Digital Archives for 'Design in India'

Project 2

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M.des Interaction design

(2021-2023)

IDC school of design, IIT Bombay

Guide

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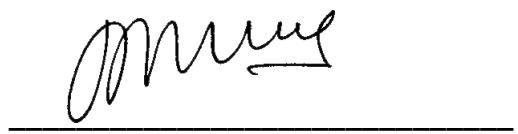
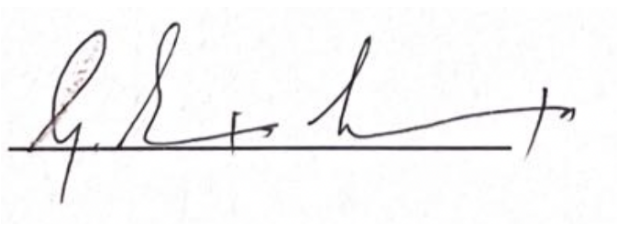
Approval Sheet

A project titled “**D’hive - Digital Archive for Design in India** ” by Sanika Shrikant Deshpande, 216330011 is approved for partial fulfillment of the requirement for the degree of ‘masters in design’ in interaction design.

Guide
Ravi Poovaiah



External Examiner
Rupa Agarwal



Declaration

I declare that this written document represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and provided references to the original sources. I also declare that I have adhered to all the principles of academic honesty and integrity and have not misrepresented or fabricated, or falsified any idea or data or fact, or source in my submission. I understand that any violation of the above will call for disciplinary action by the institute and can also evoke penal action from the sources which have not been properly cited or from whom proper permission has not been taken when needed. Sanika Shrikant Deshpande 206330011 IDC School of Design, IIT Bombay November 2022

Acknowledgements

I would like to thank IDC, IIT Bombay for giving me the opportunity to work on this project. I thank my guide, Professor Ravi Poovaiah, for his valuable guidance and support throughout the project. Working under Professor Ravi Poovaiah was a great learning experience. My sincere thanks to all the participants for giving their time for the sake of this project. I would like to thank Apoorv Anurag and Tejaswini Bundge for giving me feedback throughout the project. Lastly, I would like to thank my family and friends for their support, help, and encouragement.

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Project Type:

Development of an interactive digital archive for 'Design in India'. This project involves research, ideation options and development of the interface for digital archival purposes.

Overview of the Project:

Design Archival is really important in the evolution of design. Most of this data is not very easily available and is just known to experts in the field. The project will focus on the evolution of design artifacts found through research, documentation, and conversing with experts. And further ideating options and development of the interface for digital archival purposes.

Development of an interactive digital archive for 'Design in India'. This project is supported by the D'source project funded by the Ministry of Education at IDC. Once implemented, this project will have lasting value to preservation of Design Artifacts in India.

This project will help the designers to use the past as a cultural inventory for designing in future. Capturing, storing and later accessing digital data has become a necessity due to the rapid growth of digital content over the past 20 years. It will give designers easy and long term access to design archives as they will be available digitally.

Objectives:

1. To design an open source tool for Design community which will lead to exchange of information between the users
2. To design a blueprint, structure and user friendly interface for digital archives which will help the design community
3. To focus on the interface design part of the project and use the data which is already documented.

Scope:

1. The projects uses the available documented data and proposes a blueprint of an interface
2. The creation of documented data sets is not a part of the project
3. The projects covers an understanding of the user requirements through primary and secondary research
4. Based on the research findings, the project focuses on developing an information architecture for data documentation and data retrieval. designing the open source interface.
5. A couple of sample data sets are considered to explain the information architecture. The data collation and scaling is not a part of the project.

Methodology:

The project starts with a secondary research to understand the users of the design archives interface and importance of the archives to these users. The key problems of the users were identified through understanding and comparing user flows of existing archive interfaces.

The findings through the secondary research will be used to develop the key aspects of information architecture. These aspects will be validated through primary research to arrive at the final architecture.

A high fidelity prototype was developed based on the ideation of problems identified through secondary research. The key steps to building the prototype included ideating and wireframing.The prototype was evaluated with users and iterating based on user feedback.

Literature Review

Paper citation: Creating categories for databases by *BARUCH FISCHHOFF, DONALD MACGREGOR AND LYN BLACKSHAW. Decision Research, 1201 Oak, Eugene, Oregon 97401, U.S.A.*

The report considers different ways of organizing data sets into categories, developing labels for those categories, and presenting them to users. The report considers two key success metrics for the projects which are transparency and meta transparency. Transparency is defined as how easily users can identify the location of items and Meta transparency is defined as well users can assess the system's transparency.

The research paper studies two general approaches to eliciting potential users' mental representation of the categories underlying a domain. The more structured approach asks people to assign elements to categories whose labels have been determined by the investigator. The second, less structured approach allows nonexperts

to create their own categories by organizing elements as they see fit. The study reported here placed no constraints at all.

Paper citation: ScienceSearch: Enabling Search through Automatic Metadata Generation by *Gonzalo P. Rodrigo, Matt Henderson, Gunther H. Weber, Colin Ophus, Katie Antypas, Lavanya Ramakrishnan Lawrence Berkeley National Lab*

ScienceSearch, a generalized scalable search infrastructure that uses machine learning to capture metadata from data, context, and surrounding artifacts. New methods to generate metadata and search results can only be improved with user verification and feedback.

The four components of Science Search architecture include *data import*, *metadata extraction*, *search engine* and *user feedback*. Users interact with ScienceSearch through a web interface1 in two ways - a) they submit queries to search the data and b) they provide feedback on the metadata tags generated by the system.

Once the metadata tags have been evaluated by users, the ScienceSearch tool produces new metadata tags that merge user feedback with existing metadata tags by removing tags invalidated by users, and adding new suggested ones.

Secondary Research

What is an Archive?

Archives are historical documents or records providing information about past events. These archives are not created consciously as a historical record. Archive collections are usually unique and hence are retained for long term historical value. It is not essential for archives to be old, it is just no longer required for use for which they were created. Archive can be in varied formats including written, photographic, moving image, sound, digital and analogue. Archives contain primary sources of information that can give us insight into the actions and decisions of governments, institutions, communities and individuals, as well as hold our memories.

Importance of Archive

Archives provide evidence of activities which occurred in the past, they tell stories, document people and are valuable sources of information for research. They are our recorded memory and form an important part of our community, cultural, official and unofficial history. Storing archives also involves being able to provide a complete picture of how and why something came into being.

Internet Archive

The historical documents and objects that provide evidence of the past have been digitized and made available online. It is important to archive their digital content to keep it safe from data loss and other disasters in order to avoid any adverse effects.

Benefits of Internet Archive

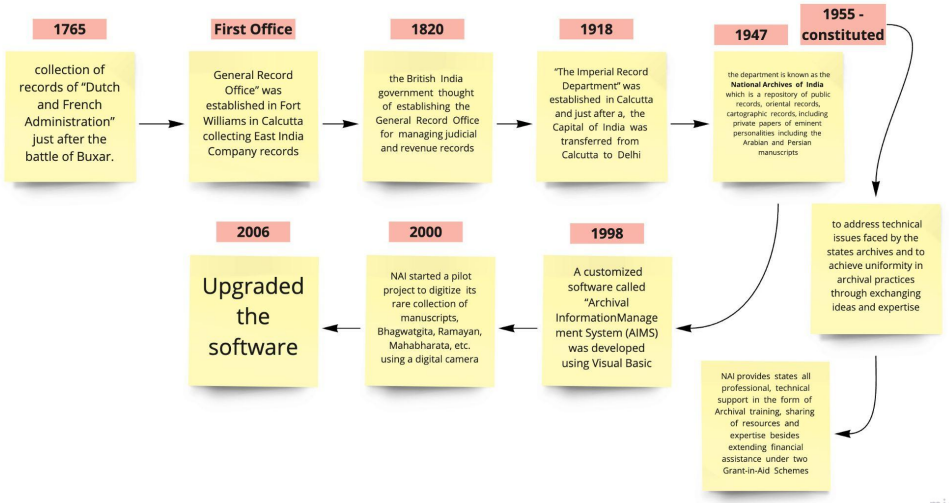
Internet archives have a lot of benefits over physical archives

1. **Increased efficiency** - Automating many of the tasks associated with managing paper records, such as filing, retrieving, and destroying records.
2. **Improved access** - Digital archiving can provide anytime, anywhere access to records with requisite access controls

3. **Enhanced Security** - Protect records from physical damage or destruction, as well as unauthorized access
4. **Cost savings** - Reducing the need for storage space, as well as the costs associated with managing paper records.
5. **Increased productivity** - Users can find information quickly by using metadata methods like tags, keywords, location
6. **Improved User experience** - Users can access documents 24 hours a day, 7 days a week.

Indian Archival System

The Indian archival system dated back to 1765 by collecting the records and filing them. In 1998 customizing a software called “Archival Information Management System for better management of the archives online



Archiving standards

Policies and standards are produced to support the long-term sustainability of archives, wherever they are kept. The website policies are customized to support your mission. Government policies are intended to support the wider archive sector.

Current Sorting of Archive

Every item in an archive is assigned a number or code based on the group they belong to. These codes and descriptions of the material within an archive together form “finding aids". This code system helps users to understand the way an archive has been organized and to locate material within it.

The key issue here is that the not all users are familiar with coding system and hence the retrieval of these archives becomes difficult

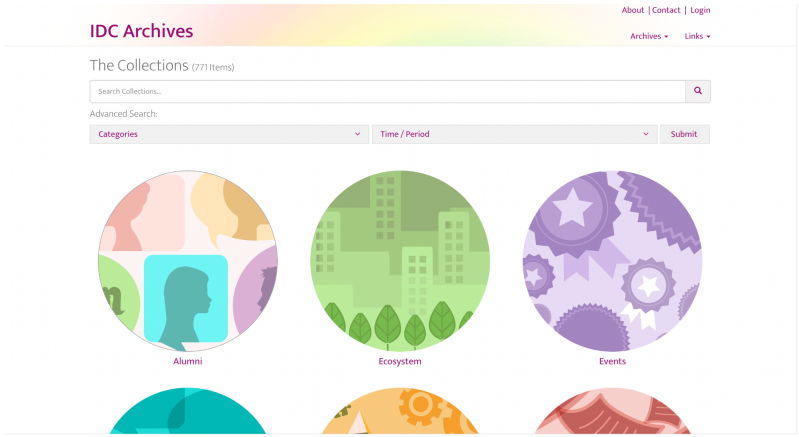
Design artifacts

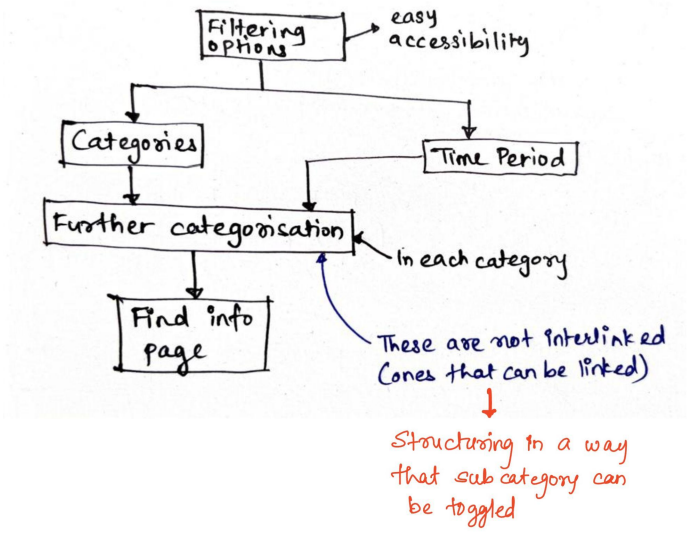
Artifact is an object made by a human being, typically an item of cultural or historical interest. The process of developing a product will produce design artifacts. The purpose of design artifacts is to communicate and collaborate, they are optimized for clarity and understanding.

Analyzing Existing digital archives

I looked into a few existing websites which are storing digital archives and tried to analyze the user flows and information architecture for those platforms. Going through these platforms I got exposure to understand various crucial factors that should be considered for designing such an interface which stores a lot of data. Structuring and chunking the information becomes the most important factor. Finding the data efficiently by enriching the data by adding metadata.

IDC Archives

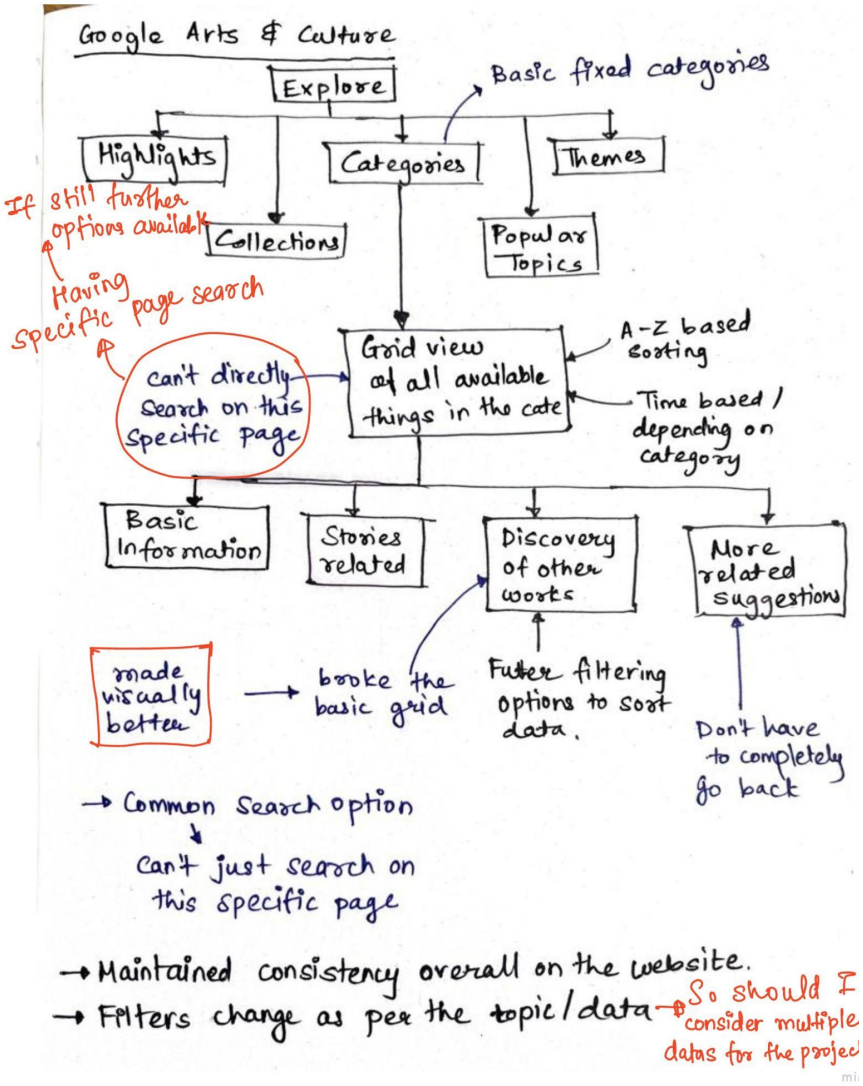


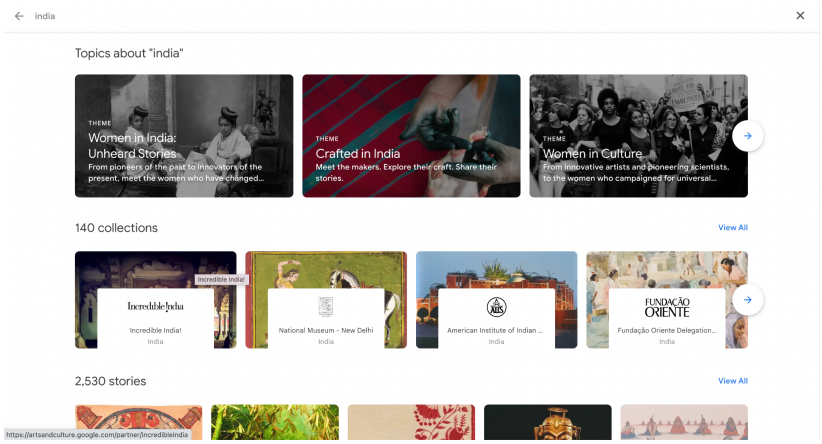


Key Problems

1. Sub categories are not interlinked with each other.
2. Data discoverability is a challenge as the user needs to go back to the main page and access sub categories again.

Google Arts and Culture





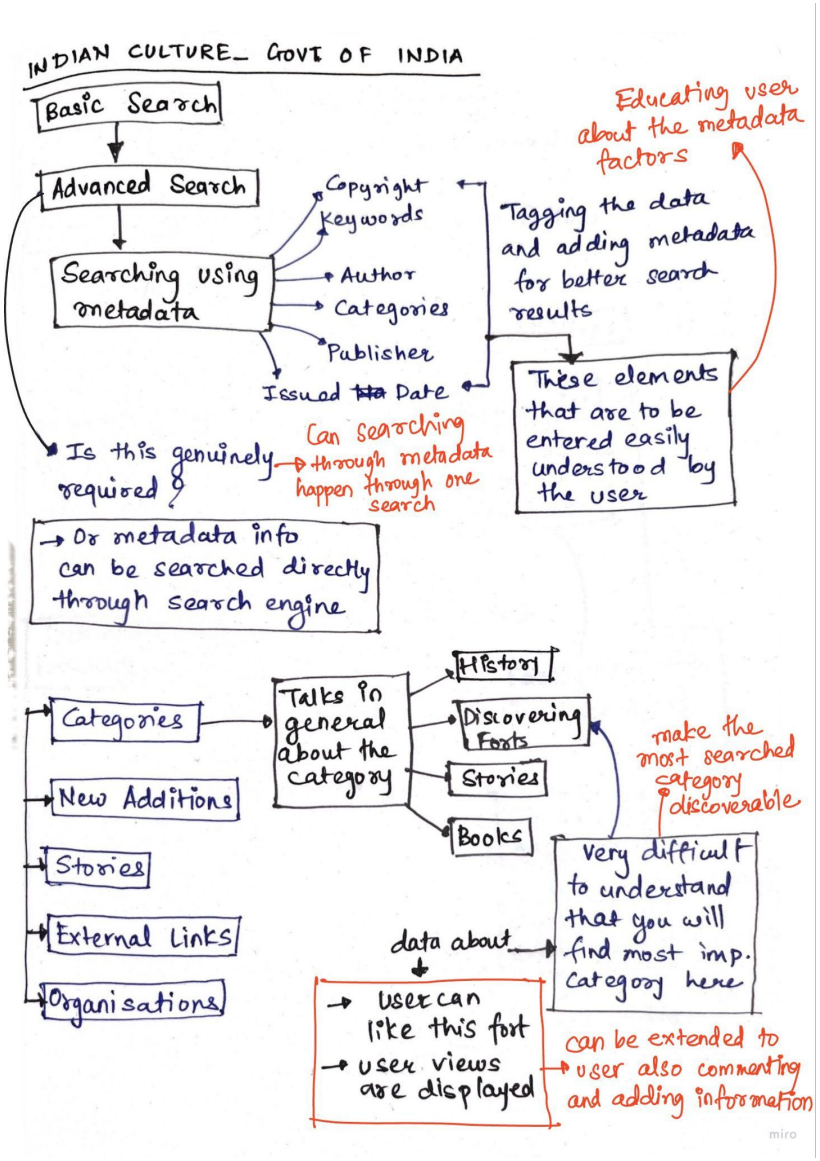
Key Problems

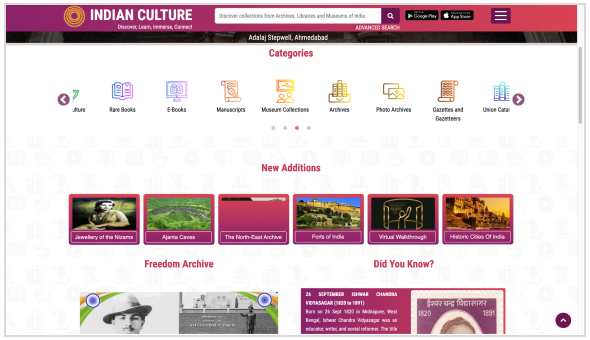
1. It is difficult to search through data on individual pages post the search results as there is no research to skim through search results
2. Data is being added as it is made leading to categorization being a bit random

Key advantage

1. They have created an interesting grid view for viewing the data and made it visually appealing.
2. Stories feature is new and interesting, users might be more interested in it

Indian Culture





Key Problems

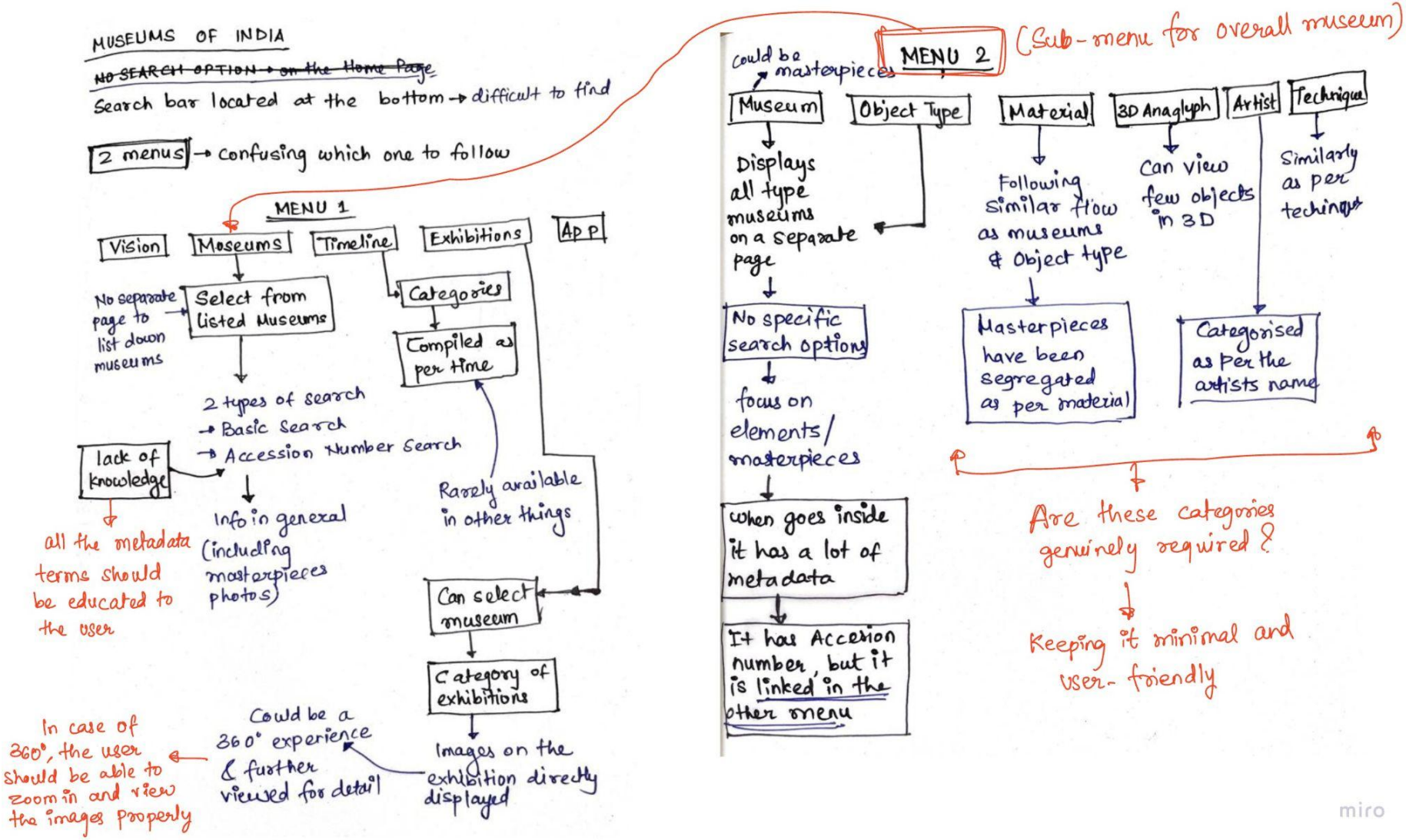
1. Has a specific Advanced Search option, through which a user can search using metadata. The nomenclature of metadata is not user friendly

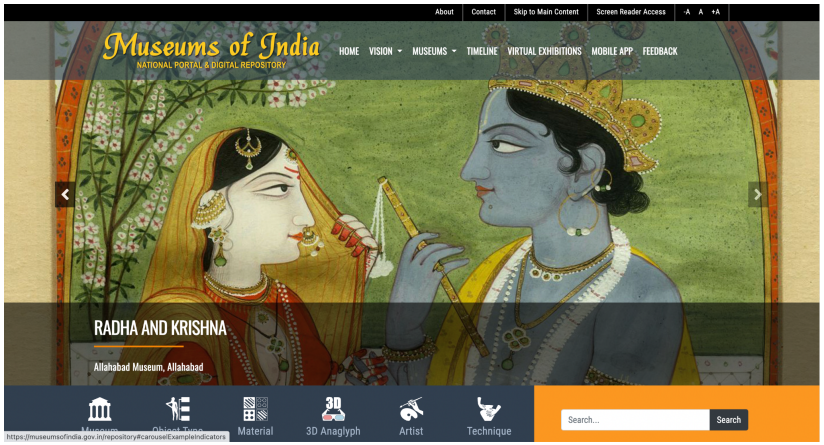
2. The categorization is very narrow leading to discoverability issues. It took time to understand the categories and further search inside them

Key advantage

1. They have a feature of users liking a category and can see how many people have viewed a specific data. This feature can be further extended to users commenting and adding information. The added information can be verified and then implemented

Museums of India





Key problems

1. This website has two main menus, the bottom menu looks like the subset of the top menu.There is no clean linking for the users to realize this leading to confusion for the user

2. Accession Number Search is the terminology used for metadata. User has to be educated about this but there is no feature on website for user education

Key Advantage

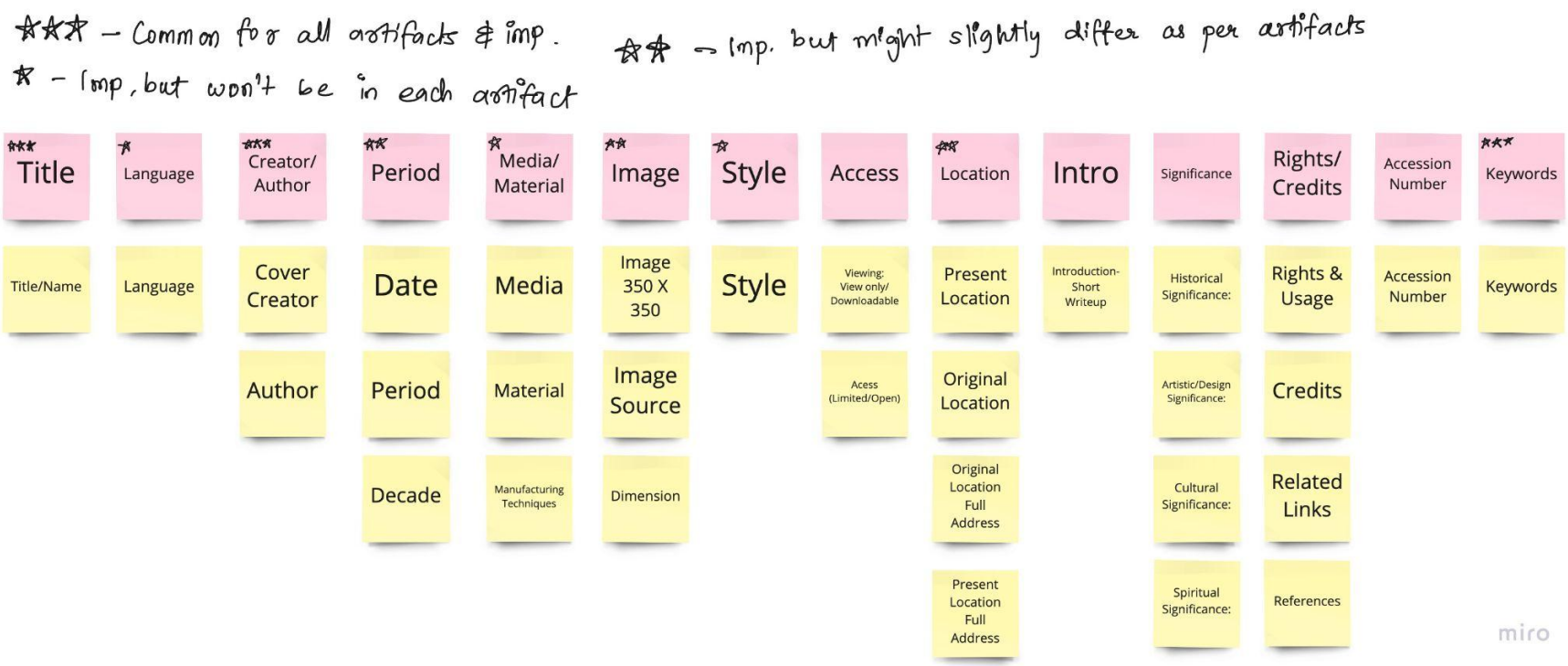
1. Timeline representation looks interesting

Data sets

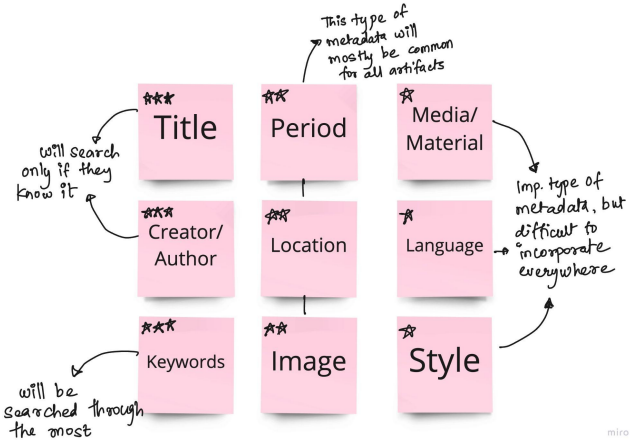
D'source has given sample data sets for analysis of the project. These datasets were used to figure out the key elements of metadata present in digital archives and key elements for information architecture

Serial no.	Title/Name	Image	Creator/Artist	Preference	Keyword	Sub-category	Category	Original Location	Cardinal point	Present Location	Date	Period	Media	Material
B.DES														
Faculty														
M.Des														
	Animation Design													
	Communication Design													
	Interaction Design													
	Mobility Design													
	Product Design													
	Research Design													
PHD														
B.DES														
1	Value 101		Rashi Gupta	0	Design Research	B.Des	Interaction Design	India	Mumbai	IDC IIT Bombay	2020	2019-2022	Report pdf	
2	Bottle Opener		Rashi Gupta	1	P1 Project	B.Des	Product Design	India	Mumbai	IDC IIT Bombay	2020	2019-2022	Presentation pdf	
3	Service Design for STARS Forum		Rashi Gupta	0	P2 Project	B.Des	Interaction Design	India	Mumbai	IDC IIT Bombay	2020	2019-2022	Report pdf	
4	Chapter-wise Summary on Action Research: Living Theory by ack Whitehead and Jean McNiff, 2006		Tarun Mugunthan	0	Design Research	B.Des	Communication Design	India	Mumbai	IDC IIT Bombay	2020	2019-2022	Report pdf	
5	Accessibility solution for wheelchair users for the bus transit system in Israel		Tarun Mugunthan	1	P1 Project	B.Des	Interaction Design	India	Mumbai	IDC IIT Bombay	2020	2019-2022	Report pdf	

Title/Name	Image 350 X 350	Image Source	Author	Cover Creator	Language	Viewing: View only/ Downloadable	Acess (Limited/Open)	Original Location	Cardinal point	Present Location	Date	Period	Media	Material	Style	Keywords	Introduction- Short Writeup
Guru Granth Sahib		https://en.wikipedia.org/wiki/Guru_Granth_Sahib	Sikh Guru Authors		Gurmukhi			Punjab		India	1604	(1750 - 1850) Pre Industrialisation	Print		The holy book of Sikhs	Book cover	The Guru Granth Sahib known as the religious holy scripture of Sikhism It is considered by the Sikhs as the final, sovereign, and eternal Guru, following the lineage of the ten huma
Adhyatma Raramayanam		https://archive.org/details/AdhyathmRaramayanam-Malayalam-TunchathuEzhuthachan/Adhyatma%20Rama	Thunchaththu Ramanujan Ezhuthachan		Malayalam			Kerala		India	17th Century	(1750 - 1850) Pre Industrialisation	Print		Malayalam version of Ramayana	Book cover	Thunchaththu Ramanujan is consider the father of Malayalam literature. The Adhyathma Ramayana Sanskrit was written by
Sambad Kaumudi		https://archive.org/details/SamkhyaTattvaKaumudiCaluctta1877SamvadGyanRatnakarPress			Bengali					India	1819	(1750 - 1850) Pre Industrialisation	Print		Bengali weekly newspaper	newspaper	Sambad Kaumudi, a Bengali weekly newspaper from Kolkat was published by Ram Mohan Roy during the first half of the 19th century. It was a well-known pro-Reform
Mirat-ul-Akhbar		https://en.wikipedia.org/wiki/Mirat-ul-Akhbar	Raja Rammohan Roy	Raja Rammohan Roy	Persian			Calcutta		India	1822	(1750 - 1850) Pre Industrialisation	Print		Weekly Journal	newspaper	Mir'ut'l-Akhbar was a Persian language journ founded and edited by Raja Ram Mohan Roy. was first published on April 12, 1822, and is published on a weekly basis on Fridays.
Bombay Samachar, now Mumbai Samachar		https://en.wikipedia.org/wiki/Bombay_Samachar	Founder - Fardunjee Marzban		Gujarati and English					India	1822	(1750 - 1850) Pre Industrialisation	Print			newspaper	The Bombay Samacha was first published on July 1st, 1822, and it is Asia's oldest continuou published newspaper, comprised of three sma quarto sheets. The Bombay Samachar, no
The Bombay Times, now The Times of India		https://www.firstversions.com/2016/11/the-times-of-india.html	Founder - Raobahadur Narayan Dinanath Velkar		English					India	1838	(1750 - 1850) Pre Industrialisation	Print			newspaper	The Bombay Times an Journal of Commerce was founded in 1838 to serve the British residents of western India. At the beginning, was published twice weekly, the paper
Six Acres and a Third/Chha Maana Atha Guntha		https://en.wikipedia.org/wiki/Six_Acres_and_a_Third	Fakir Mohan Senapati		Odia					India	19th century		Print		novel	book cover	Chha Maana Atha Gun or Six Acres and a Thir is an Odia language novel written by Fakir



After grouping the metadata elements, 9 metadata elements were identified to be very important for further structuring and discoverability of data.



Keys findings

Artifacts nomenclature is not online friendly.

The archives system was made when the key source of archives was in museums. These museums followed a coding process which made it easier for them to locate articles. The online world works on metadata and hence a change in identification and discoverability using metadata is critical.

Digitization of archives

Most of the artifacts are today in an offline format and digitization of these artifacts is important. The easiest way to do this is to get all the museums/people with the artifacts involved in this process of digization.

Ease of discoverability

There are 3-4 key websites that are currently in the digital archives space. The ease of finding out the right artifact through search remains a consistent challenge

Content categorization

There are issues currently with the content categorization too broad or too thin. A primary user research needs to be conducted to figure out the hierarchy of content categorization that will facilitate ease of discovery

User specific content

The focus on the websites in this domain is around having a generalized content. Users generally have a specific taste in this category and hence content needs to be refined to user needs. Most of the websites in similar categories like Pinterest work on this concept

User engagement

The content right is transactional where the user comes in only for specific needs. The website needs to have mechanisms to attract users to interact with the website in free time.

Primary Research

Primary research was conducted for structuring Information architecture. Open card sorting method was used to conduct the research

Card Sorting

Card sorting is a UX research method in which study participants group individual labels written on notecards according to the criterias that makes sense to them. It serves to create an information architecture that matches users expectations.

Open Card Sort was conducted in which users were free to whatever names they wanted to the groups they've created with the stack.

User Group

The user group selected was design students as they will be one of the core users for the interface. Initially, this card sorting was conducted with MDes students from IDC. To further verify if the insights are the same, this card sort was also conducted with students from different institutions.

Recruiting Users

Using the screener listed below, 5 users were recruited for conducting card sorting,

1. Design Student from different streams of design
2. Uses inventories as an inspiration while designing

Users which were recruited:

1. 24, Interaction Design, IDC (Mdes)
2. 25, Animation Design, IDC (Mdes)
3. 23, Communication Design, IDC (Mdes)
4. 21, IDC (Bdes)
5. 26, IIT Hyderabad (Mdes)

Card Sorting Protocol

There were 40 cards created from 5 design disciplines which were a combination of artifacts, design events, designers and history of design. The users were expected

to sort the cards into open categories as per their mental model.

The recruited users were met personally/called on zoom meetings for the primary research. They were made aware of the card sorting technique with a warm up task of sorting fruits and vegetables into categories. Post this the users were given 20 mins to complete the exercise.

Data Collected from the Users

Overall, these were the categories classified by the users.

Ideation

Designing Information Architecture

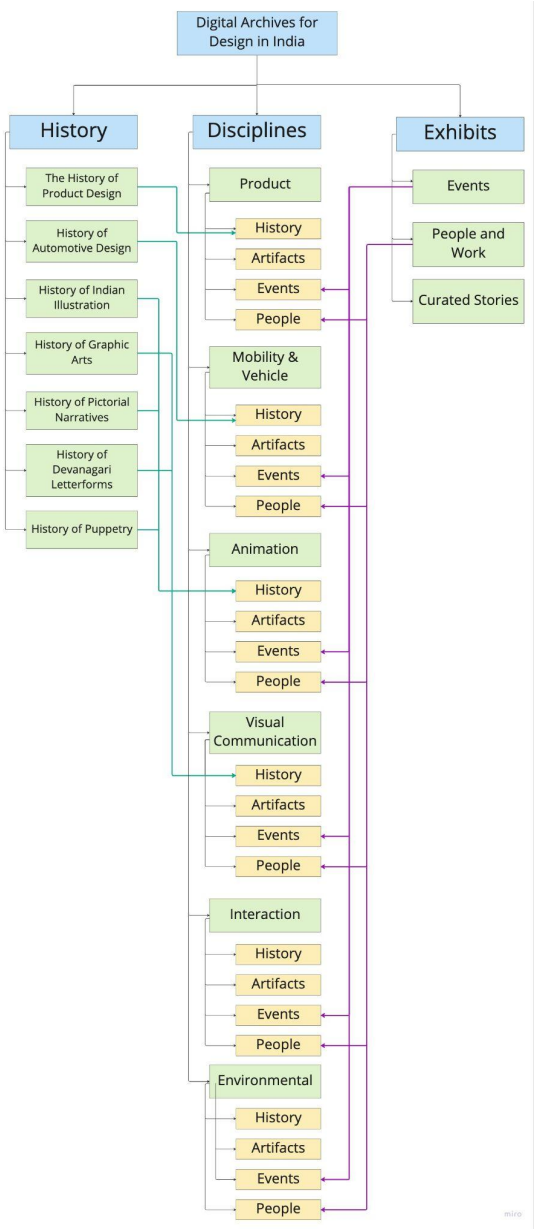
The user classified the cards into main three categories as per the conducted card sorting

1. History
2. Disciplines / Design Domains
3. Exhibits

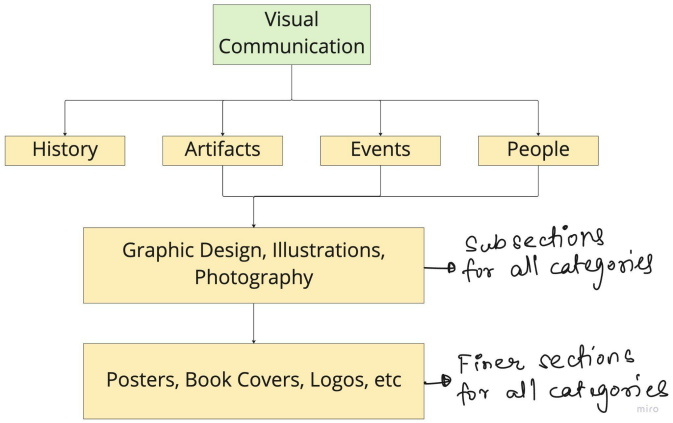
Further segregation inside the design domains as there is an overlap in case of the main categories which can also be incorporated in the sub categories through segregation.

Inside each domain there will be four sub categories

1. History
2. Artifact
3. Events
4. People



Further considering one domain and detailing out its information architecture



Visual communication will further have sub-categories like Graphic Design, Illustrations, Photography. These sub-categories would further lead to finer sections of artifacts.

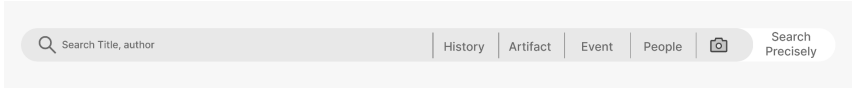
Ideating Design Features

Search Optimisation

Problem Identified: The overview search does not help to figure out the precise user requirement. The search is text based which makes it difficult of users who are looking for a specific paper with an image

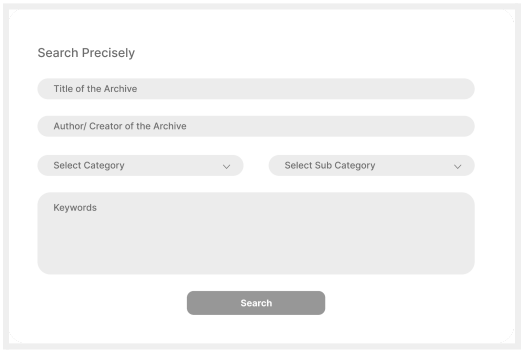
Proposal: Proposing different search engines as per requirement.

1. Home Page Search



The main search to include the major categories as per the information architecture. The users can use an overall search or filter the requisite category and search inside the category. An option to search precisely is also included to search specific authors' artifacts.

An image search option is provided for users to gather more information of a available image or figure out the artifacts that display that image



2. Internal Artifact Search

The results from the initial search can be filtered on the metadata elements. There is a search option to easily locate the precise artifacts.

User Contribution

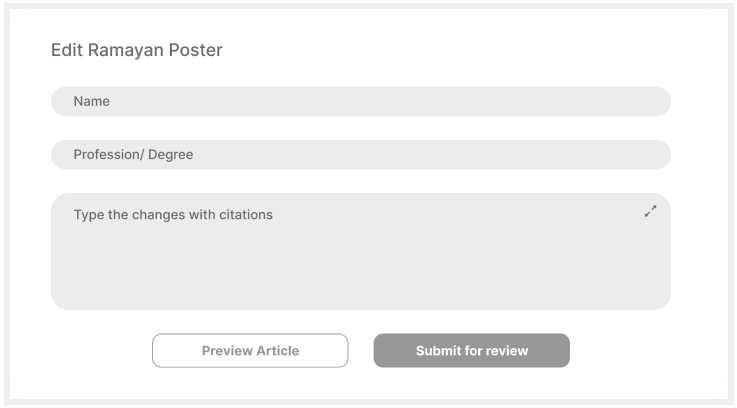
Problem Identified:

- It is difficult for the admins to generate a large database due to bandwidth constraints
- Users sometimes have knowledge about specific information but are not able to contribute

Proposal: Users can contribute to the data as per their expertise.

Users will have to login if they have to contribute to the database. This allows the admins to have the record of the user who is contributing. The contribution will be further verified by admins and then only updated in the database.

Whenever the user is suggesting a change in the existing database or creating an entire new database, they have to cite the required references.

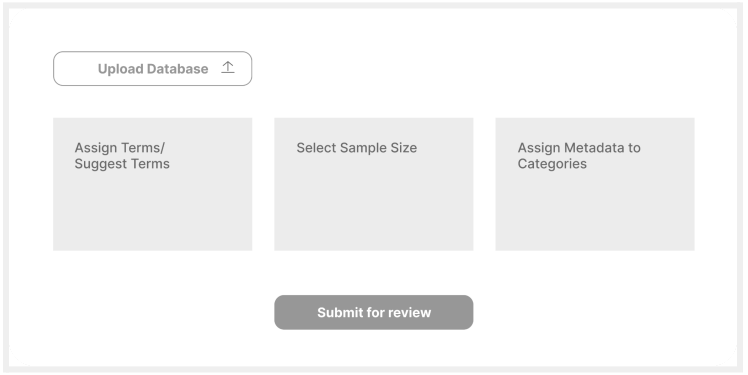


Data Import and Metadata Enrichment

Problem Identified:
The users forget to add metadata elements during upload

Proposal: Using AI to enrich metadata after importing datasets by the users.

This feature will automatically assign terms/ keywords to the database as per the metadata categories made. If it is a large data, the users can also select a specific sample size which can be considered for overall metadata assignment. These metadata elements would be verified by the user uploading the data and then only assigned to the database.



Curated Stories

Problem Identified:
There is not user interest to be active with these websites on a regular basis

Proposal: Special curated content will be uploaded on a weekly basis. This content will be in a stories/ collections

format which will provide information about a specific topic.

This would be featured on the homepage as per the interests of the users. And also in the specific category page.

Displaying Content as per User interest

Problem Identified:
The database of the artifacts is fairly large and hence displaying all the information to the users makes it cluttered

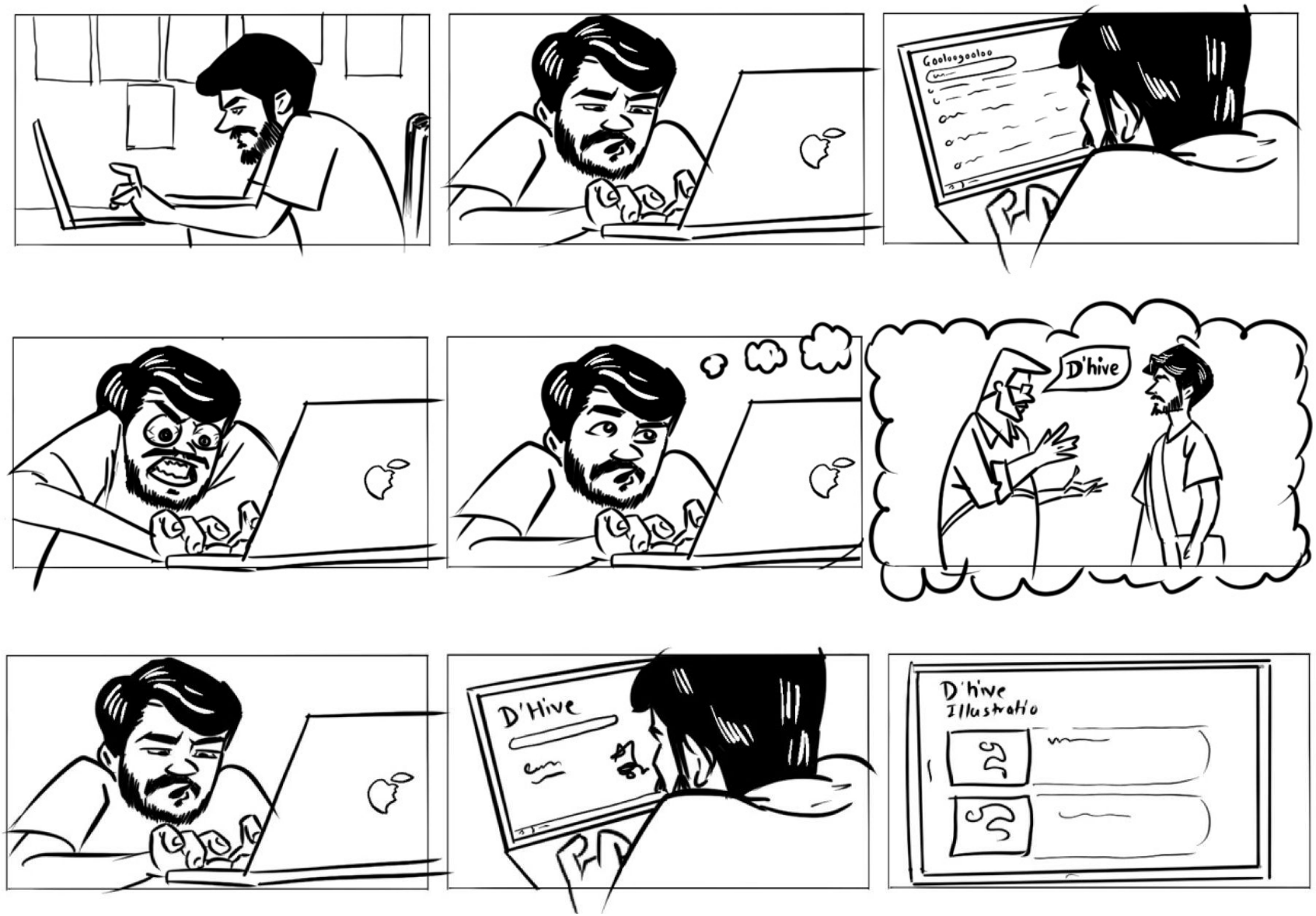
Proposal
After logging in, the website would ask users about their interests. The data will be further curated on their home screen as per their interests.

Incorporating Social Media

Problem Identified: It is difficult to share these artifacts within groups or tell people about interesting artifacts

Users can share the articles on social media. This will be a way to make people know about this portal. Also including features like liking the content, leading to popular content in the database.

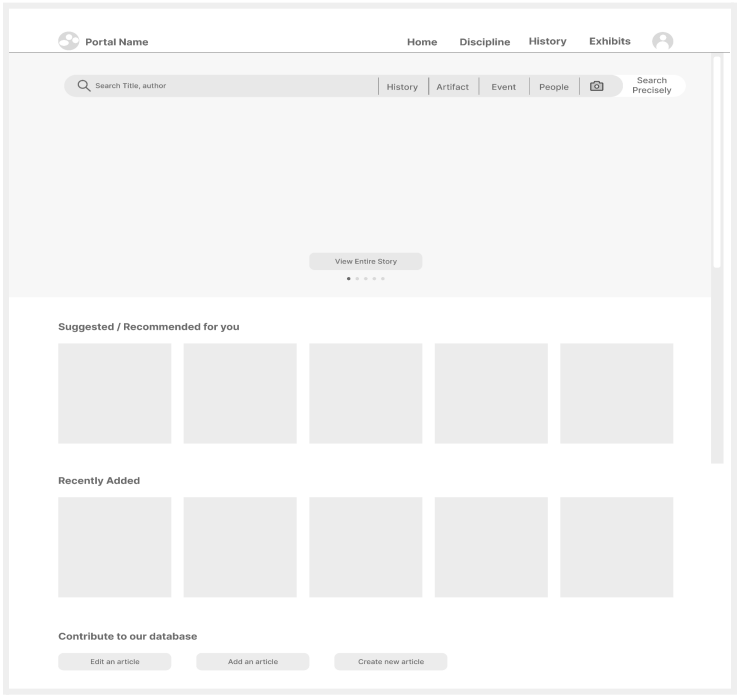
Scenario



Wireframing

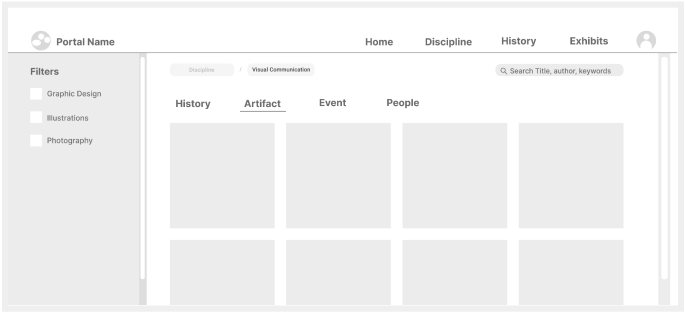
The user requirements were developed into wireframe to before developing the prototype

1. **HomePage**



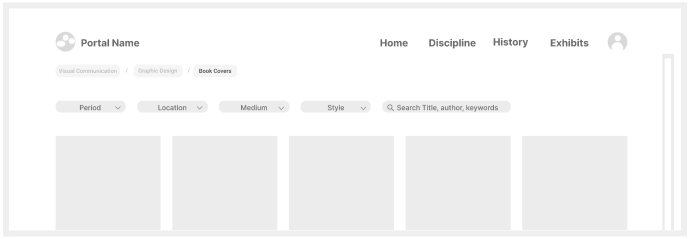
2. **Sub Category Page**

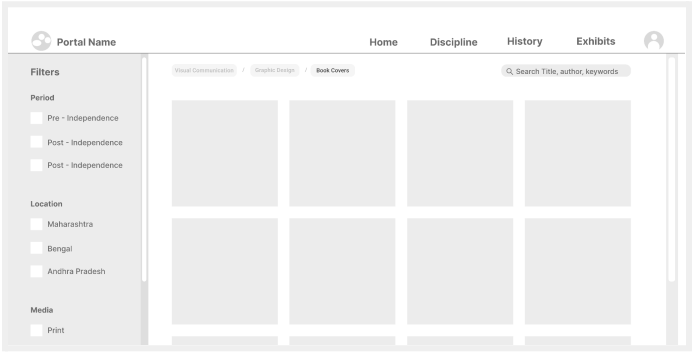
This will have two types of filters. One to toggle around and then further to filter sub categories.



3. **Finer Category Page**

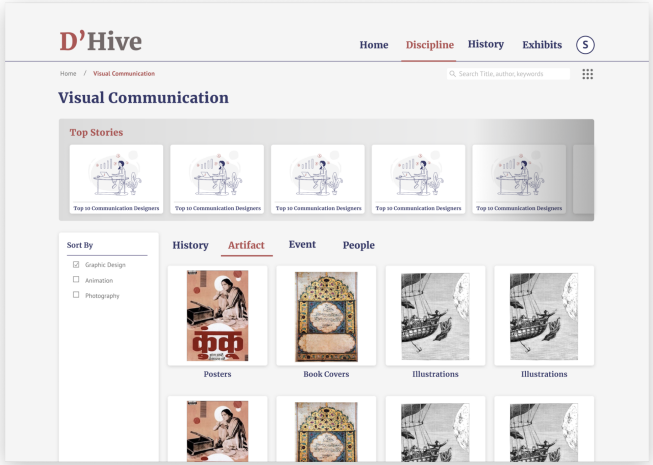
These are the two filtering options for the fine categories like book covers.

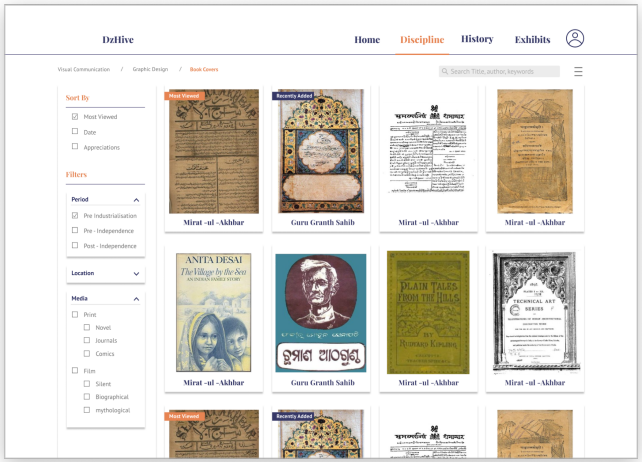


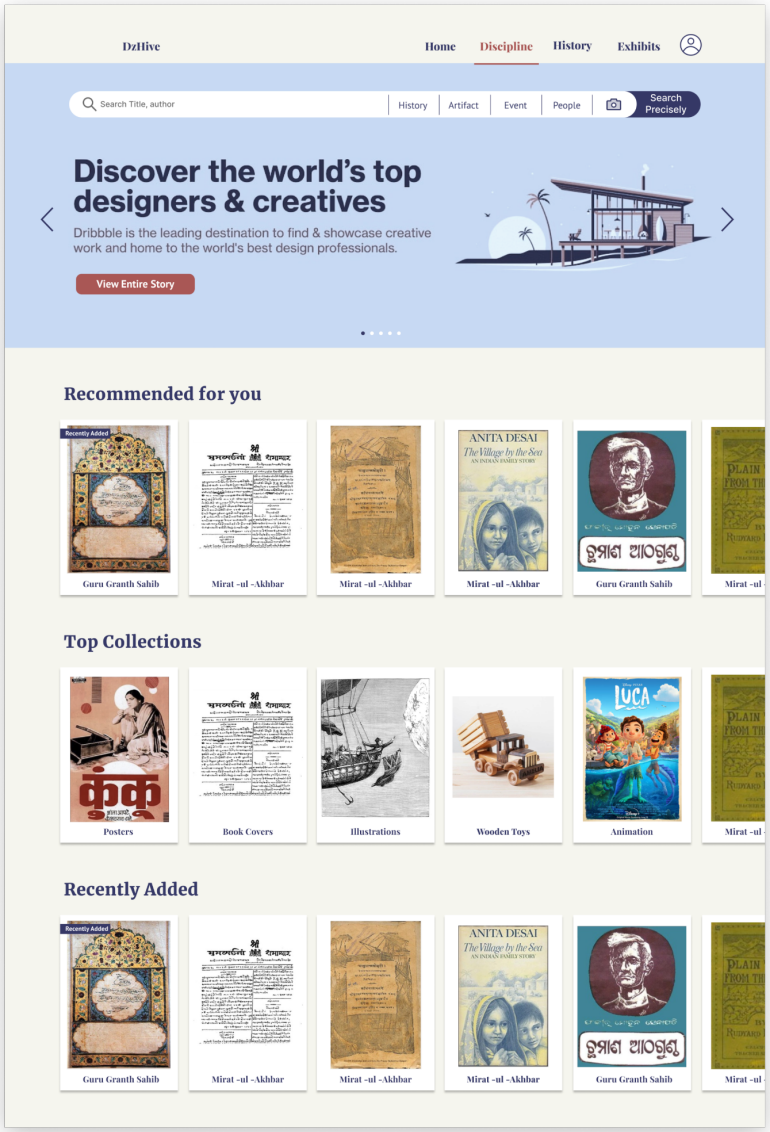


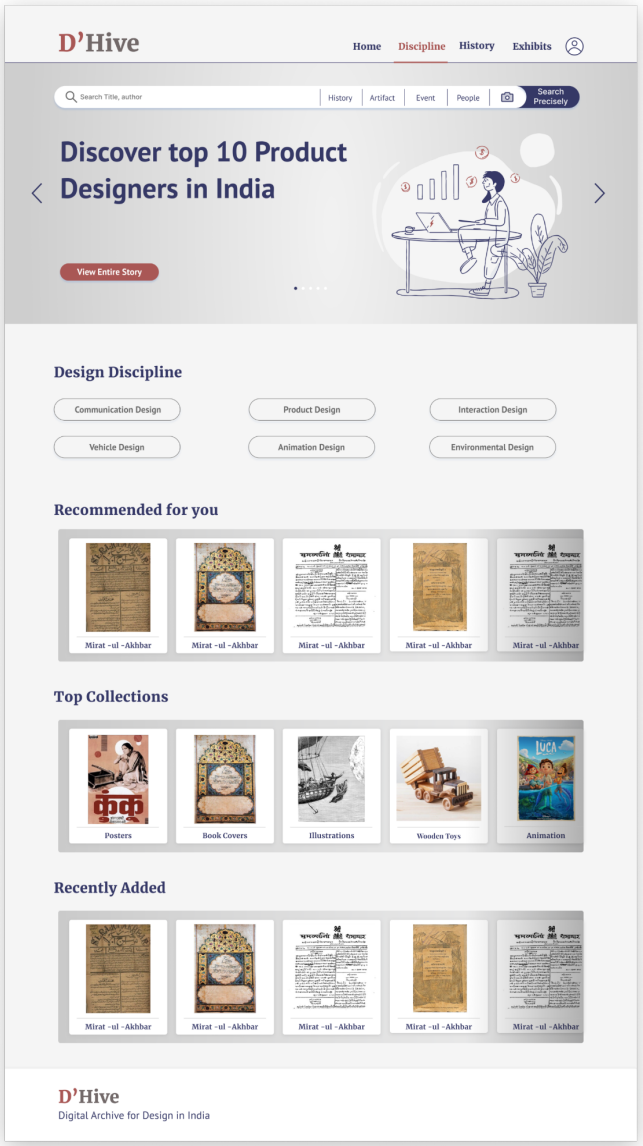
High Fidelity Prototype

Iterations



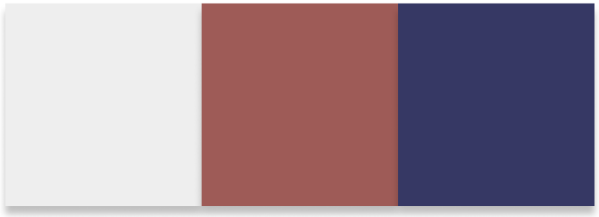



DzHive
Home
Discipline
History
Exhibits
Search Title, author
History
Artifact
Event
People
Search Precisely
Discover the world's top designers & creatives
Dribbble is the leading destination to find & showcase creative work and home to the world's best design professionals.
View Entire Story
Recommended for you
Guru Granth Sahib
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Guru Granth Sahib
Top Collections
Posters
Book Covers
Illustrations
Wooden Toys
Animation
Recently Added
Guru Granth Sahib
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Guru Granth Sahib


D'Hive
Home
Discipline
History
Exhibits
Search Title, author
History
Artifact
Event
People
Search Precisely
Discover top 10 Product Designers in India
View Entire Story
Design Discipline
Communication Design
Product Design
Interaction Design
Vehicle Design
Animation Design
Environmental Design
Recommended for you
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Top Collections
Posters
Book Covers
Illustrations
Wooden Toys
Animation
Recently Added
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Mirat -ul -Akhbar
Mirat -ul -Akhbar
D'Hive
Digital Archive for Design in India

Final High Fidelity Design

Color Palette



1. Following grey color as the background to keep focus on the design artifacts
2. Adding blue to build trust between users
3. Red is used to complement them and highlight details

Logo

D'Hive

Digital Archive for Design in India

Since this is a collaborative portal, hence taking inspiration from bees and their beehive.

Incorporating Design Elements

Design elements at the back so that it makes the portal look different from any regular site.

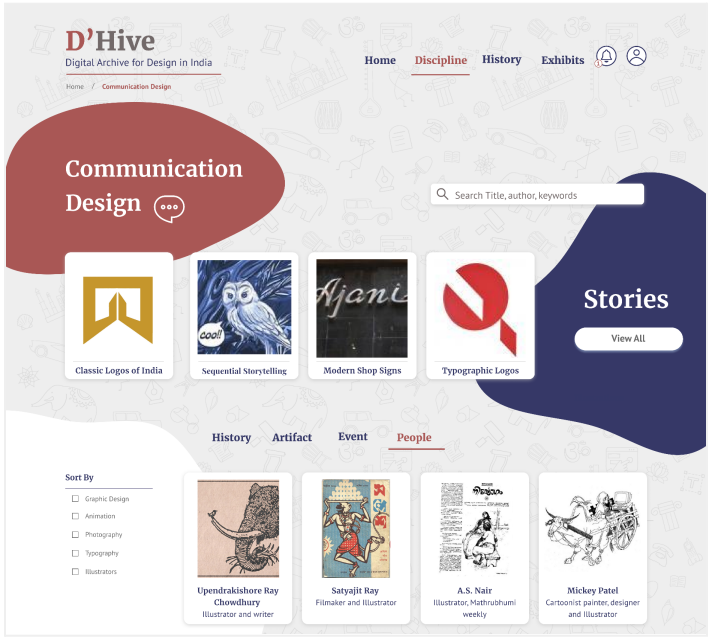
Home page

D'Hive home page consists of Specific designed search, Top Stories, browsing as per design disciplines, recommended artifacts as per user interests. D'Hive home page has a search designed through which a user can search in specific categories of History, Artifact, People and Events. When the user searches for Graphic Design in the history category. He can easily find History of Indian Illustration. This category can be accessed through the overall History Section as well as the specific

section on Communication Design History Sub - Category.

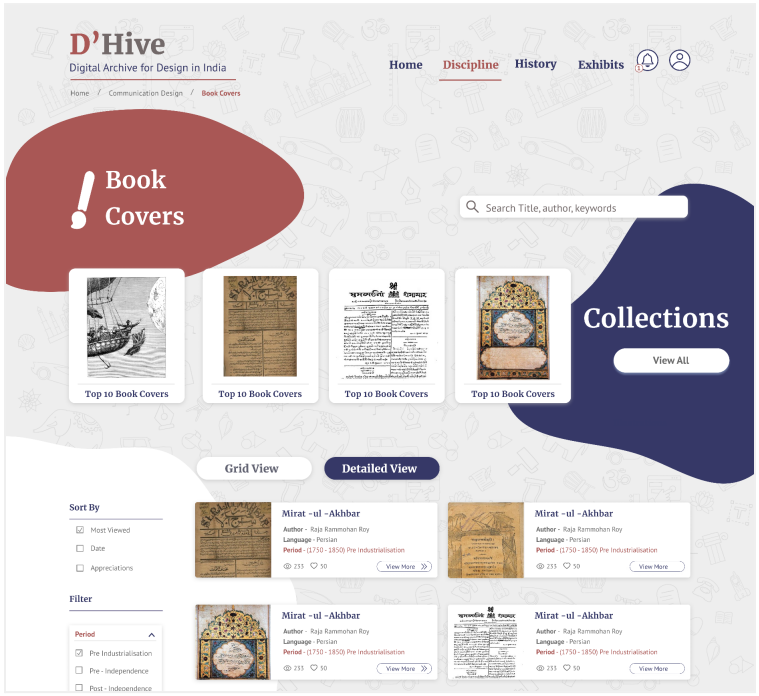
Discipline Page

Users can explore the artifacts discipline wise. If the user enters the Communication Design discipline, he can toggle between the sub categories which will have all the content about communication design. In the artifact section, users can sort the datasets as per categories like graphic design, Photography, etc. Sorting the data for graphic design users can see datasets of book covers, posters, Illustrations, etc.



Specific category page

Going inside the book cover section, the user can still look into and filter the datasets with specific metadata elements. With D'Hive, the user can apply multiple filters together and find their exact requirement. All these internal pages will have search engines, but that would focus more on the keywords and title or author names of the specific page and not be the overall search. They can be viewed in both detail as well as Grid view.

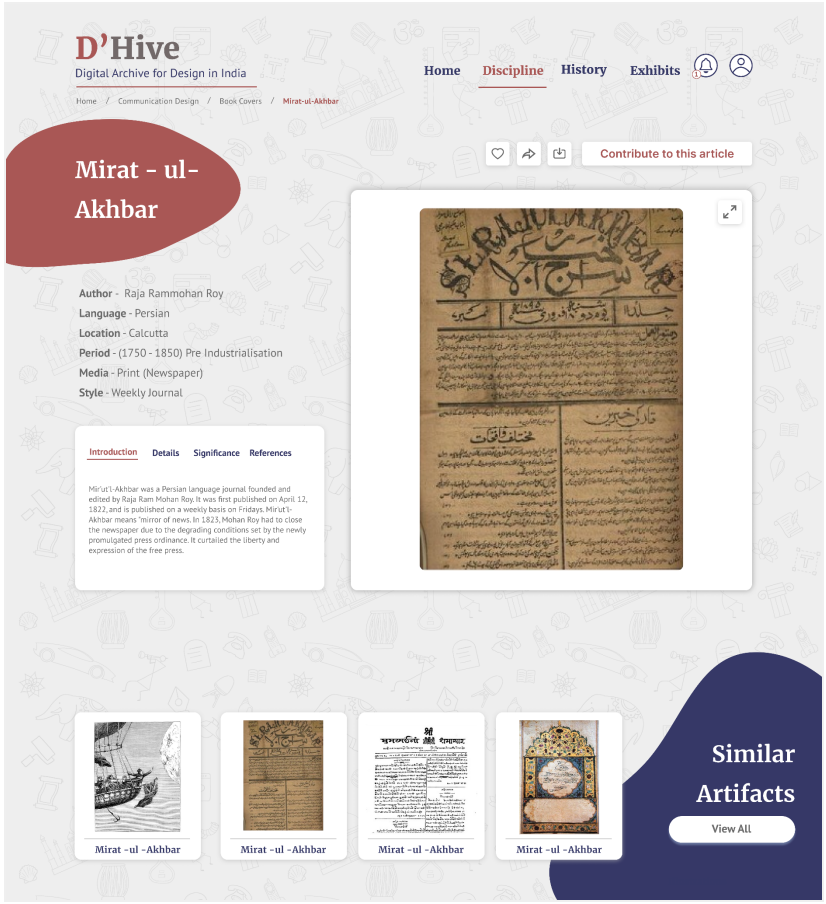


Collections page

Users can see collections of book covers. There is also special curated content of similar Book Covers. There will be some similarity among them like time period, author, etc.

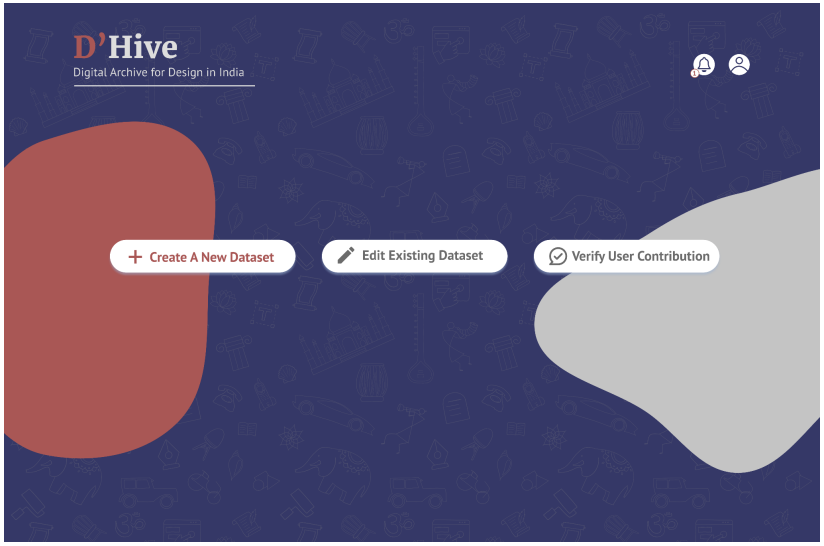
Specific archive page

This page gives information about the artifact. The information is clustered into specific categories for easy understanding. After going through the detailed information about a specific archive, if the user feels that he can contribute something to the article which will help this database grow. This feature is also incorporated in D'Hive. Users can contribute to the database with proper citations and send it for further verification to the admins who handle and add to the database.



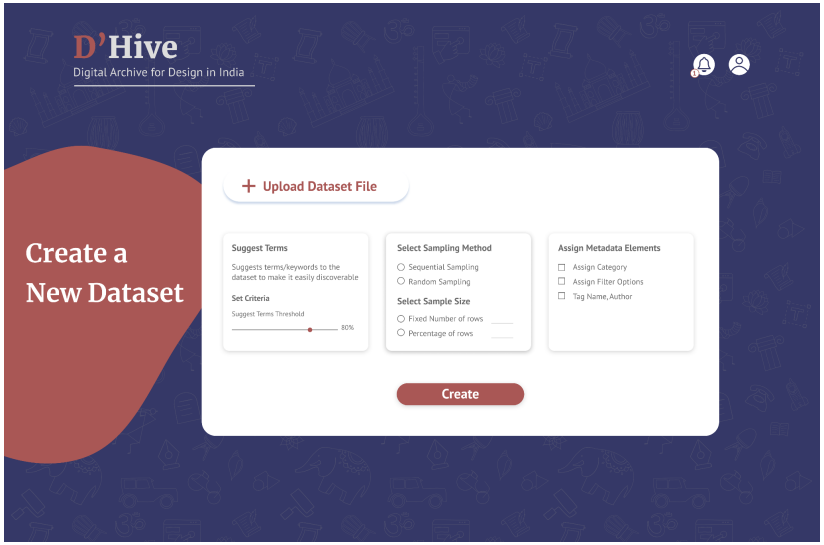
Admin Side pages

Admin performs three major actions which are Create a New Dataset, Edit Existing Dataset and Verify user contribution. Whenever an admin has to create a new dataset, firstly he has to upload a file of the dataset and set the parameters of the metadata elements which will be suggested. Suggest terms will be suggesting keywords for the datasets. In case of a larger dataset with similar artifacts, sampling size will come into picture. Directly assigning metadata elements to the filtering options.

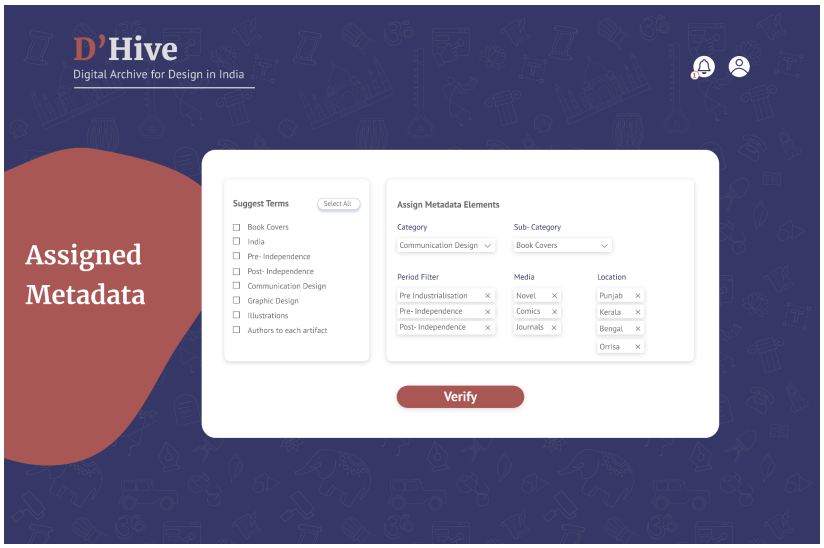


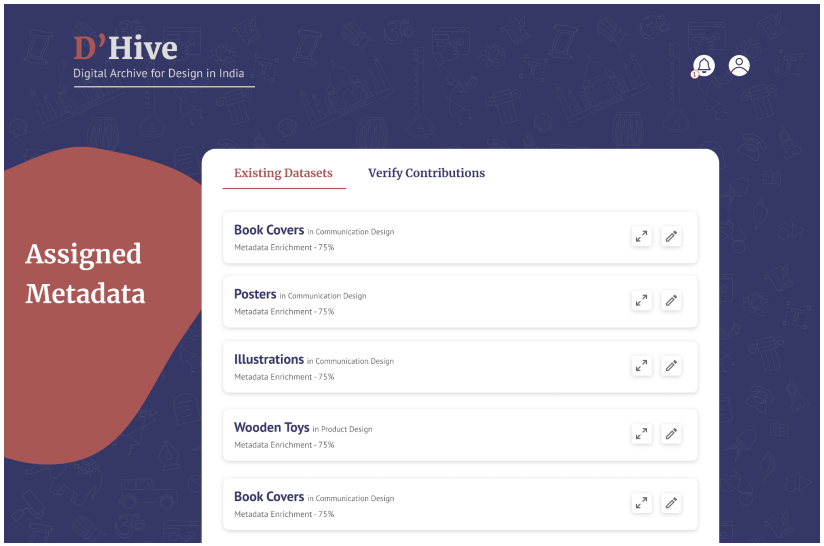
This data will be once manually verified by the admin and then will be live on the D'Hive interface.

The admin can view all the artifacts as a dataset and edit to change any data if required.



The contributions done by the users will be verified by the Admin. This will be visible in the verify user contribution section. Admin will go through the contribution suggested by the user. If it looks valid and has proper citation backing then it is verified and goes live on D'Hive.





[Prototype Video Link]

Usability Evaluation

Scope:

User Evaluation will focus on discoverability and data retrieval, metadata enrichment and users contribution.

User Profile:

The user group considered would be design students from varied design disciplines. These students should have some interest in research

Device:

Available on Desktop, laptop

Testing device:

Laptop

Using Usability Goal Tool to identify the most critical parameters to be observed in Moderated User Testing.

Parameter	Weightage	UT Evaluation
Learnability		
Findability: options / data / information should be visible / easy to find	5	Users will be given a task and tell them to use the product and look for information
Product should be internally consistent	2	Give the users to perform multiple tasks and check the consitency
Speed of use		
User should be able to navigate quickly and easily	5	Give the users to perform multiple tasks, and check if they can navigate through the product quickly
Product should not load user's memory / product should not put cognitive load on user	4	None
Product should be personalised for the user automatically	3	None
Ease of use		
Interface should clearly communicate the conceptual model	3	None
Intuitiveness: User should be able to predict the next step / task	4	None
Ease of Communication		
Information architecture: Information should be well aggregated, categorised, presented	5	During a think-aloud test, probe for confusions, particularly if users are lost or if users look for data in the wrong place
Error-free use		
Product should help user recover from errors / help users troubleshoot problems	5	During the test, count the percentage of users who are able to recover from errors, and percentage of errors they can recover from

Designing the task

1. Objective Based tasks to understand user's interaction with the Portal
2. Creation of a Dummy Page where the user is redirected to on selecting an incorrect step

Task	Objective	Success Criteria	Time	Attempts
To access the Book Cover (1) of Mirat-Ul-Akhbar	Evaluation of Navigation in the Product via multiple means	Successfully reaching either one of these pages: • Individual Artifact Page of the Book Cover • Viewing in Collections Page	21 sec	2
To access the History of Indian Illustration (2) of Communication Design	Evaluating if users interact with Filter at an earlier or later stage	Successful Navigation to the History Page of Communication Design	12 sec	1
To access the Story about Logos (3)	Evaluate if Users interact with the 'Story Section'	Successful Navigation Logo Page through Story Section	10 sec	1

Task -1: To access the Book Cover of Mirat-ul-Akhbar

User	Time	Attempts	Observation	Insight
MDes Student	24 sec	2	Recommended Section	• It took users 2 attempts in this task as they had no background knowledge about the interface • Though they were told not to use search, it was intuitive to first search • Images of collections should showcase that it's a collection
MDes Student	17 sec, 35 sec	2	Recommended , CD Section	
BDes Student	25 sec	2	Recommended Section	
BDes Student	20 sec	2	Recommended Section	
MDes Student	22 sec	1	Recommended Section	

Task -2: To access the History of Indian Illustration Page of Communication Design

User	Time	Attempts	Observation	Insight
MDes Student	6 sec	1	CD section , History	• Could easily relate this task more towards History inside communication design as they have understood the nesting in that way • Being a designer had idea that illustration will be inside CD section • They at times tired to connect with collections • Top Main Menu is not that intuitive
MDes Student	10 sec	1	CD section, History	
BDes Student	20sec	2	Main History Section	
BDes Student	8 sec	2	CD section, History	
MDes Student	17sec	1	Main History Section	

Task -3: To access the Story about Logos

User	Time	Attempts	Observation	Insight
MDes Student	5 sec, 19 sec	1	Through cover image, CD section	• Having used the interface once, familarity of the interface helped • They found this easily discoverable • Being a designer had idea that logo will be inside CD section • No one used the top discipline section
MDes Student	9 sec	1	CD section	
BDes Student	10 sec, 20 sec	1	Through cover image, CD section	
BDes Student	6 sec, 25 sec	1	Through cover image, CD section	
MDes Student	15 sec	1	CD section	

Key Insights from Usability Evaluation

1. The main menu having history and events can be considered and stacked inside the disciplines it self
2. Main Menu can just consist of disciplines which would eventually lead to all data
3. On the home screen, the search through the disciplines should be prioritized more than stories
4. Considering designers, they can easily relate to these categories. It would be difficult for non designers to relate to it
5. Familiarity of the interface is impacting the accuracy
6. It is very intuitive to search in the first place for the user

Future Steps

1. Designing an interface for mobile device for D'Hive
2. Deploying this product and making it available for the users
3. Compiling and adding more datasets to D'Hive database
4. Making iterations as per the insights from usability evaluation

Learnings and Reflections

1. This project helped me in understanding the immense importance of design archives especially among designers.
2. I learned a lot about structuring and organizing data.
3. My knowledge about metadata increased.
4. I learnt about conducting usability testing.
5. I realized in such an infrastructure based project it is important to define a process/ structuring that can be universally used.

References

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