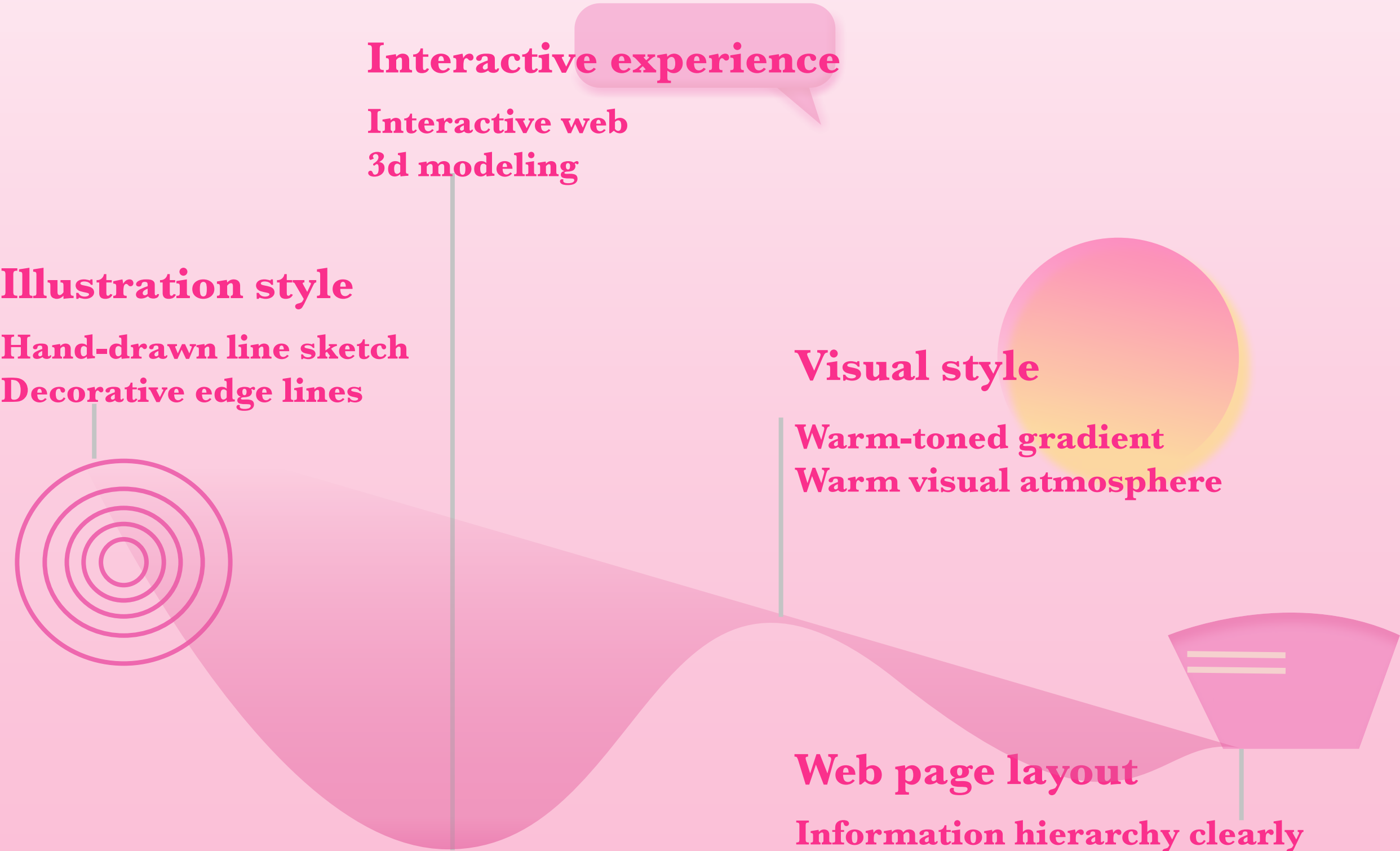
Layout
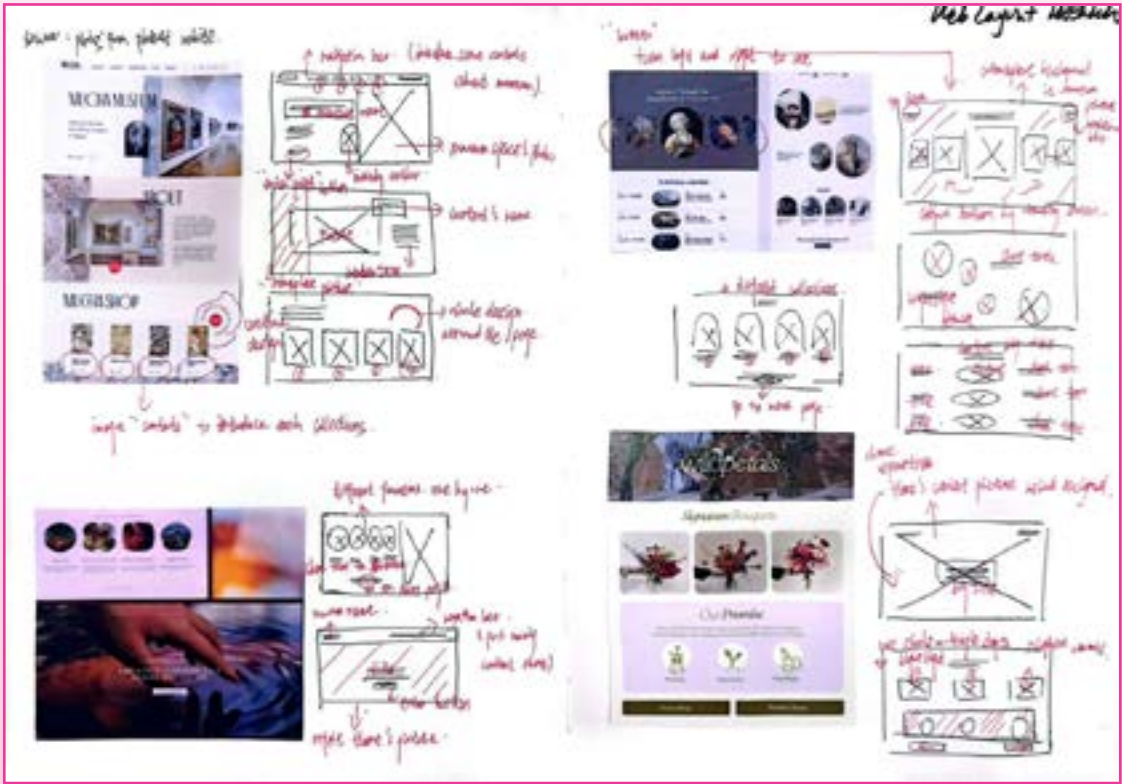
Digital exhibition
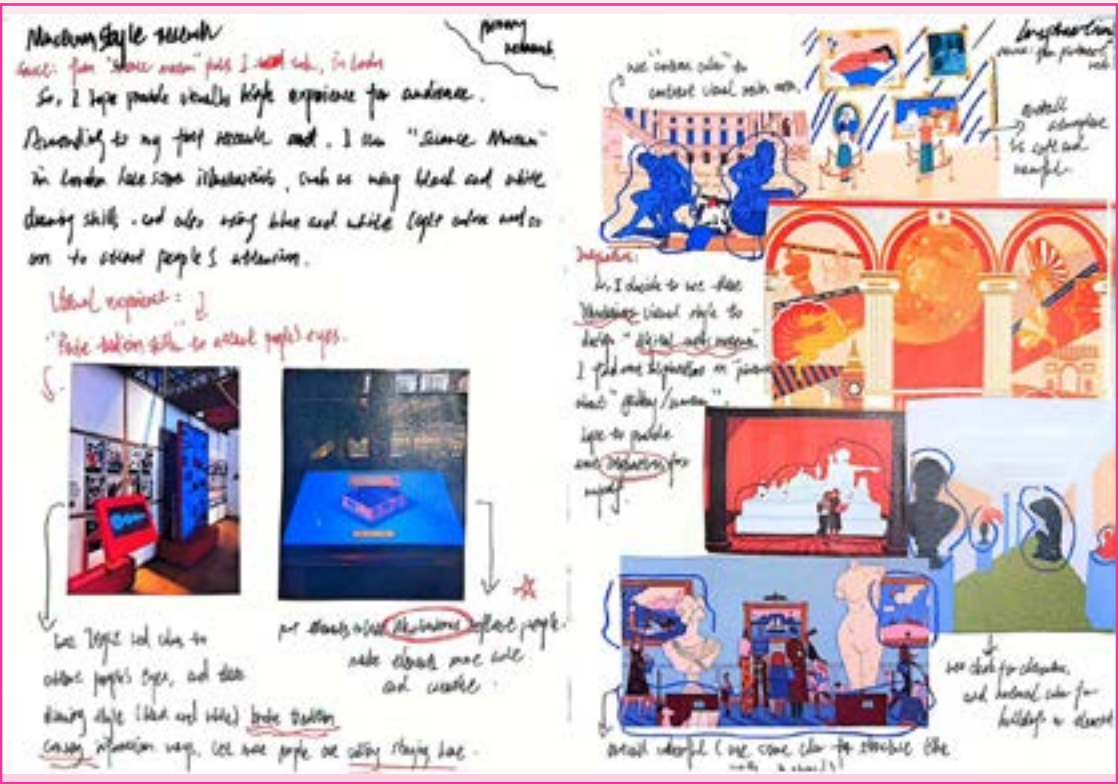
Illustration
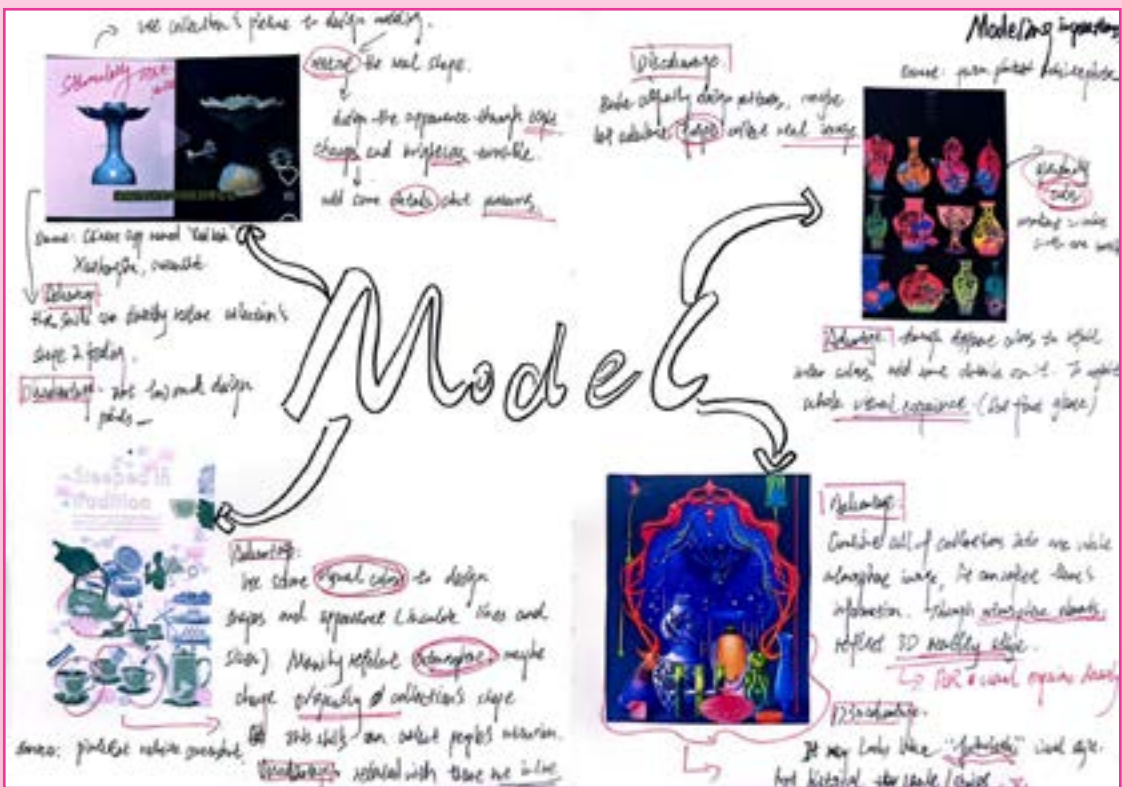
3D model

Development

Website storyboard

This storyboard helped me sort out the entire conception process of web design. Based on the characteristics and demands of the young group (18-25years), I consider the overall content structure, visual style and interactive form of the website, including key elements such as color matching, illustration application, Picture's and text's layout. This process provides a clear understanding for the subsequent web page prototype design.

Wireframe

Welcome page

Waiting page — Entering page

Home page — Function page

"Collection 1" page   "Collection 2" page   "Collection 3" page   "Collection 4" page   "Collection 5" page
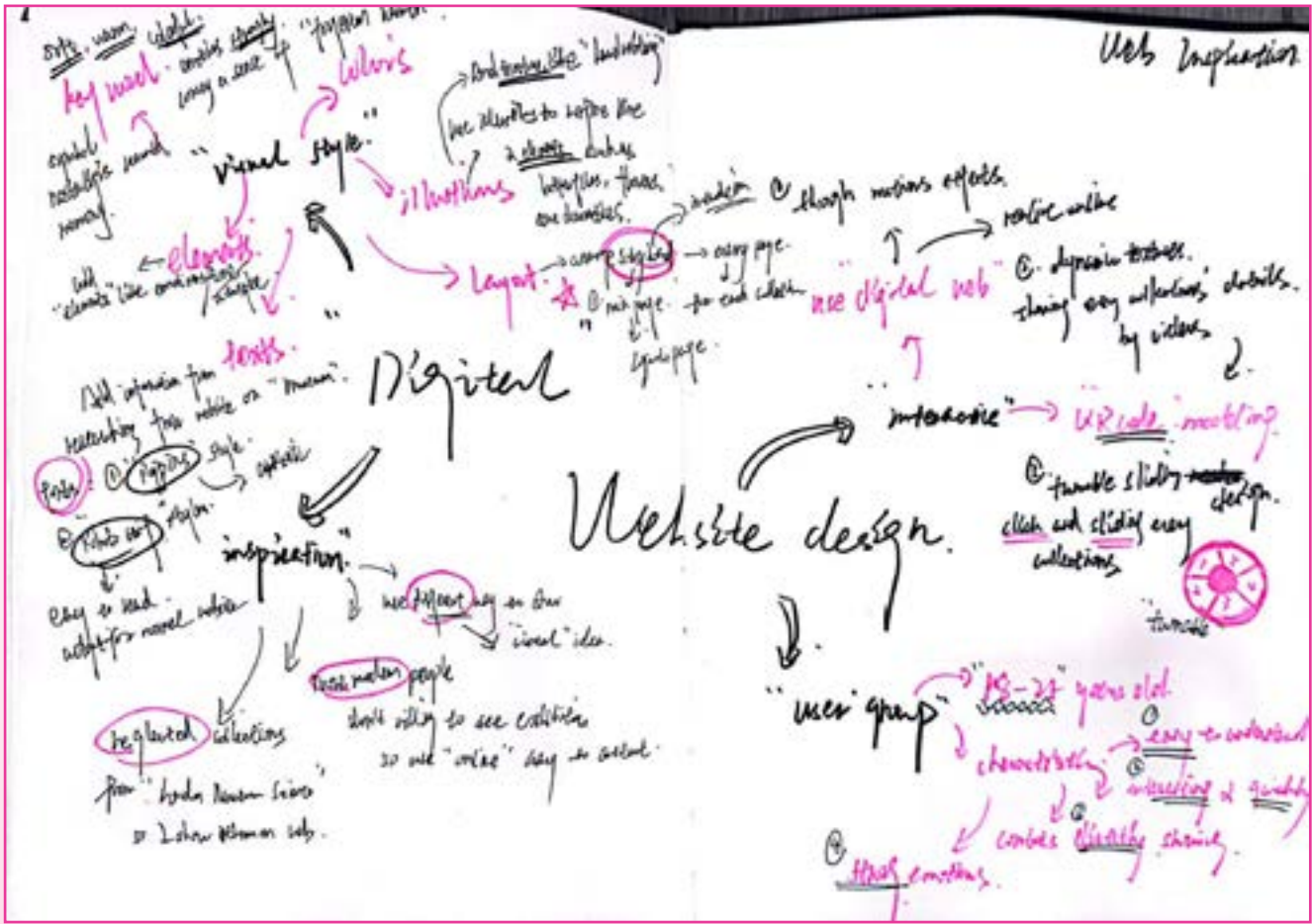
"interaction 1" page   "interaction 1" page   "interaction 1" page   "interaction 1" page   "interaction 1" page
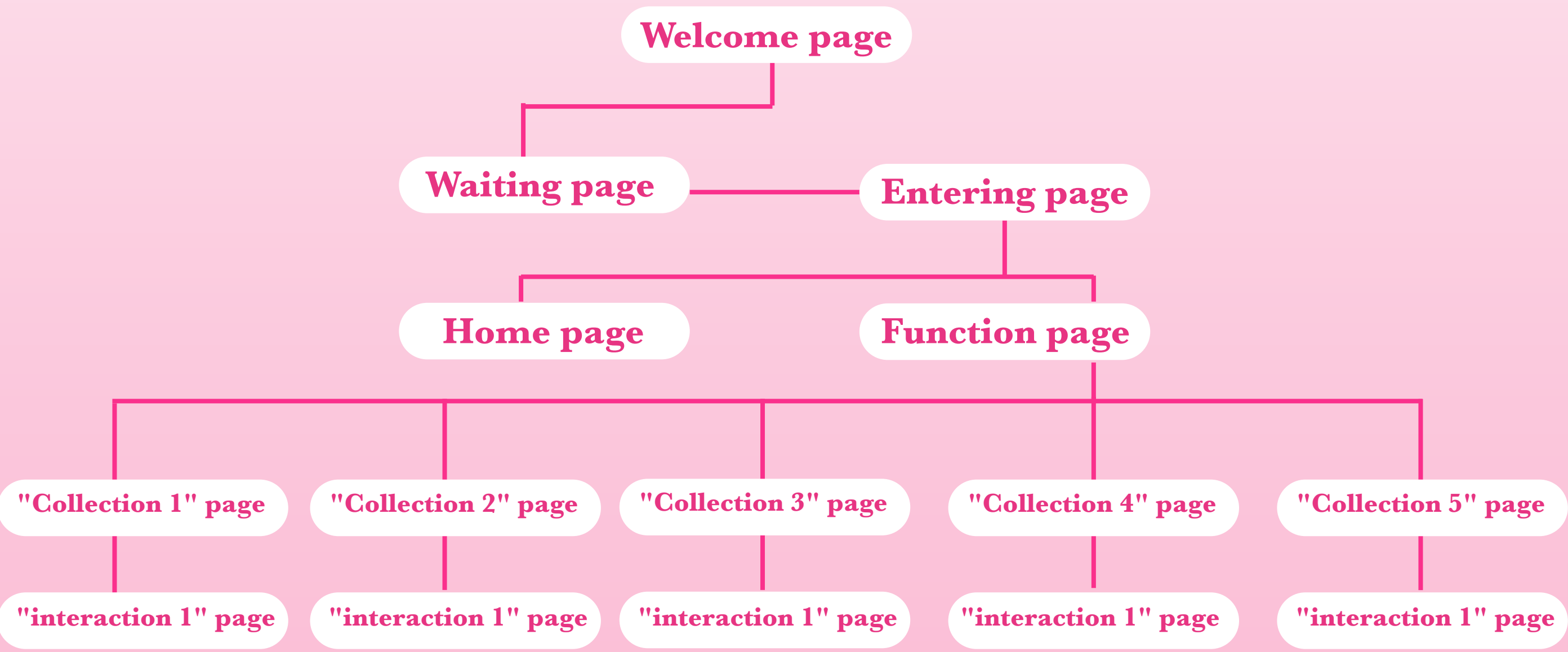
Website interesting point

Story narration combining pictures & text

Through concise text and visual illustrations, it guides people to understand culture and story of the collection.

Multi-sensory

The transition animations of dynamic elements and the soothing background music break the traditional static browsing experience. Sliding turntable interactive way replaces the traditional menu bar, adding a sense of exploration and fun.

3D model

Scan the code to view the 3D model, zoom in and rotate, and observe freely.

Color scheme & typeface

For color scheme of the web page, after adjustments, I finally chose warm style in soft pink and light yellow, with a small amount of light blue and light green. The overall color style is gentle and elegant, creating a friendly, soothing and artistic visual atmosphere. This color combination meets the elegant texture and functionality of porcelain, and shortens the distance between people and porcelain.

In addition, I chose two sans-serif fonts, "Poppins and Roboto'. "Poppins" are visually striking and round, so I use them for most of the titles. "Roboto" is used for textual explanations, and the information is clear and easy to read.

Color experimental

Roboto   Poppins
Roboto   *Poppins*

f5f5bb   ed778c   74c8d6   a6d7c7
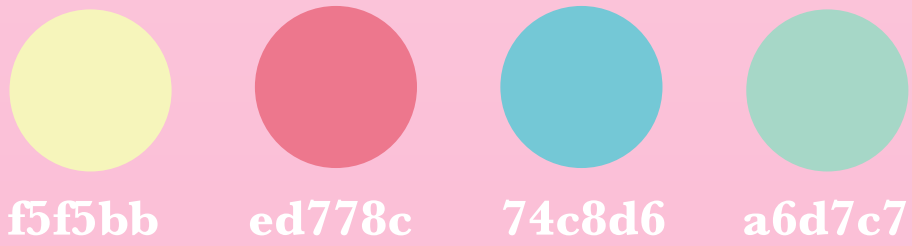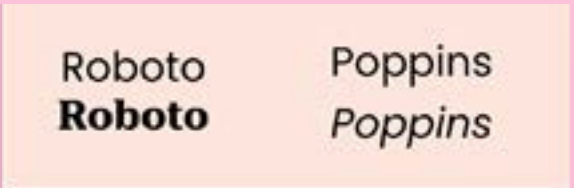
Sketches for logo
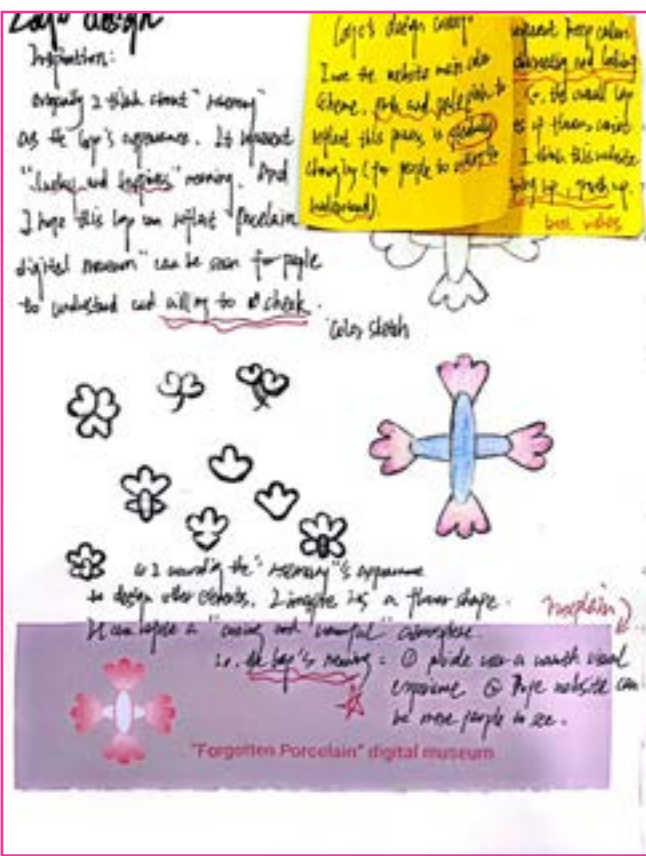
Design inspiration of this Logo comes from concept of the four-leaf clover, and its basic meaning expresses the elegance and beautiful appearance of the porcelain collection. The deeper meaning symbolizes hope, growth and extension. The four symmetrical petals reflect the power of upward growth and outward expansion. I hope to this digital museum will draw more people's attention to these forgotten porcelain collections, allowing them to be seen, understood and spread again.

"Forgotten Porcelain" digital museum

Sketches for icon

I also drew some icon elements, including decorative and functional design elements. I use to create the atmosphere of the overall page and enhance the visual beauty of the web page. The design elements of "Like", "Share", and "Personal homepage" in the navigation bar are expressed through simple and understandable elements, which makes the user operation recognition higher. This enhances the emotional expression and content coherence of the website.

Handdraw & digital sketches for collections

These are my design process of five porcelain collections, including sketches, black and white line drafts and coloring drafts. I drew the outer outline of the collection, and then I used Procreate on the iPad to color and adjust the shape. The overall design adopts an illustration style, with delicate lines and gentle color combinations.

Collection1- Plate
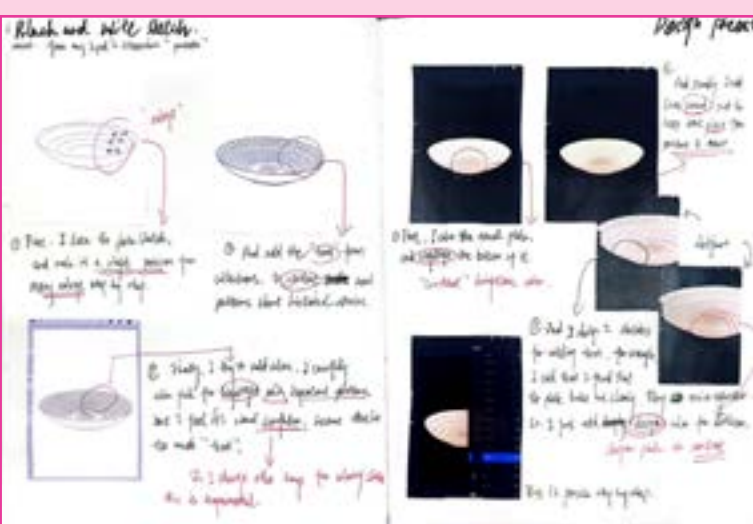
Collection2- Vase

Collection3- War Bowl
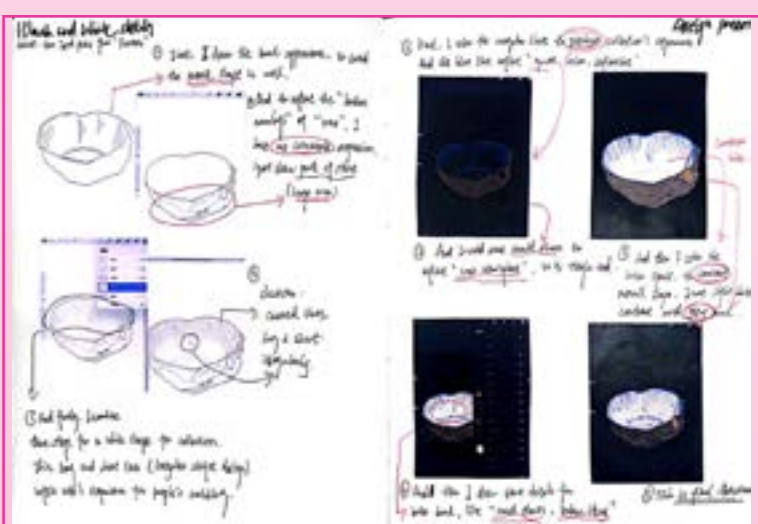
Collection4- Perfume bottle
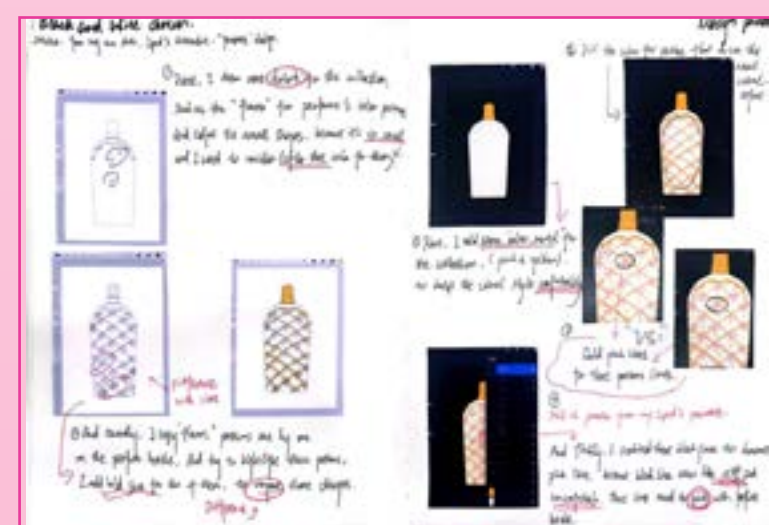
Collection5- Biscuit jar

Fianl Illustrations collections

After continuous adjustment and improvement, the designs of five collections were finally completed. I hope through the visual style of the illustrations, I can attract more people's attention to get closer to these collections and understand the history and emotions behind them.

Interactive ideas

When I thinking about how to present the model better, I have considered using VR devices or projectors to display the 3D collection model and create an immersive experience. It's difficult to achieve and the equipment is incomplete. I finally chose QR code to presenting 3D model. This mode of transmission is more flexible. Viewers only need to scan the code with their mobile phones to view and rotate. It's convenient for people to browse the collections directly and quickly online. It's also suitable for people to collect and share socially.

Modeling video

I rendered these 5 models and presented them in video form, which facilitates people to browse the form and details of each collection item in a dynamic way. And I added soothing background music in the editing software to create a immersive viewing experience. This music can achieve a multi-sensory experience effect. I also recorded my own voice explanations, along with the process of model rotation and display. I introduce the names, functions and historical and cultural information of the collections. This helps people understand the cultural value behind the items more clearly in a short period of time, enhancing interactivity and a sense of closeness.

backgoround's voice

own voice to introduce collection information

Modeling design process & adjustment

These are my 3D modeling design process for five porcelain collections. I used Ipad's "Nomand modeling software" to reconstruct the overall structure, carve and process the texture of each collection. To presenting the appearance and texture of porcelain, I constantly adjusted the proportion, structure and surface details. I also tried to adjust the effects of light and shadow and the reflection of materials, which is more realistic and visually impactful.

AR & scan code

I uploaded five modeling videos of the collections to "YouTube" website and added text descriptions to each video to help viewers quickly understand the background and significance of the collections. In addition, I made 5 QR codes for the video. I plan to place them on the interactive page of the website. People only need to scan it with mobile phones to watch. People can forward and share this QR code, which expands the popularity of the museum and enhances its publicity scope.


QR code's link: https://youtu.be/usyZEcWztxE

QR code's link: https://youtu.be/dPIjcuw84VY
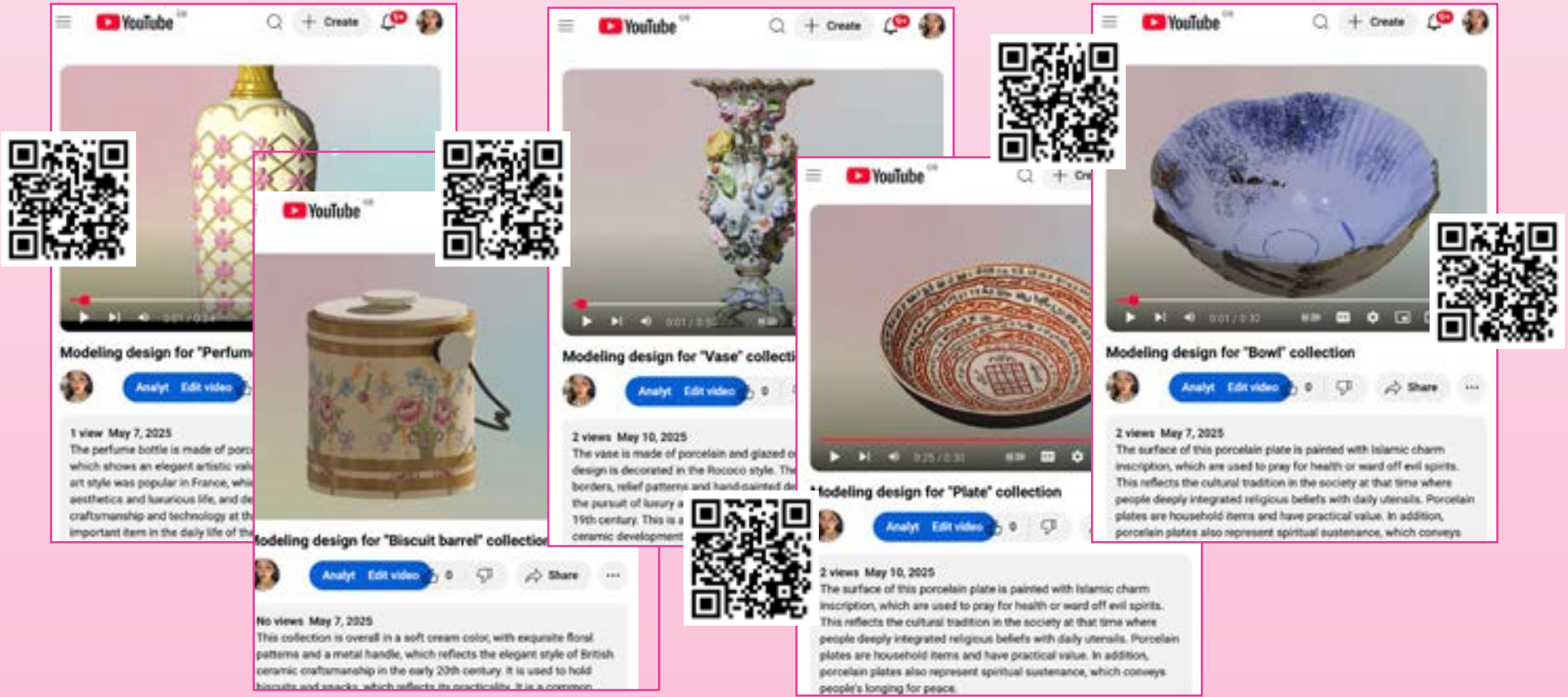
QR code's link: https://youtu.be/yEa7ZzizW1g

QR code's link: https://youtu.be/1kqgo_VKd48

QR code's link: https://youtu.be/2jTSwbnkHls

Website layout sketches

I drew five different layout design schemes for webpage. I mainly think about how to better layout the graphic and text structure and avoid confusion in terms of visual aesthetics. For interactive experience, I think about how information can be presented interestingly. I constantly modified the content hierarchy and the ratio of text and images, hope the layout of each web page reflect creative changes.
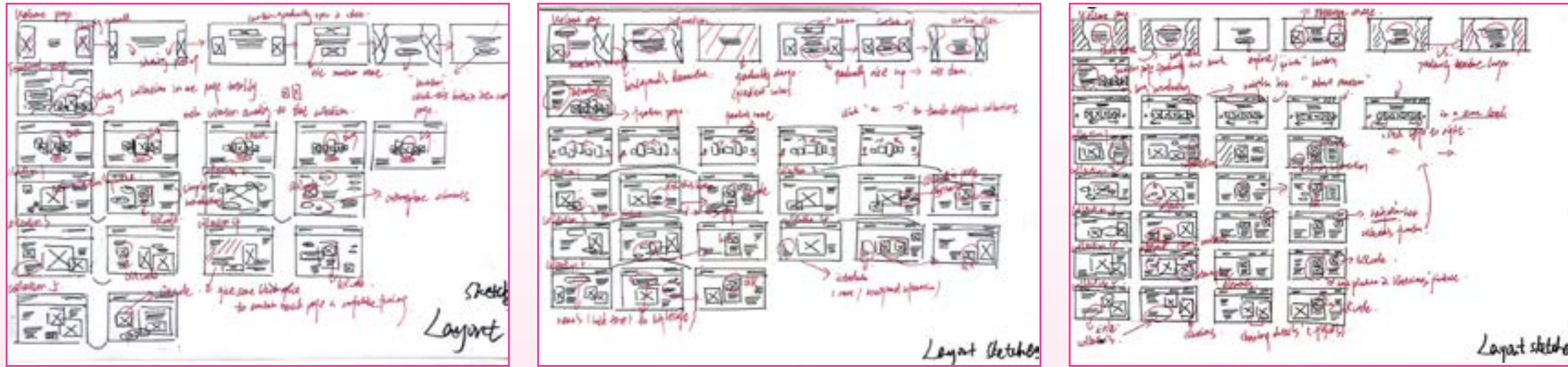

Testing & first iteration

After drawing these website design's layout, I made the mockup to testing its. And I invite friends to test and gave some suggestions for me. Compare other layouts, he agree skecth 2 layouts schemes . Because it look likes more motion design points. But he hope me to enlarge the collections's picture and reduce the text's size, it highlight visual range.
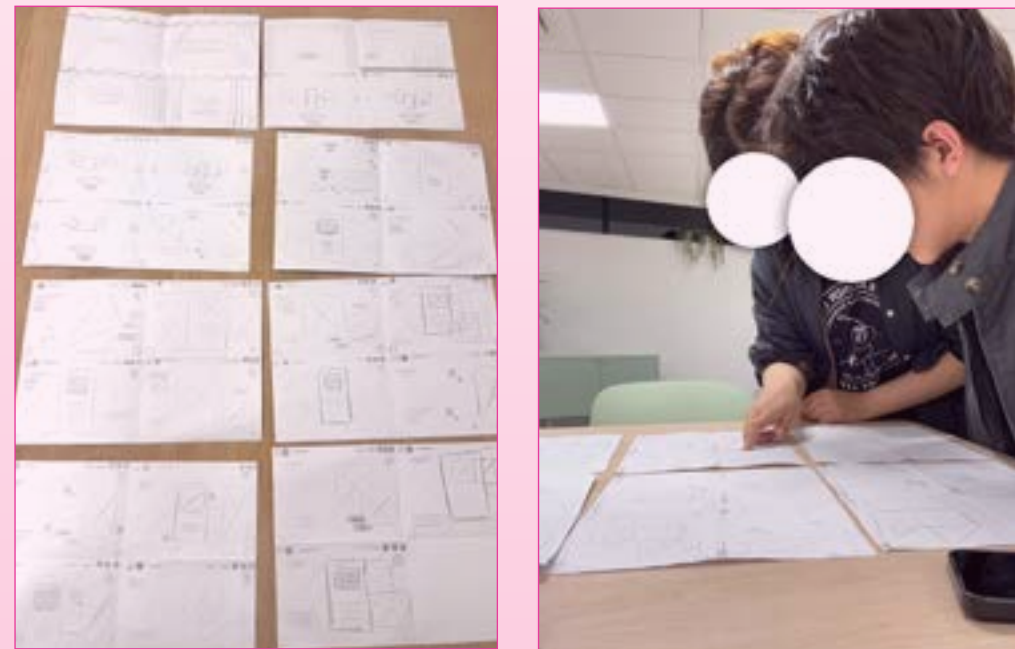
Final website layout

Finally, according to my friend's advice, I set up more motion effect design such as for "Function page", I set up a turnable design and 2 buttons so that user can clike and slide to find out those collections. It expresses diverse experiences for web page. And I set up pop-up window to give people a virtual digital museum.
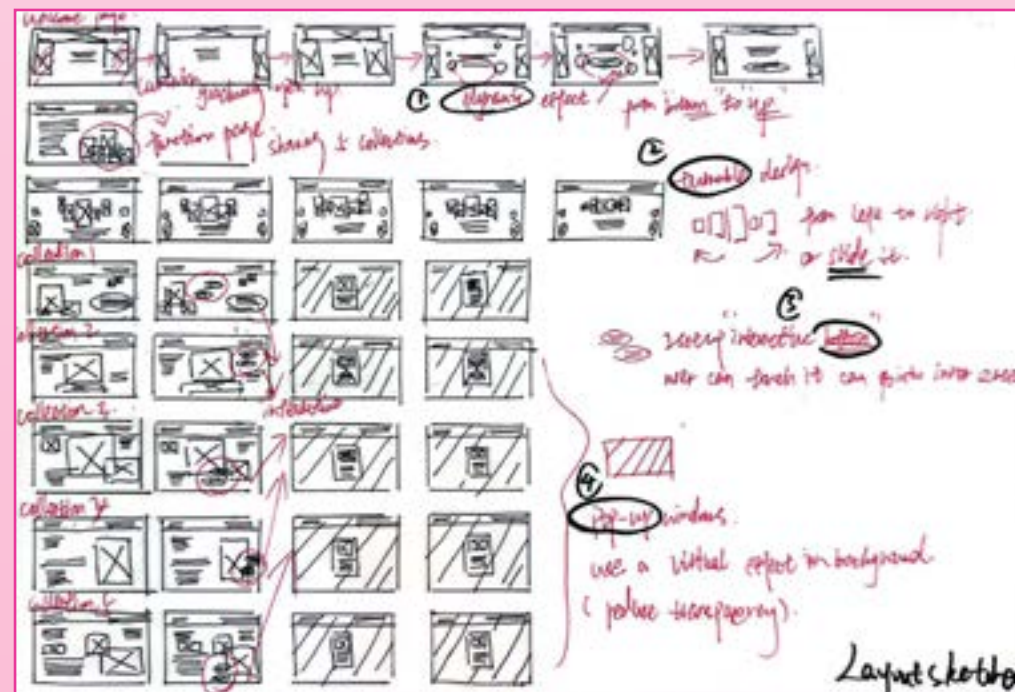
low-fidelity model testing & Second iteration

Based on hand-drawn layout sketches, I designed a low-fidelity prototype on "Figma" software. I found my friend to test the second experience. During the testing process, I found he was troubled when redirecting to web pages. Therefore, I readjusted the interactive thumb line. I added a "goback" button to each interactive page, which facilitates users to return from the interactive page to the original collection inner page. Meanwhile, I have newly added a quick entry for each collection page to jump back to the function page, which has significantly enhanced the usability and user experience of the website.

Before   **After**

Add new button: every interactive page can go back to every collection's inner page.

Before   **After**

Add new button: Each inner page of the collection can return to the functional page.
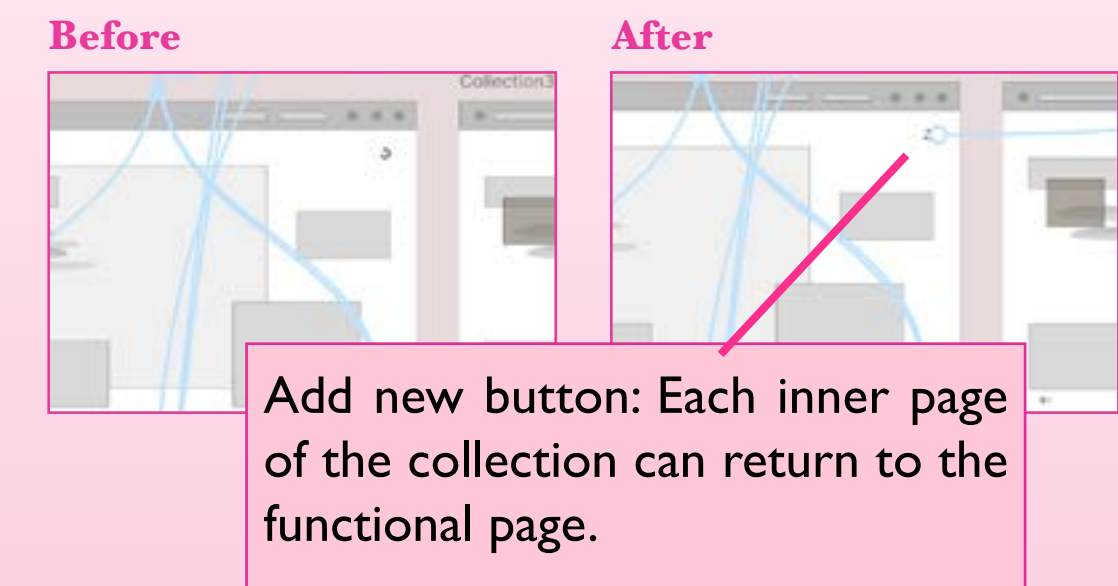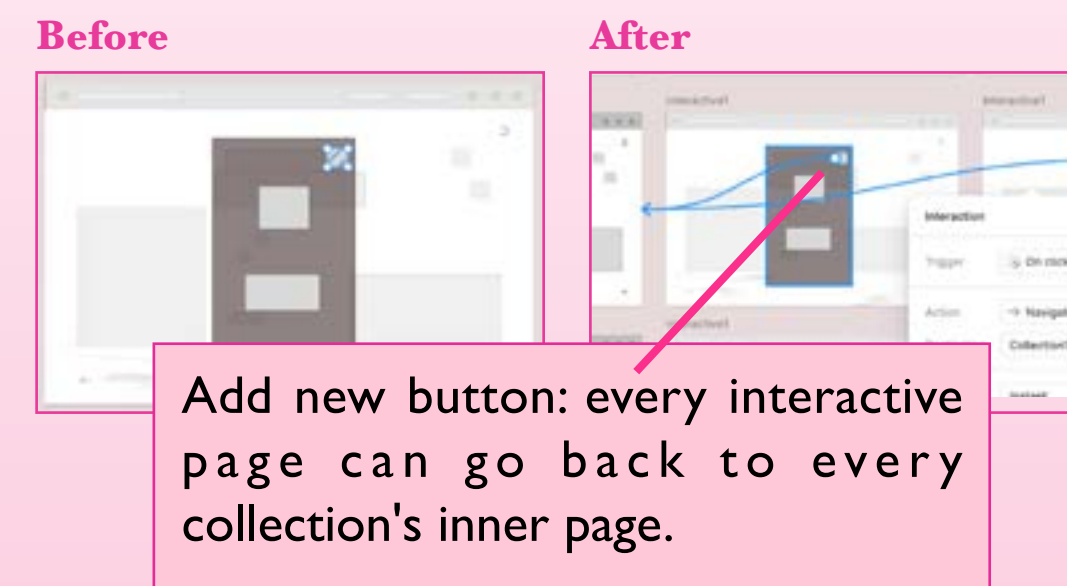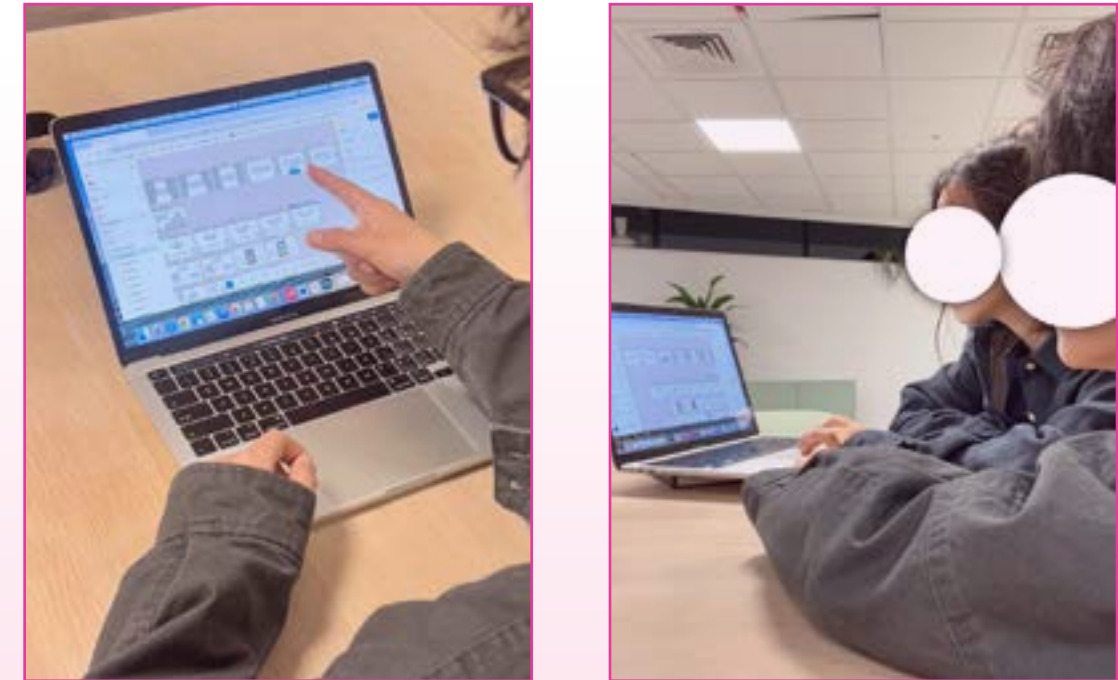
Fianl low-fidelity model

Color layout sketches

This is the coloring sketch I drew for the website. I conducted experiments on the sketchbook using colored pencils. I tried the visual effects of different color combinations on different pages. I want to enhance the illustration visual image of the collection through a gradient background. I also constantly change the coordination between the colors of the atmosphere decoration elements and the text content areas.
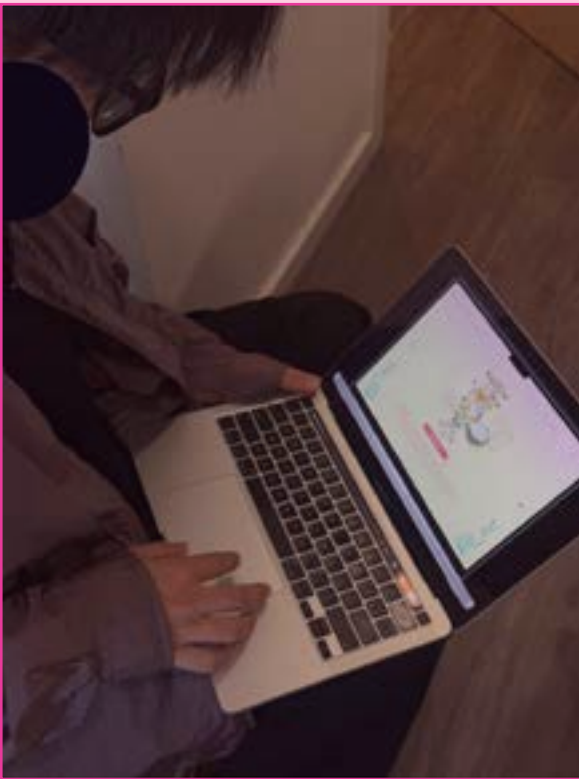

Website motion process

I made some animation effect on "Figma" software. The most outstanding feature is the setting of this turntable sliding function. People can directly touch the collections to enter the next page, or click the left and right buttons to browse different collections. I have set up a "floating" effect on each inner page of the collection. When touching the illustration collection, two gradient animation buttons will appear. The overall page switching is more smooth, which gives people an interactive experience.

Testing & third iteration

For the third testing, I invited users to experience my web design respectively through digital devices. My friend hopes to adjust issues such as page jumps, color contrasts, and layout of text and images. The color schemes of some web pages do not present the same effect on different devices, especially on a light pink background, the text will be hard to read. The font of some characters is not used appropriately. Also, the placement of some jump buttons needs to be more clear.
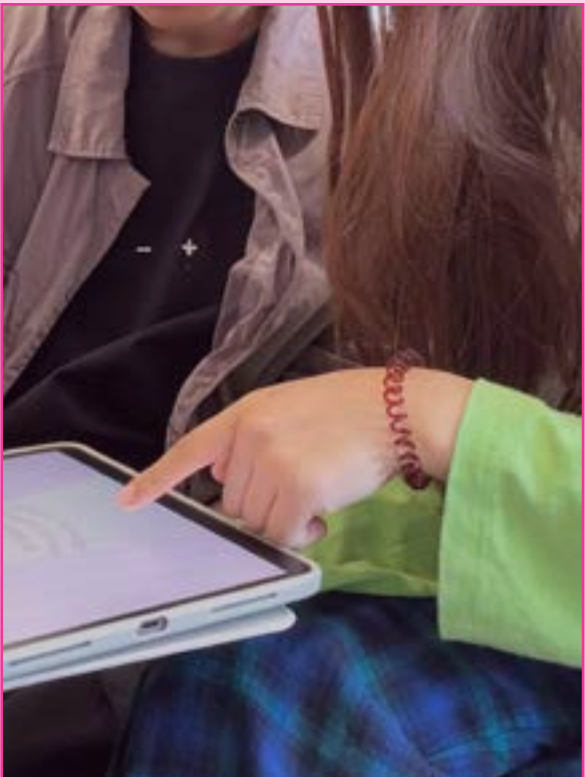
Touching screen experience

Clicking by macbook

Improvement process

After third testing, I rejusted the layout of the web page based on user feedback. I changed the font of the main page and highlight the title information. In addition, I adjusted the text's size and pay attention to the hierarchical relationship of the information. I alsp simplify the decorative elements to avoid visual clutter.

Before | **After**

change text's font, more elegant and meet the decorative function of the welcome page.

Before | **After**

The color matching is inappropriate and there are too many decorative elements.

Before | **After**
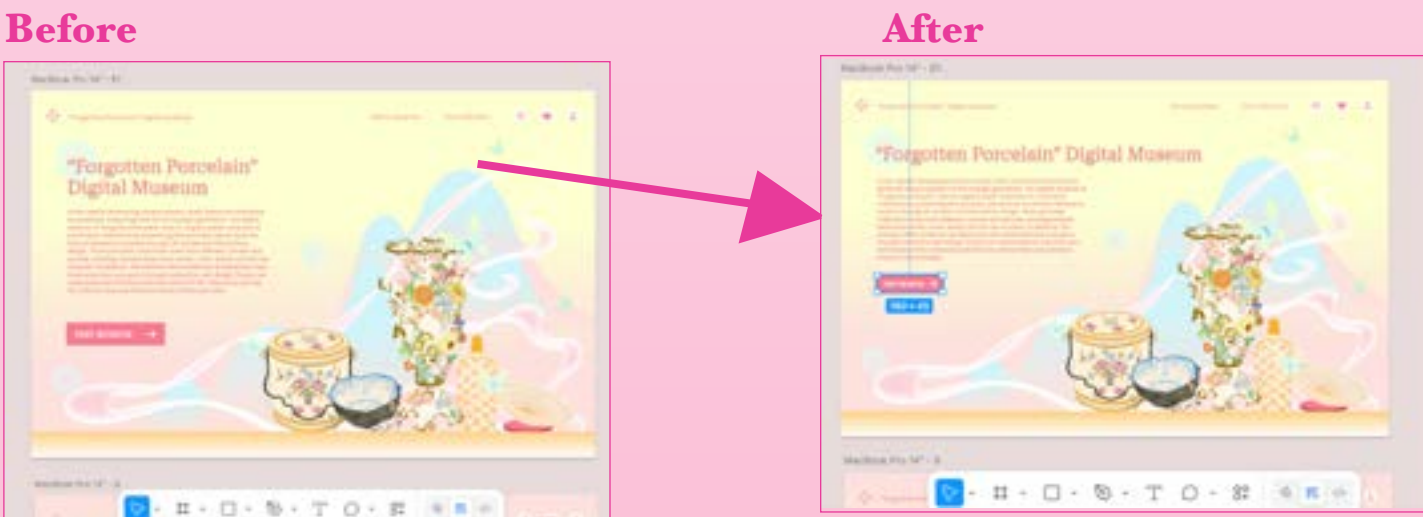
contents too much, mainly highlight the title, so adjust the text's size.

Before | **After**

layout confusion, deleted some decorative elements.

Fianl High-fidelity model

Final Thumb Wireframe

This is my screenshot of thumb wireframe, which shows the interaction process of the entire web page. This ensured that users have a smooth and free operation path during the browsing process. During the connection process, I made many times improvements on "Figma" software before getting this final wirframe. This helps me identify existing interaction issues in advance, such as the inability to achieve certain page jumps during the process.
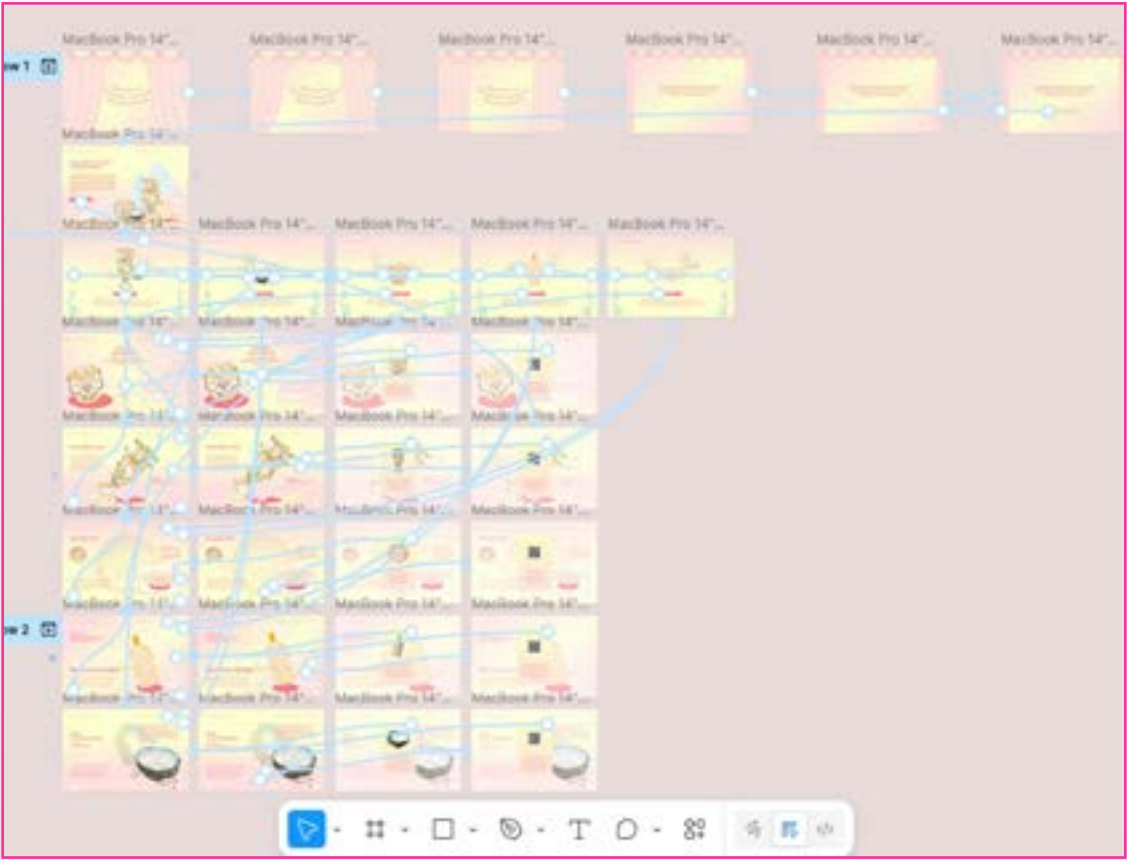
Interactive testing

The digital website is set in a dark environment, which is closer to the lighting atmosphere of a physical museum exhibition hall and enhances the digital experience. Users can browse through digital devices such as Ipad or computers. The website successfully simulates the feeling of touch screens in offline museums. The entire browsing process achieved a multi-sensory experience of vision, hearing and interactive operation, and was approved by friends.
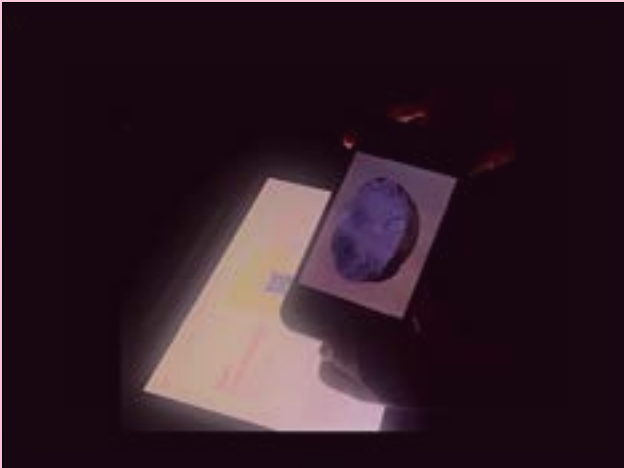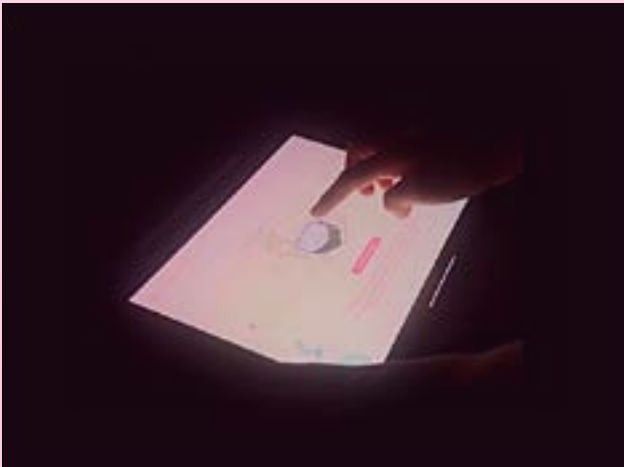
Ipad immersive experience's link: https://youtu.be/tqlCEOclIR0

Outcomes

Reflection:

In this digital museum project, I took porcelain as the entry point. By investigating its functions and materials, and understanding the story and historical culture, I researched a complete story. I try to tell the stories of these collections in an interactive way and create a digital experience for people. I analyze the relationship between museums and people, break the traditional design approach, and reawaken those forgotten collections.

Besides, I successfully responded to the initial three core questions. I chose familiar porcelain in daily lives as the carrier of the website, which easily enables the audience to establish an emotional connection. I established an "online digital museum" website, expanding the influence of the porcelain collection, which provides users with a visual experience regarding online access, sharing and interaction. Meanwhile, I use illustrations to meet the aesthetic standards of contemporary young people, enhance authenticity with 3D modeling, and design interactive buttons and turntable functions to increase users' sense of participation.

This project also enabled me to deeply explore the multiple functions of museums. I believe that museums are not only for display but also platforms for dissemination. The website simulates the use of touch screens, and the audience experiences it through ipads and computer devices.

Through user testing, the project has basically achieved the expected goals and received positive evaluations. Users think this "Forgotten Porcelain museum" website is relaxing and interesting, and the website is a friendly interface and narrative content. In the future, I hope to learn VR interactive media technology and continue to explore more motion effect designs on Figma software.