

GRADUATION PROJECT

VISUAL COMMUNICATION (BACHELOR OF DESIGN)

Vol. 1 of 1

Project Title:

**Typographic conservation of Modi script
and its adaptation in Devanagari**

Name:

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Project Mentor:

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2025



The Graduation Project Evaluation Jury recommends **MUKTA GAGE** from **Visual Communication** for the Bachelor’s Graduation Degree of **Unitedworld Institute of Design, Karnavati University, Gandhinagar, India** herewith, for the project titled **Typographic conservation of Modi script and its adaptation in Devanagari**. The project is complete in every aspect in accordance to the guidelines set by the institution.

Chairperson

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Members

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*Subsequent remarks regarding fulfilling the requirements

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Written and designed by **Mukta Gage**, under the guidance of **Mahendra Patel**.

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Acknowledgements

I wish to show deep gratitude to the Divine power that has provided everything that enriches my life. Because of their constant support, my parents have created the person I am today and I am immensely thankful for their love.

Through my educational experience, I garnered precious guidance from Mahendra Patel Sir, Sambit K. Pradhan Sir along with other professors and department heads with their notable backgrounds. My friends have blessed me with four years during which I accumulated treasured memories together with delightful moments. Om Bhava, in particular, I want to acknowledge because your endless support, words and actions, became an inspiration and anchor for me. My mentors alongside department heads alongside all of you have enriched my life and for that, I am truly grateful.

About UID

UID operates as a Karnavati University constituent and has gained recognition through its advanced design educational methods, which unite experiential learning with global exposure. The institute's educational environment allows students to explore creative interdisciplinary work and develop their boundaries in innovative ways. The designed curriculum teaches students to use critical thinking with a problem-solving approach while fostering teamwork to address human-focused real-life challenges. Being enrolled at UID provides professional skills but also helps students develop into future-oriented members who can make meaningful social contributions.



About Me

Through empathy, design reaches its exceptional level of quality. The fundamental principle of my design philosophy emphasizes human experiences because I deeply study user behaviors. My commitment lies in developing designs that build authentic connections through understanding user needs, detecting their emotions, and establishing the original cause of their communication. My passion leads me to create sustainable solutions that connect emotionally with users while maintaining complete user-centeredness. User experience remains the core principle that guides my design approach because it generates the most effective results by delivering positive experiences to users.



About Mahendra Patel

As a design professional Mahendra Patel earned great respect through his four-decade professional career. He worked 39 years at the National Institute of Design (NID) in Ahmedabad before retiring as Principal Designer in 2003. Patel's education revolves around fine arts and graphic design because he studied Painting at the Faculty of Fine Arts M. S. University Baroda (1960-64) followed by Graphic Design at NID Ahmedabad (1964-67). The School of Design Basel awarded him advanced training in Graphic Design and Typography in 1968 while he dedicated 1971 to type design work at Atelier Frutiger alongside Adrian Frutiger in Paris.

The Type Design Development projects developed by Patel amounted to extensive work on Devanagari, Gujarati, Bengali, and Tamil scripts and expanded to include Oriya Malayalam Gurumukhi Kannada, and Telugu scripts. During his career, Patel devoted himself to teaching design by leading workshops and delivering teaching sessions at important international educational facilities throughout India and worldwide. Presently he holds the role of Adjunct Professor at the United World Institute of Design (UID) within Karnavati University's Gandhinagar campus.



Preface

Typography can act as a strong instrument for heritage preservation along with cultural celebration. During their rule from 1260 to 1309, the Yadava dynasty created the Modi script through which the written presentation of Marathi cultural and historical documents continues to be relevant today. After its administrative origins, the writing system evolved into Modi script that established its own distinctive character to match the linguistic evolution and artistic elements of that time. British colonial administration caused Modi script to face decline when Devanagari acquired prominence until the point where its use vanished permanently.

The objective behind this work involves preserving the core values of Modi script and establishing its relevance with adaptations in Devanagari's typographic systems. The research establishes a connection between the preservation of historical values while building functions that allow modern digital users to utilize Modi script. This research contribution to typographic preservation includes documenting Modi script while digitizing its writing system and presenting an adaptation design system.

A new typeface emerged from developmental design phases uniting past traditions for a contemporary Modi script meeting historical needs along with typography criteria of the current era. Strategies for upholding preservation requirements while achieving innovation despite reading problems in digital interfaces and issues about cultural suitability are also mentioned. This project works to restore the Modi script through its initiative while establishing a template to protect endangered language systems.

Timeline

Phase 1
The design process for developing Modi script and Devanagari typeface began with research and analysis, focusing on the historical and aesthetic aspects of both scripts.

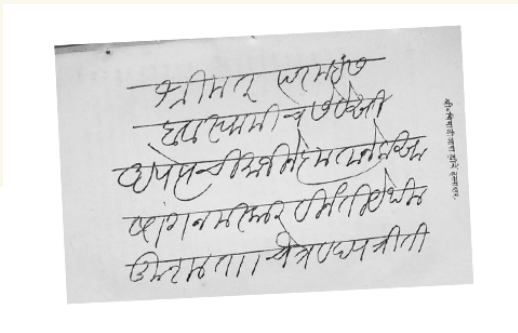
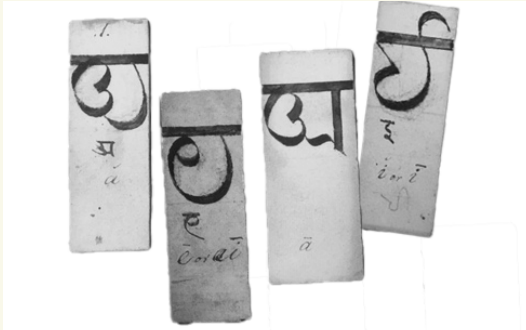
Phase 2
Concept development involved creating sketches and visual references to explore potential adaptations.

Phase 3
Prototyping saw the creation of digital typefaces using specialized software.

Phase 4
Iteration and refinement involved gathering feedback and making necessary adjustments to enhance readability and aesthetic harmony. Finally, finalization included testing the typeface across various mediums and documenting the process.

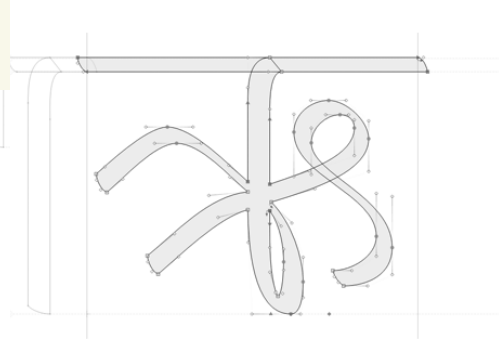
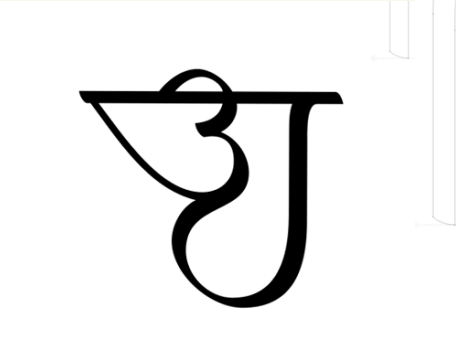
Research

- Study of Scripts
- Socio-political landscape
- Evolution of Script
- Characteristic Study
- Anatomy Study



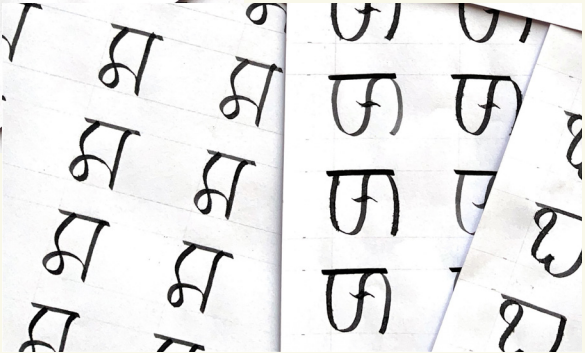
Modi Typeface Creation

- Anatomy
- Glyph Set
- Designing in FontLab
- Kerning
- Spacing
- Family



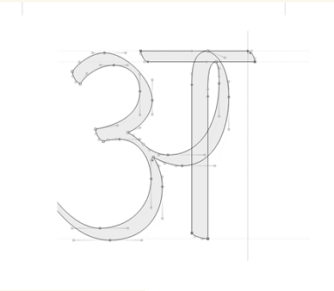
- Tool Exploration
- Orthography Practise
- User Assesment

Ideation



- Anatomy
- Glyph Set
- Designing in FontLab
- Kerning
- Spacing
- Family

Devanagari Typeface Creation



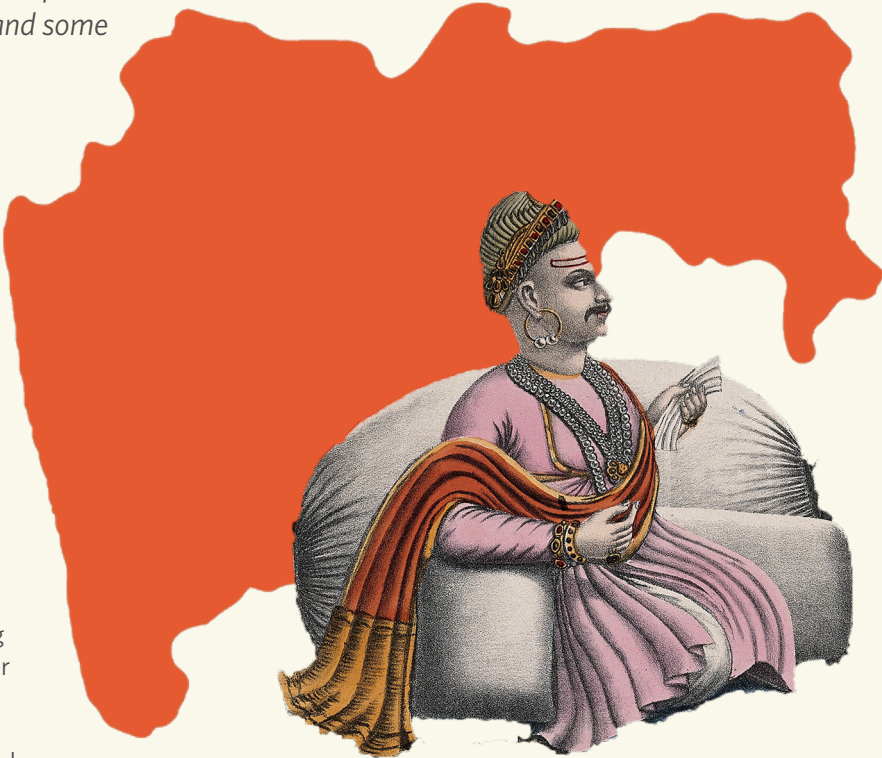
Introduction

- Introduction
- Evolution of Modi
- Decline of Modi
- Revival of Modi
- Varnamala
- Form wise Categorization
- Characteristic Study
- Comparative Study
- Design Brief

Modi lipi

Modi script is a Brahmi based script used primarily for writing Marathi and some other languages like Kannada, and Konkani.

Traditional Devanagari was found to be excessively time-consuming since each character required over 3 to 5 strokes and the lifting of the hand each time for each stroke. Modi got round this obstacle by 'bending' the letters, improving speed writing.



Origin	Modi was developed by Hamadpant Pandit (during reign of Yadava dynasty (1260-1309).
Creation	The Modi script was invented as a cursive 'shorthand' or speed writing to note down royal edicts.
Influence	Inspired by the cursive Sinhalese script- which involved less lifting of the hand while writing.
Etymology	Comes from the Marathi word "modane," meaning "to bend."
Purpose	To streamline the writing process, practical for various purposes, especially in administration and official royal contexts.

Evolution of Modi

13th-14th Century

YADHAVKALIN MODI

Yadav dynasty is credited with popularizing the use of the Modi script

During this period, Modi became the official script for administrative purposes, record keeping, tax collection and land grants.

17th Century

SHIVKALIN MODI

Golden age of the Modi script

Perso-Arabic influences, refined letterforms diverse variations in this era

19th-20th Century

ANGLAKALIN MODI

Decline of Modi script

Latin script co-existed alongside Modi. Traditional writing tools transitioned to mechanical calligraphy pens which modified the way Modi was written.

16th Century

BAHAMANIKALIN MODI

The Bahamani period saw further development and refinement of the Modi script

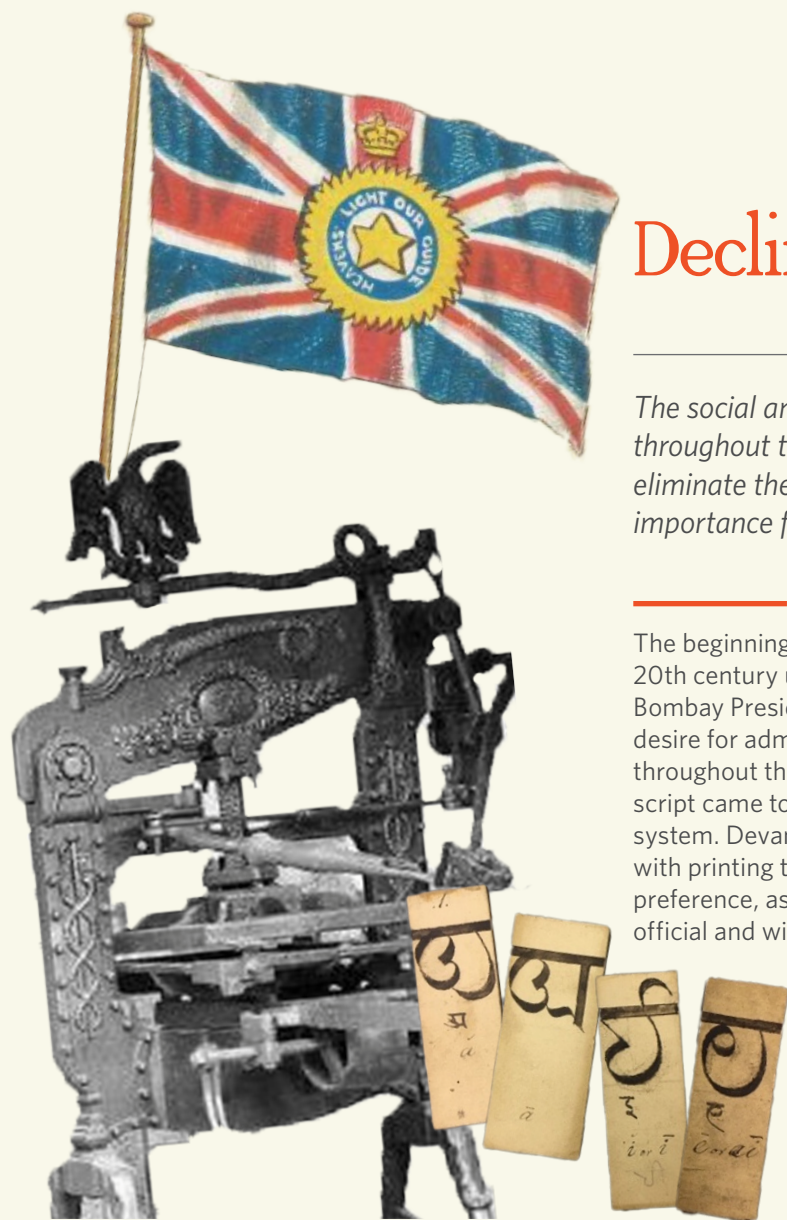
Evident that the script was heavily influenced by Perso-Arabic cursive styles. Newer letterform variations.

18th Century

PESHWEKALIN MODI

Gave rise to 3 styles
-Mahadajipanti
-Biwalkari
-Ranadi

Evolved into a more structured and pleasing writing system. Evolution was marked by a distinct refining of its letterforms, with curves becoming more elongated.



Decline of Modi

The social and political changes in India throughout the 20th century threatened to eliminate the Modi script which held significant importance for Marathi cultural heritage.

The beginning of its downfall is marked by early 20th century under the British Government of the Bombay Presidency. The British had been driven by a desire for administrative convenience and uniformity throughout this region, and the Devanagari (Balbodh) script came to be the first choice as the main writing system. Devanagari's more positive integration with printing technology further supported this preference, as Modi slowly replaced Devanagari from official and widespread use.

Further, the ending of the British colonial era made use of the Modi script more and more, by making it more and more marginalizing the Modi script through actively promoting the use of English as the language in administration as well as education. The Modi script itself was not standardized, facilitating only a limited use – an explanation that even further compounds the external pressure. The educational area underwent a drastic transform where with the growing Devanagari (Balbodh) in the schools and institutions, it began drop greatly in the teaching and learning of Modi.

Despite these formidable challenges, the Modi script is being revived and preserved in a renewed cultural awareness, a fact that makes certain that the legacy of the Modi script will survive.

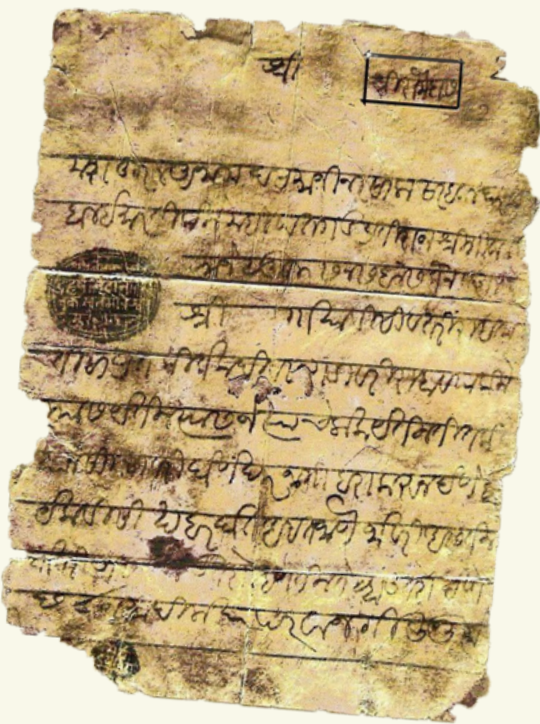
Revival of Modi

The Maratha civilization had built this unique written form which now stands as a vital link in the history of this country. Letting it fade would be a senseless loss of a precious part of India's linguistic and artistic patrimony, reducing the rich colorfulness of the country's cultural kaleidoscope. Consequently, it is important to revive and to diligently conserve it.

The Modi's script lives to prove that India's cultural history and heritage has had significant impact and value that goes way beyond mere linguistic expression.

A crucial key to unlocking India's past was the Modi script. This script is meticulously written with a wealth of historical documents, ranging, from administrative records to literary masterpiece to sacred religious texts. Consequently, Modi's preservation and revival constitute an imperative for scholars and researchers, who wish to explore and explore the indispensable historical resources so that it may prove insightful to delve into the previous eras.

Resurgent Modi script plays a key role in protecting India's rich linguistic diversity. This specific writing system endures so long as we're writing it; we are helping to preserve linguistic multiplicity within the nation, which is to say, helping to hold off and celebrate a special and irreplaceable constituent of our cultural geography.



Varnamala

Vowels

ਅ ਘ ਈ ਊ ਓ ਔ ਏ ਐ ਅੰ ਅਃ

Consonants

ਸ਼ ਚ ਗ ਘ ਙ ਤ ਥ ਦ ਢ ਢ
ਰ ਰ ਙ ਙ ਙ ਤ ਥ ਦ ਢ ਢ
ਘ ਘ ਘ ਘ ਘ ਘ ਘ ਘ ਘ
ਘ ਘ ਘ ਘ ਘ ਘ ਘ ਘ ਘ
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Form wise categorization

Recurring form

Family

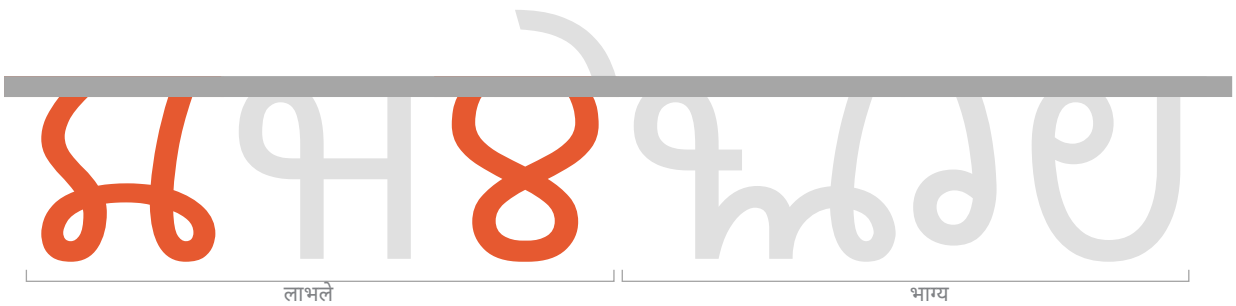
ੳ ਅ ਓ ਔ ਅੰ ਅਃ
ੲ ਘ ਏ ਐ
ੳ ਈ ਚ ਘ ਙ ਥ ਦ ਢ
ੲ ਸ਼ ਘ ਘ ਘ
ੲ ਗ ਙ ਤ ਥ ਘ

Recurring form

Family

ੳ ਙ ਘ ਙ ਙ
ੲ ਰ ਰ ਰ ਰ
ੳ ਘ ਘ ਘ
ੲ ਘ ਘ
ੲ ਘ ਘ

Charateristics of Modi



01 The primary horizontal axis for all of the letterforms is a single shiroekha line. The shiroekha stroke is the first, and subsequent letter components are written below it.

02 Modi script written in the hand varies significantly from writer to writer. They range in ways involving spacing, with some writers leaving bigger spacings between words and others leaving smaller ones.

03 Certain vowels and consonants, when combined with vowel conjuncts in Modi script, do not simply receive diacritical marks (matras). Instead, their entire letterform undergoes a significant transformation. (Here observe the case of ला,ले in the word लाभले)

04 The glyphs for short (hrasva) and long (dirgha) 'ekar' (ँ, ी) and 'ukar' (ँ, ू) are identical, as well as thier diacritical marks.



Here observe the case of शि,जी Both recieve the same diacritical mark despite their differences.

05 While the use of the anusvara diacritic was sometimes omitted in practice for the sake of writing speed, its application in the Modi script generally follows the conventions established in Devanagari. Same follows for the visargah diacritic mark.

06 The script uses basic letterforms yet some letters distinguish themselves only through small graphical elements.



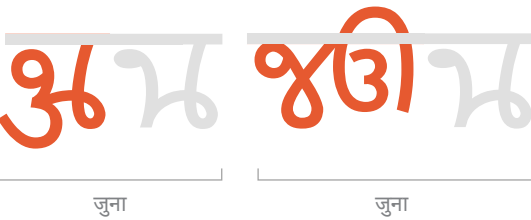
(Here observe the case of ब, द, ह)

07 The method Devanagari uses for combining consonants with consonants in its script also appears in Modi but several consonant shapes like 'sa' (स) and 'ra' (र) completely change in both Devanagari and Modi when integrated with vowels or consonants.



(Here observe the case of स, र)

08 Certain letters and conjunct forms in the Modi script show allographic variation. An "allograph" refers to a variant form of a a written symbol. Each written character maintains its original meaning through various possible writing styles that represent it.



09 There are context dependent allophonic variation in the letter 'उ' (ra).
a. When a consonant with a kana precedes the letter उ changes to ु, and is directly added to the kana.



b. When a consonant without a kana precedes the letter उ changes to ृ.



c. Following the above, matra is added to the allographic variation.

d. When a consonant with a kana forms a conjunct with ण (उ), उ (र) is added to the matra itself.



Modi's Unique System

Although based on the same underlying principles as Devanagari, Modi script contains substantial differences in terms of its appearance and written conventions.

In specific contexts, actual differences in the work of character are observable, and cannot be neglected. Unlike Devanagari writers, Modi orthography has some different consonant conjuncts and vowel-consonant combination rules. The distinctions are made on account of fundamental elements that impact on correct interpretation of Modi texts, and so require special knowledge.

Modi script is unique because it has combination of letters and flowing writing style, which makes it different from other scripts.



Comparative Study

The historical scripts of Modi orthography need full examination to understand its impact properly.

A detailed assessment investigates Modi among four leading scripts during that time period including Devanagari, Mahajani, Landa, and Kaithi.

Devanagari operates as a primary analysis point for Sanskrit and multiple Indo-Aryan languages and stands out as an essential script which affects various regional writing methods.

Script Characteristics:
-An abugida script with clear, and segmented characters.
-Features a shirorekha over arrangement of vowels and consonants.
-Serves as a primary script for literary, religious, and academic texts.

Mahajani, acted as primary recording script throughout western and northern regions of India to handle commercial documentation.

Script Characteristics:
-A cursive script , condensed letterforms.
-Primarily used for the documentation of mercantile transactions.
-Has regional variations.

Landa used as a short and practical mercantile script.

Script Characteristics:
-Used for commercial accounting, for ledgers, and trade-related documents.
-Have a high degree of variation and lacks a standardized form.

Kaithi, a script used for administrative and legal documents in northern and eastern India, demonstrates the regional diversification of Indic scripts.

Script Characteristics:
-Features simplified letterforms and flowing ligatures.
-Employed for writing languages like Bhojpuri, Magahi, and Awadhi.
-Used for administrative documents.

An investigation of Modi script elements reveals how adapted characteristics distinguish it from both Devanagari and Mahajani and Landa and Kaithi scripts. The Modi script resembles Devanagari through its structure but it adds cursive writing and ligatures to reach high writing speed. The standard business scripts Mahajani and Landa use a simpler operation structure than the design found in Modi. Kaithi, with regional variations, highlights the diverse evolution of the scripts.

Here we evaluate Modi specifically as a writing system which functioned in regional document and administration activities and advances our understanding of social factors influencing subcontinent writing system evolution.

MODI	DEVANAGARI	MAHAJANI	LANDA	KAITHI
ग	ग	𑂔	𑂔	𑂔
घ	घ	𑂕	𑂕	𑂕
छ	छ	𑂖	𑂖	𑂖
झ	झ	𑂗	𑂗	𑂗
ञ	ञ	𑂘	𑂘	𑂘
ड	ड	𑂙	𑂙	𑂙
ढ	ढ	𑂚	𑂚	𑂚
ण	ण			
त	त			𑂛
च/थ	थ	𑂜	𑂜	𑂜
छ	द	𑂝		𑂝
ज	ध		𑂞	𑂞
झ/प	न	𑂟		𑂟
ष	प	𑂠	𑂠	𑂠
म	भ	𑂡		𑂡
र/य	म	𑂢	𑂢	𑂢
उ	य		𑂣	𑂣
ऋ	र	𑂤	𑂤	𑂤
श	श/श			𑂥
ष	ष			𑂦

Table 01

Design Brief

Design a Modi script typeface as a vital tool for conservation efforts, enabling the preservation and revival of this historical writing system.

Primary Research

- Font Analysis
- User Mapping
- Design Interventions
- Revised Project Brief
- Collecting Samples
- Letterform Evolution
Study

Font Analysis

NOTO SANS MODI

This is a widely accessible font developed by Google as part of their Noto font family. It provides a basic support for the Modi script.

The Noto Modi font displays multiple advantages. This script format maintains classical Modi symbols with its expansive character set to support numerous written signs from the traditional Modi script. Readability standards from the font create convenient text utilization for academic researchers and common readers. By integrating into the Noto family of fonts the design principles and multiple script languages receive consistent support throughout.

Needless to say there are weaknesses alongside the strengths of the Noto Modi font. Despite having more characters than other scripts it only captures a limited expression of the Modi script because it fails to display its aesthetic characteristics. The incomplete adherence to stylistic fidelity produces a result that fails to display the particular aspects which define Modi calligraphy. Problems in the font arise from its poor range of weight variations and insufficient width details as these restrict versatility in implementation.

[illegible]

Noto Sans Modi Glyph Set



HEMADREE MODI

Hemadree Modi makes efforts to preserve the classical calligraphic elements of Modi script when applied to digital formats as well as printed materials.

The substandard font establishment diminishes both its general quality and stability capacity. Insufficient weight variation together with substandard digital performance create restrictions for typographical use which leads to rendering difficulties specifically for online displays.

Inadequate design of the font leads to erratic shirorekha and broad character spacing and problematic matra spacing which decrease the readability and grant attractiveness.

[illegible]

Hemadree Modi Glyph Set



This font seeks to present the Modi script in classical form by embracing historical standards which aligns well with academic research needs

A minimalist character selection prevents the font from representing advanced textual elements precisely. The combination of kerning problems with inadequate digital construction leads to inconsistent visual and digital rendering issues. Weight variations in this script create restrictions for typographic applications and stress communication through different weight levels.


ModiKhilari Glyph Set

Weights: Regular
Designed by: Rajesh Khilari

User Mapping

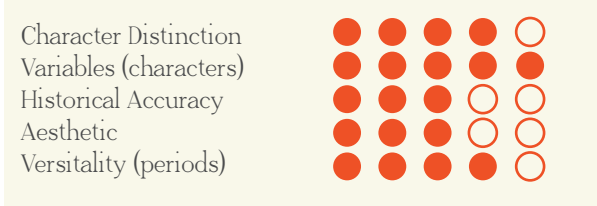
Scholars and Researchers

Linguists, historians, manuscriptologists, epigraphers, and other academics studying pre-modern Maharashtra and its related cultures.



Goals	<div><div>-Transcription activities</div><div>-Historical document analysis</div><div>- Digital archive creation</div><div>- Scientific publications</div></div>
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Usage	<div><div>-Transcription of manuscripts</div><div>-Digital archive development</div><div>-Scientific paper publication with</div><div>-Conference presentations</div></div>
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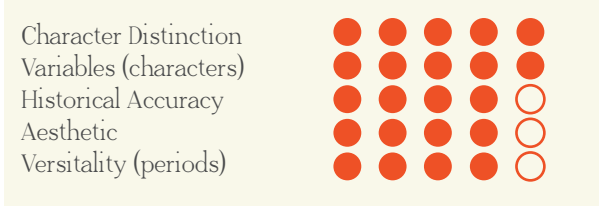
Educators and Students

Teachers of Marathi language (Modi script) and history, students learning Modi script.




Goals	<div><div>-Effective script instruction</div><div>knowledge delivery</div><div>-Script reading along with</div><div>scripting abilities</div></div>
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Usage	<div><div>-Developing educational</div><div>resources and online interfaces</div><div>-Written practice</div><div>-Text analysis and presentation</div><div>preparation</div></div>
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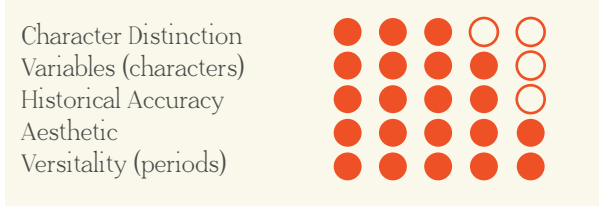
Cultural Heritage Enthusiasts

People who study Marathi cultural history and genealogy. Members of cultural organizations together with local history guests make up this user group.



Goals	<div><div>-Preservation of Modi script as</div><div>well as the promotion of its usage</div><div>in modern times.</div><div>-Producing both digital and</div><div>physical duplicates of historical</div><div>documents.</div><div>-Learning and teaching the script.</div></div>
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Usage	<div><div>Varies widely according to</div><div>presonal use from hobbyists to</div><div>professionals in other fields</div></div>
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Possible Design Interventions

Digital Preservation

Typographic conservation

Create high-quality digital fonts in various styles to facilitate easy typing and printing of Modi script with a focus on technical accuracy (Unicode, OpenType) and stylistic range (historical periods, weight variations).

Creative reinterpretation and Modernization

Study Modi's aesthetic through that cursive-flowing and unique forms of letters into another script, and design fresh innovative, culturally-relevant hybrid scripts generating artistic interest and expanding the visual possibilities of Modi. Script forms possible-Devanagari, Latin.

Interactive Exhibits

Using interactive equipment as digital displays, touchscreens, and hands-on activities, all will take the visitors back into history and experience the script much more richly, while gaining perspective in and concerning cultures.

Educational Initiatives

1. Creative Learning Materials
Creating learning materials, engaging and interactive, so that they make learning enjoyable.

2. Online Platforms and Resources
Creating online platforms and resource materials, including interactive modules for study, online dictionaries, and translation tool to increase the accessibility of Modi script to learners.

3. Gamified Learning Platforms
Incorporate gaming mechanics for the purpose of enjoyment, fun, and motivation in learning.

Cultural Revitalization & Promotion

1. Preserving Modi script alive by conducting community events and workshops. These events would attempt to build the community through the display of calligraphy, literature and cultural heritage, sharing of skills and raising awareness on the script.

2. Also capable of initiation of action that bears, for future generations, through documentaries and other multimedia presentations of the history, cultural significance and challenges in the preservation.

VR & AR Experiences

Creating immersive VR/AR experiences of Modi script historical manuscripts where users can interact with ancient texts and artifacts, and virtually with ancient texts and artifacts, gaining a more understanding of how and why it is important in a modern format.

Revised Design Brief

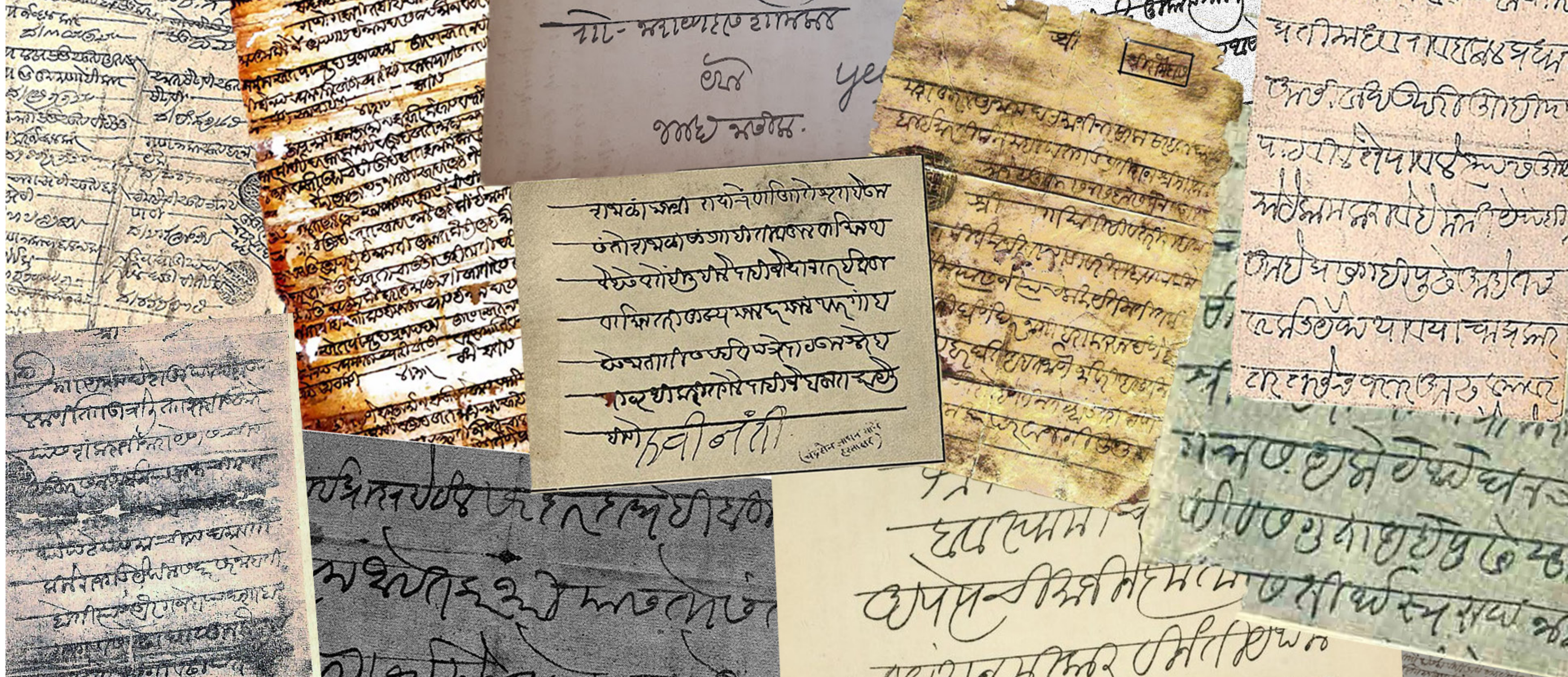
Typographic revival and conservation of the Modi script and adapting it to contemporary Devanagari script, preserving its aesthetic and historical significance.

Collecting Samples

To facilitate analysis of Modi script's historical evolution, I collected a group of documents written in Modi, from various sources, which I categorized in terms of the historical periods- Bahamanikalin, Shivkalin, Peshwakalin and Anglakalin periods.

By following this systematic procedure, the characteristics and writing styles are studied in a comparative way of Modi's different features and styles at different times, so the changes in letterforms, orthography and the effect of socio and political environments are identified. Such timeline of the development of Modi script would then be helpful for its accurate interpretation and digital preservation.

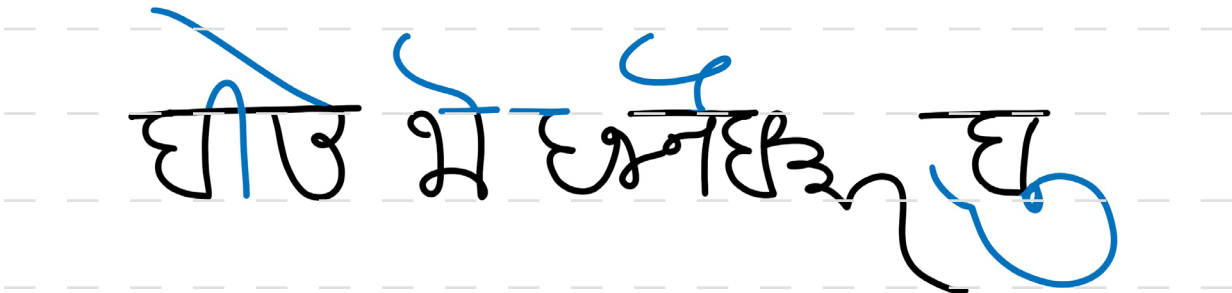
The samples given here have been gathered from a variety of sources including the Bharat Itihas Sanshodhak Mandal and Poona Akhbars Vol. These include Modi Documents In The T. M. S. S. Library Vol. 1 Series No. 409 (Thanjavur Sarasvati Mahal Series), Dr. Dhammapal Mashalkar's Modi Vaibhav and, Modi documents from Tanjore in Danish collections.



Evolution of the letter

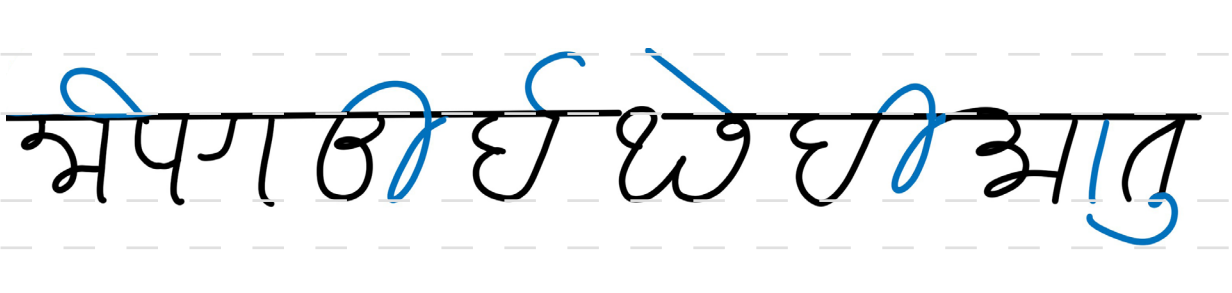
Bahamnikalin Modi

Influence	Modi script in the Bahmani period was highly influenced by perso-arabic script	Character anatomy	Matra proportion is 1:1 Character Anatomy- simpler forms (Shirorekha above the consonant not often)
Emerging cursive	Characters are highly looped and flow into each other.	Extent	spread with Bahmani Sultanate in Maharashtra, Telangana, and Karnataka
Consonant cluster	Follow Devanagari style shirorekha	Word spacing	Minimal spacing between letters and words as well.



Shivkalin Modi

Influence	Modi script was influenced by perso-arabic script	Character anatomy	Simple forms, practical short matras with one horizontal line above consonants. Letter : Matra Proportion- 1: 0.5
Emerging cursive	Letters do not flow seamlessly into one another. Character recognition is legible	Extent	Maharashtra, parts of Gujarat, Madhya Pradesh, and Karnataka. Key tool for war messages and administrative records
Consonant cluster	Letter joined, compact characters	Word spacing	Minimal spacing between letters and words as well as word spacing.



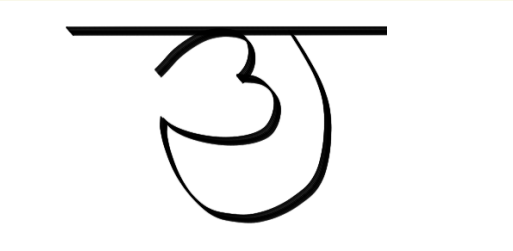
The Process



01. Letter identified from samples



02. Reconstructing skeleton from samples



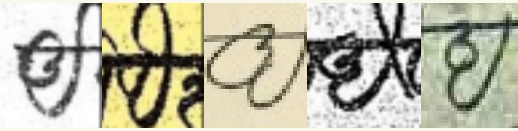
03. Added visual weight

Peshwekalin Modi

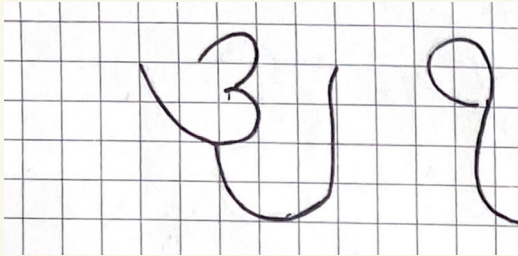
Influence	Unidentified. Styles like Chitnisi, Bilavalkari, Mahadevapanti, and Ranadi were born	Character anatomy	Increased legibility Certain characters have elongated terminals Letter : Matra Proportion- 1:1.5
Evolved cursive	Letters flow seamlessly into one another	Extent	Found in Maharashtra, Rajasthan, and Tamil Nadu.
Consonant cluster	Compact characters	Word spacing	More word spacing observed than in previous eras



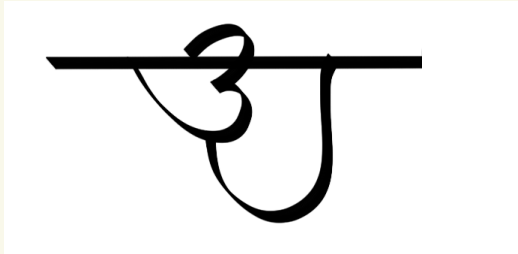
The Process



01. Letter identified from samples



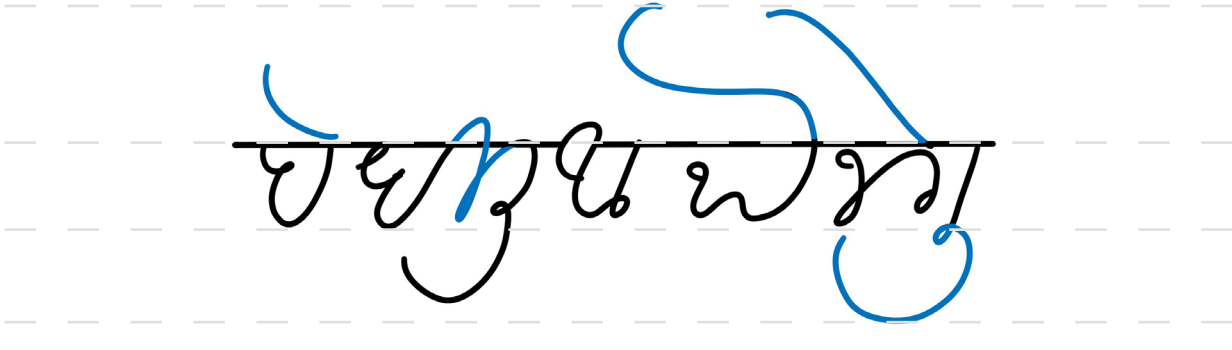
02. Reconstructing skeleton from samples



03. Added visual weight

Anglakalin Modi

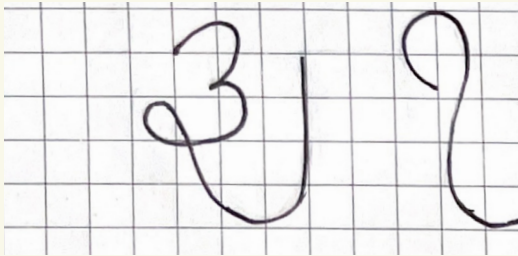
Decline	Socio Political Changes (British Raj) - The use of Modi declined due to influence	Character anatomy	Due to use of calligraphy nib characters would become thicker and thinner in weight resulting to increased contrast between thin and thick.
Writing System	Modi was also written in cursive, as well as Latin	Extent	Other areas where Maratha influence continued into the present
Consonant cluster	Spaced cursive characters	Word spacing	More word spacing observed than previous eras.



The Process



01. Letter identified from samples



02. Reconstructing skeleton from samples



03. Added visual weight

Style Development

- Exploring Styles
- Testing
- User Assesment
- Comparative Study of Styles
- Proposed Style

Exploring styles

Reed Pen (boru)

Variations

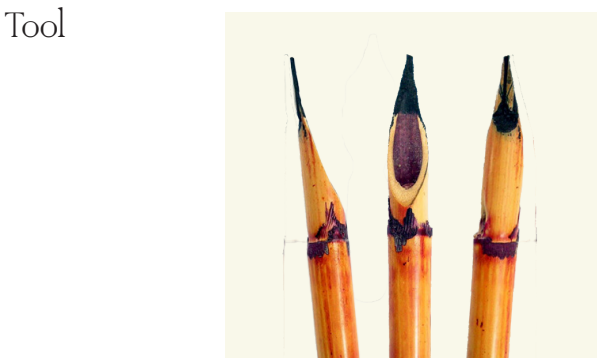
- 1. Fine
- 2. Medium
- 3. Italic

Tone of voice

Humanistic
Slightly informal

Type

Display
Body Text



Calligraphy pen

Variations

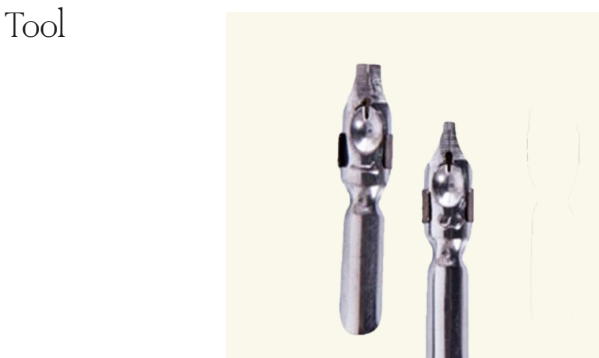
- 1. Latin calligraphy slant
- 2. 180-degree angle

Tone of voice

Playful
Expressive

Type

Display



Monolinear Pen

Variations

- 1. Round Thin

Tone of voice

Clean
Minimalist
Geometric
Modern

Type

Body Text



Testing Samples

01 Reed pen Fine

સમ્રાટે પામ્યા ઉગ્રમગ્ધ દોષ તો મનાડી

02 Reed pen Medium

સમ્રાટે પામ્યા ઉગ્રમગ્ધ દોષ તો મનાડી

03 Reed pen Italic

સમ્રાટે પામ્યા ઉગ્રમગ્ધ દોષ તો મનાડી

04 Latin calligraphy Slant

સમ્રાટે પામ્યા ઉગ્રમગ્ધ દોષ તો મનાડી

05 180-degree angle

સમ્રાટે પામ્યા ઉગ્રમગ્ધ દોષ તો મનાડી

06 Monolinear round

સમ્રાટે પામ્યા ઉગ્રમગ્ધ દોષ તો મનાડી

User Assesment

User's Top Choices

01// Reed pen Fine

સમ્રાટે પામ્યા ઉગ્રમગ્ધ દોષ તો મનાડી

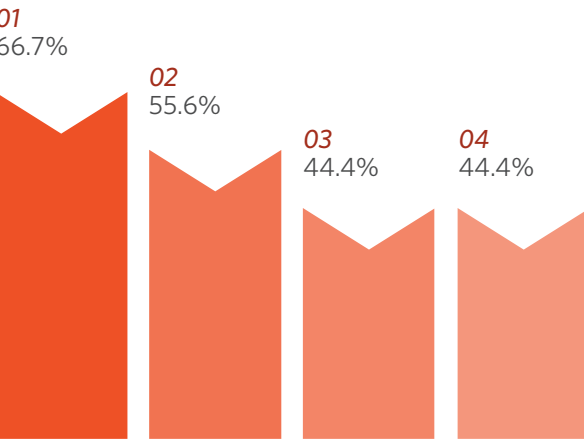
02// Calligraphy pen 180° angle

સમ્રાટે પામ્યા ઉગ્રમગ્ધ દોષ તો મનાડી

03// Monolinear round

સમ્રાટે પામ્યા ઉગ્રમગ્ધ દોષ તો મનાડી

Key Aspects of Modi for Users



01 Legibility

02 Culturally Significant

03 Aesthetic Appeal

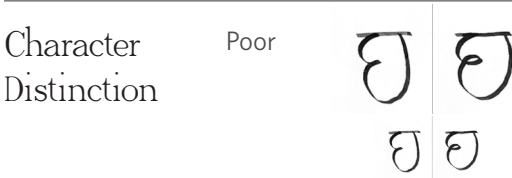
04 Variability (suitable for various applications)

Comparative Study of Styles

Reed Pen Fine



Weight, Contrast
Light
High contrast



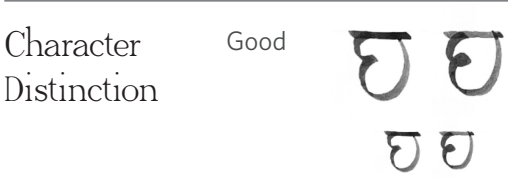
Historical Accuracy
High

Impression
Clean, Flowy, Organic, Delicate

Reed Pen Medium



Weight, Contrast
Semibold
Moderate contrast



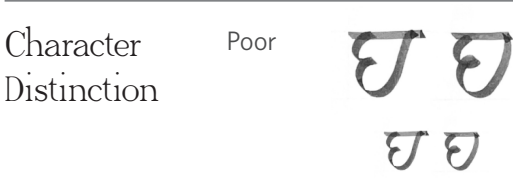
Historical Accuracy
High

Impression
Bold, Striking

Reed Pen Italic



Weight, Contrast
Medium
High contrast



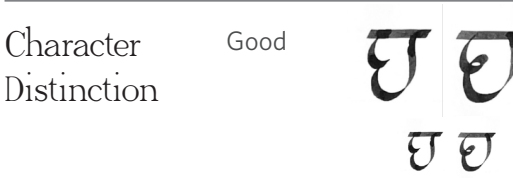
Historical Accuracy
High

Impression
Messy, Hard to read

Latin Calligraphy Slant



Weight, Contrast
Medium
High contrast



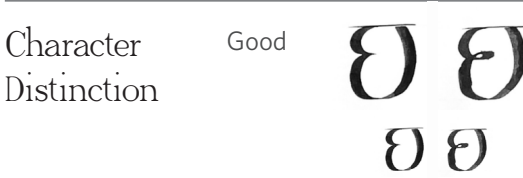
Historical Accuracy
Limited

Impression
Hazy, Unclear, Straining

Calligraphy 180° angle



Weight, Contrast
Bold
High contrast



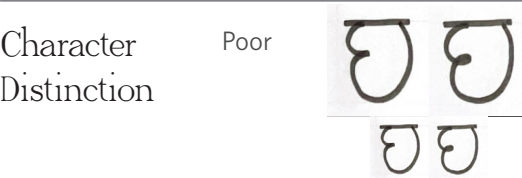
Historical Accuracy
Limited

Impression
Unique forms, Geometric, Bold, Modern

Monolinear Round



Weight, Contrast
Thin
No contrast



Historical Accuracy
Moderate

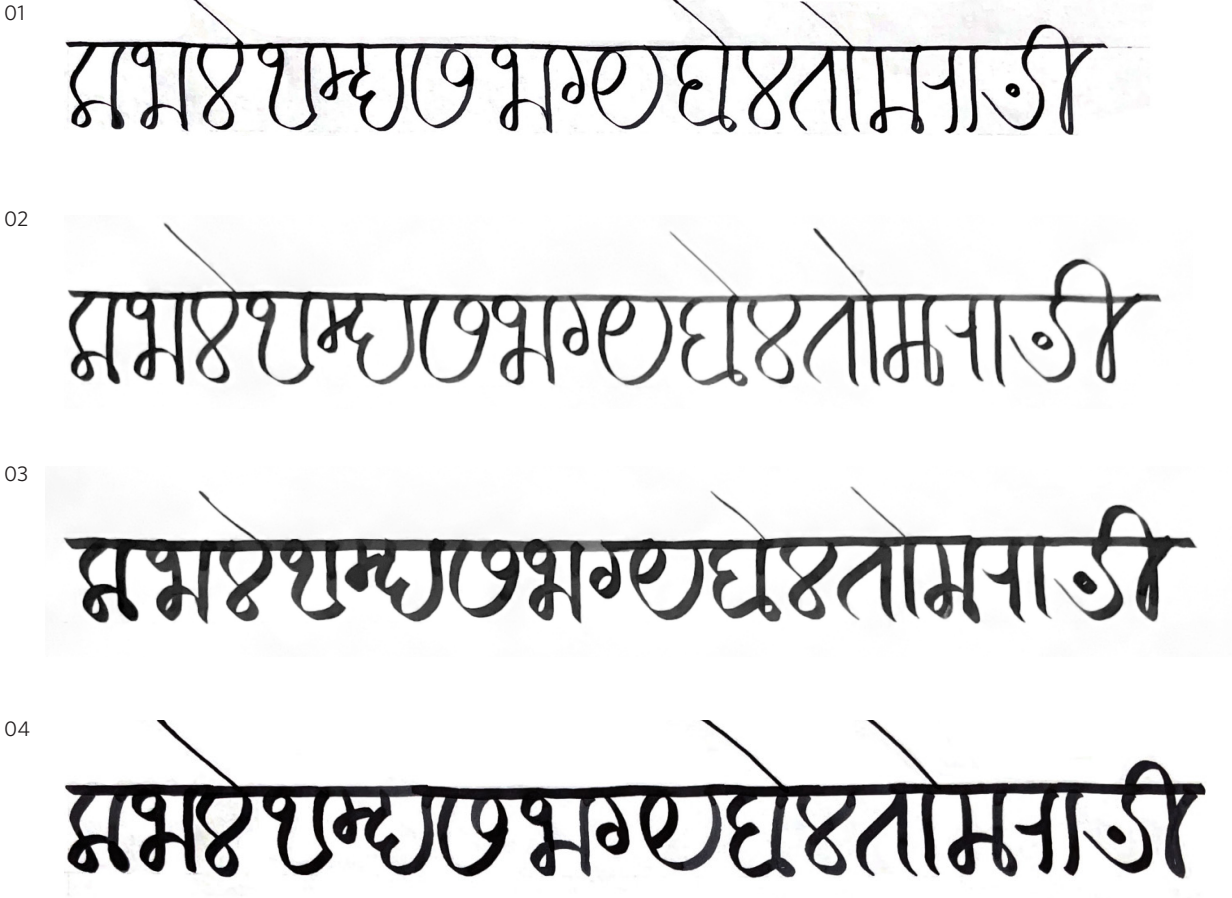
Impression
Soft, Clean, Minimalist

Iterations

The reed pen fine style (see 01), favored for its clean, flowing, organic, and delicate impressions was a problem because of its lightweight nature. They compromised readability and character distinctiveness in the letterforms, which ended up being thin and had high internal contrast.

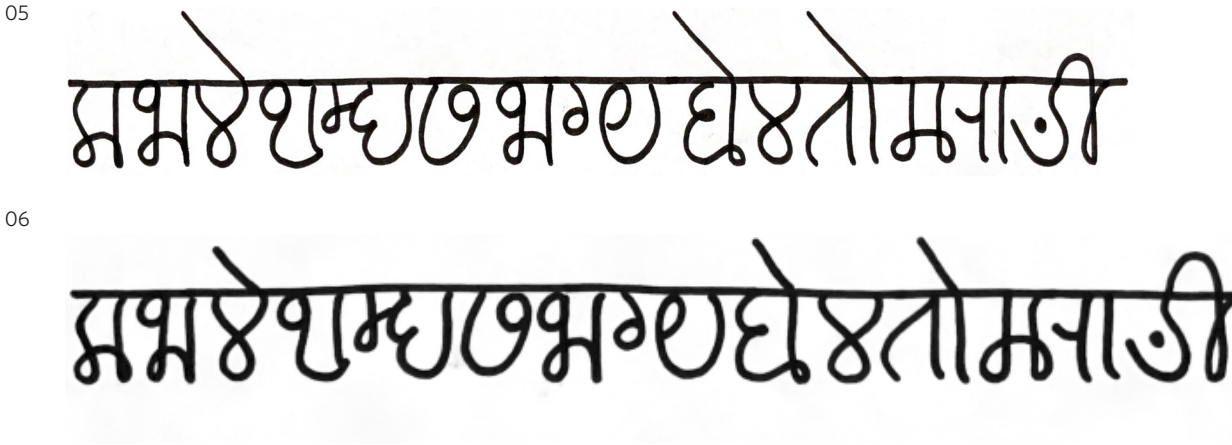
To solve this, iterative adjustments to the original weight were made- 50% increase (02), 100% increase (03), and 150% increase (04). By increasing its weight by 50%, we were able to produce an enhanced weight in a style while keeping the organic aesthetic. Nevertheless, the 100% weight and 150% weight increased styles were well above the original reed pen fine style in contrast but still did not reach the highest contrast level of the resulting styles obtained with the original fine and the smooth styles. However, these modified styles lead to readability issues and undesirable contrast.

The comparative analysis on the various Modi script styles based on the user requirements and critical insights thus lead us to choose the 180 degree angle style as unsuitable based on which we discarded it.



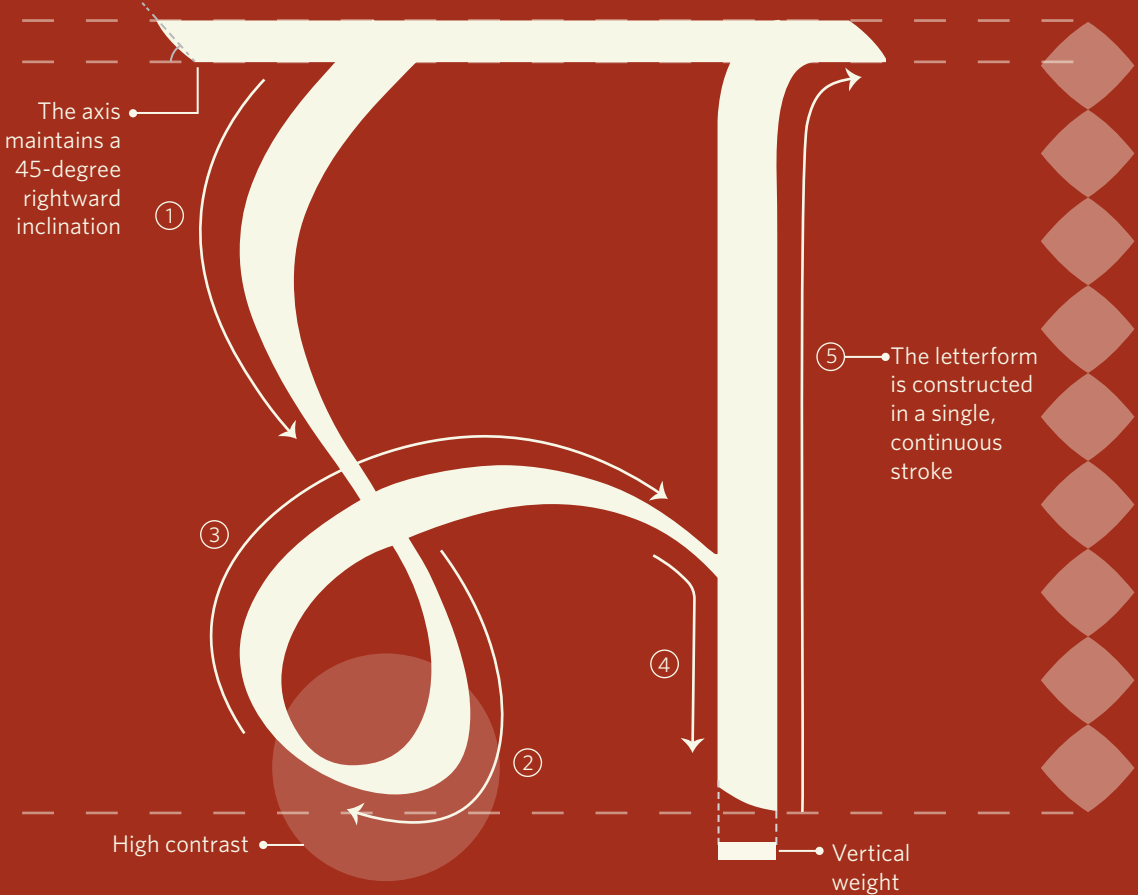
Third in preference was the mono-linear round style (see 05) with a soft, clean and minimalist aesthetic. In terms of stroke weight, this style lacked internal contrast; the stroke weight was consistent from letterform to letterform. However, reading was difficult if scaled down because of its light weight, which called for a 100% increase in stroke weight to make legible (see 06).

Particularly, the mono-linear character of this style meant the degree of character difference was lower than in the modulated styles, where stroke variations increase character distinctiveness.



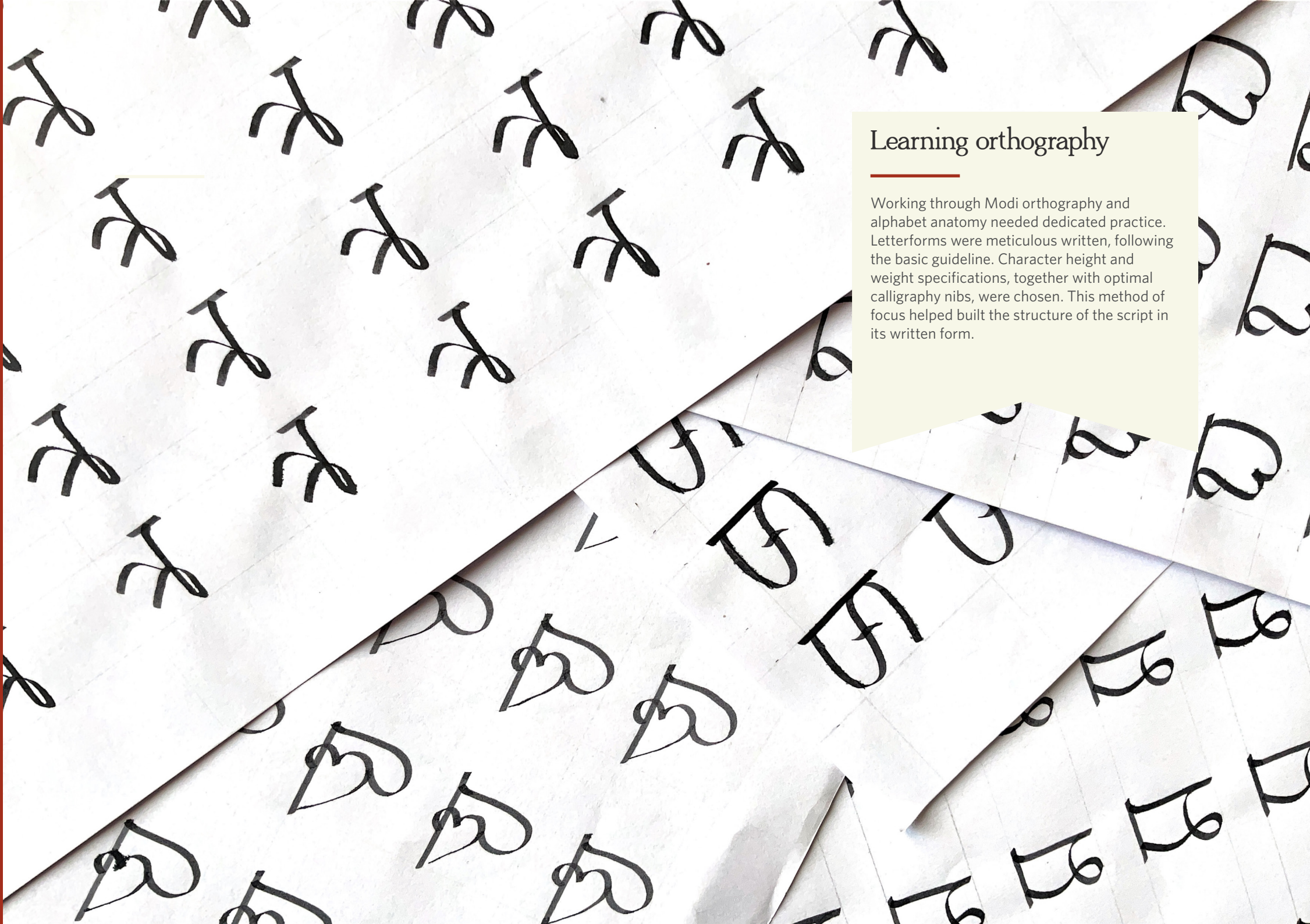
Proposed Style

Impression	Clean, Organic, Humanistic, Delicate
Historical Accuracy	High
Style	Regular Bold Slant
Contrast	Modulated
Impression	Clean, Organic, Humanistic, Delicate



Learning orthography

Working through Modi orthography and alphabet anatomy needed dedicated practice. Letterforms were meticulous written, following the basic guideline. Character height and weight specifications, together with optimal calligraphy nibs, were chosen. This method of focus helped built the structure of the script in its written form.



Character Design

- Similar Forms
- Glyph Cards
- Designing in FontLab
- Final style
- Font Design Workflow
- Final Typeface

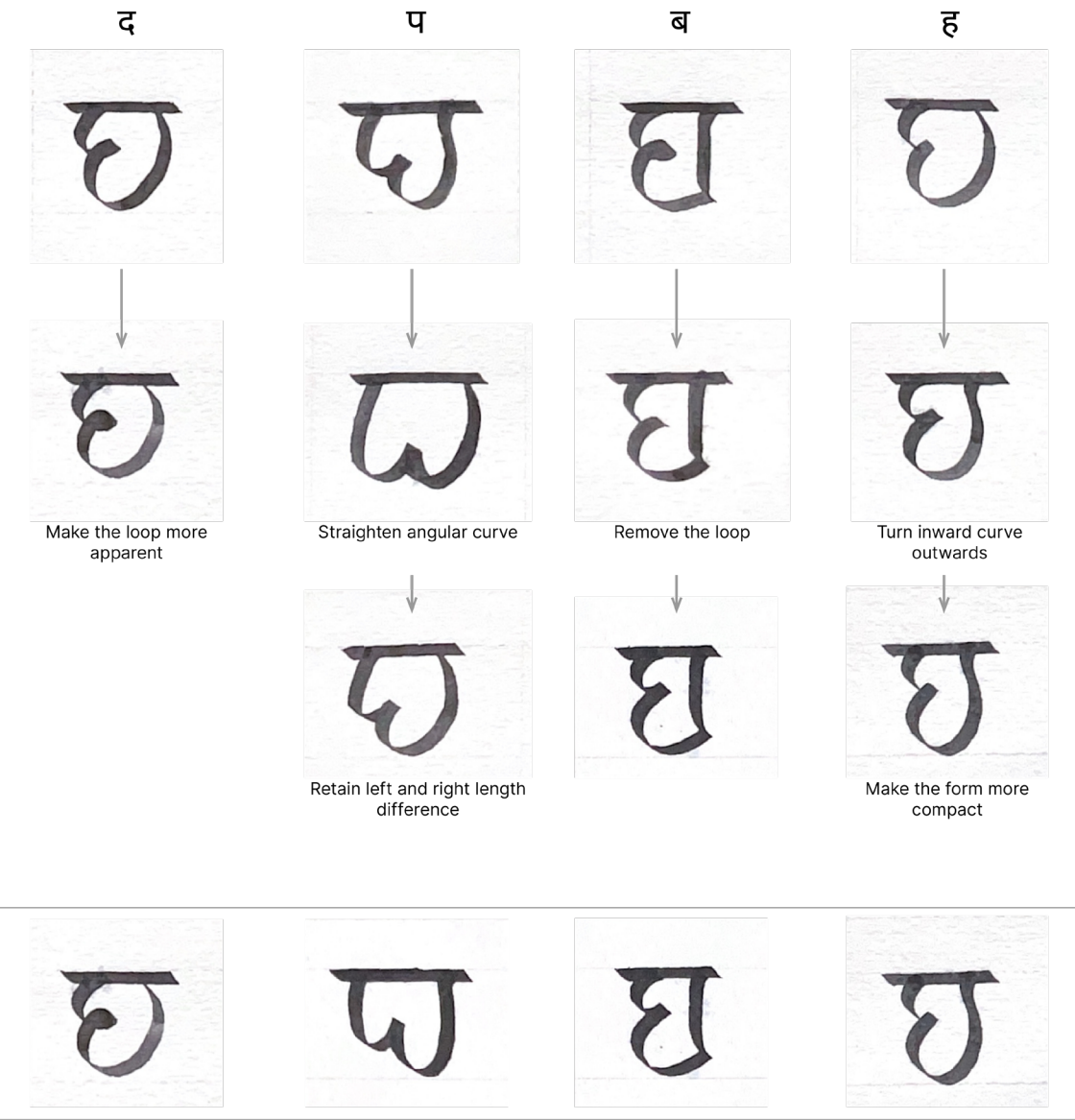
Similar Forms

A major problem in the process of character recognition is the same visually similar letter forms in the Modi script. The fact that the principal record of Modi letterforms is only in handwriting and etchings, the variants and inconsistencies in the latter rendering the issue worse.

As a result, multiple renderings of these letterforms were a necessary core objective to make differentiation between characters relatively easy and retain their original anatomy. Such instances were addressed by means of a comprehensive approach.

Case 1

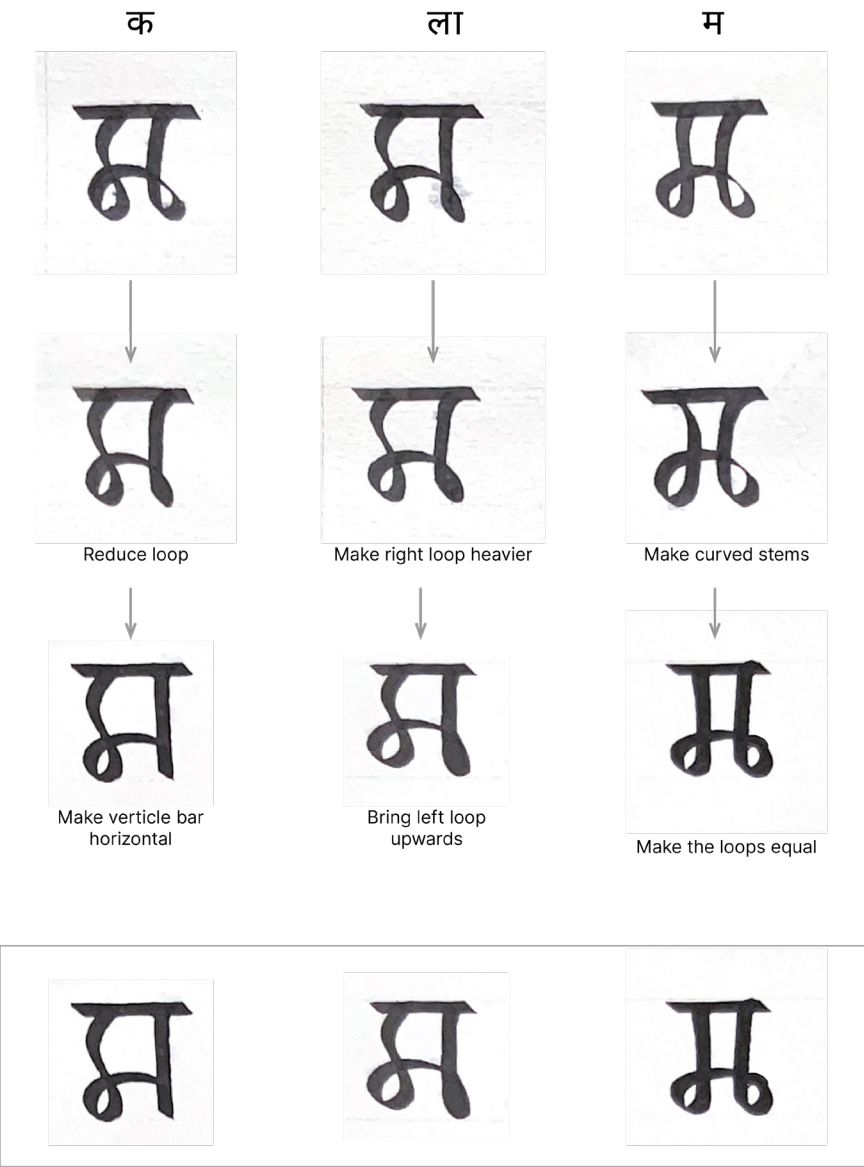
Modi letters द, प, ब, and ह resemble each other so visually, and their double loop on the left side is particularly striking. These distinguish themselves subtly by the shape of the knot formations and, secondly, by the left side of those connections. This was done to make the knot/loop formations were modified and, the rightside connections changed to provide a clear visual separation.



Case 2

At sight, the Modi letters क, ला, and म are visually similar, in particular in their loop formations. The shape of the bottom loops plus the curvature of the left stroke that forms the bottom loops are the distinguishing features. Thus, we introduced a filled loop as a visual indication of the 'T' matra, and have used it to establish a standardized anatomical representation of characters.

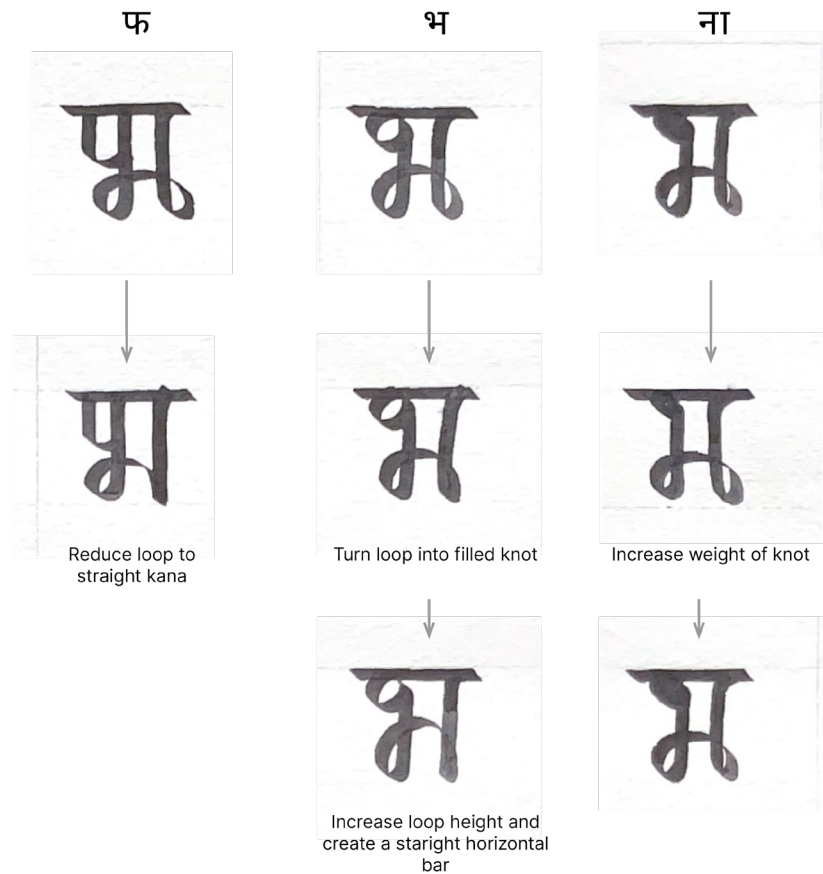
In cases of ambiguity enabled by the loop, the loop was strategically disallowed to simplify the letterform and resolve ambiguity.



Case 3

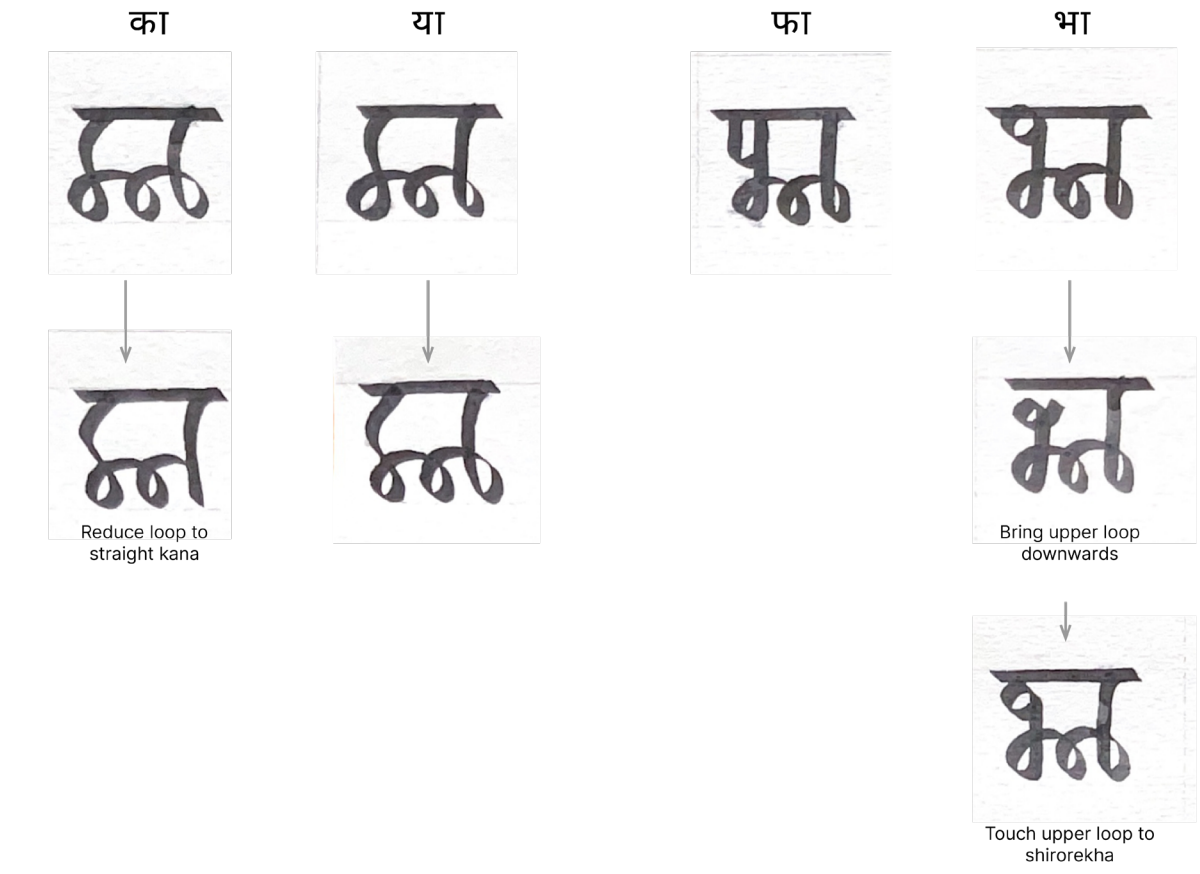
The Modi letters फ, भ, and न show visual similarity, mainly in their upper loop formations. In the close resemblance of the loop structure, फ and भ are specifically exhibited. The curvature and length of these loops were modified so as to improve visual differentiation.

Additionally, with regards to these otherwise similar letterforms, the left stem of the न character was adjusted so that by creating curvature in it, a clearer boundary was made between these letterforms.



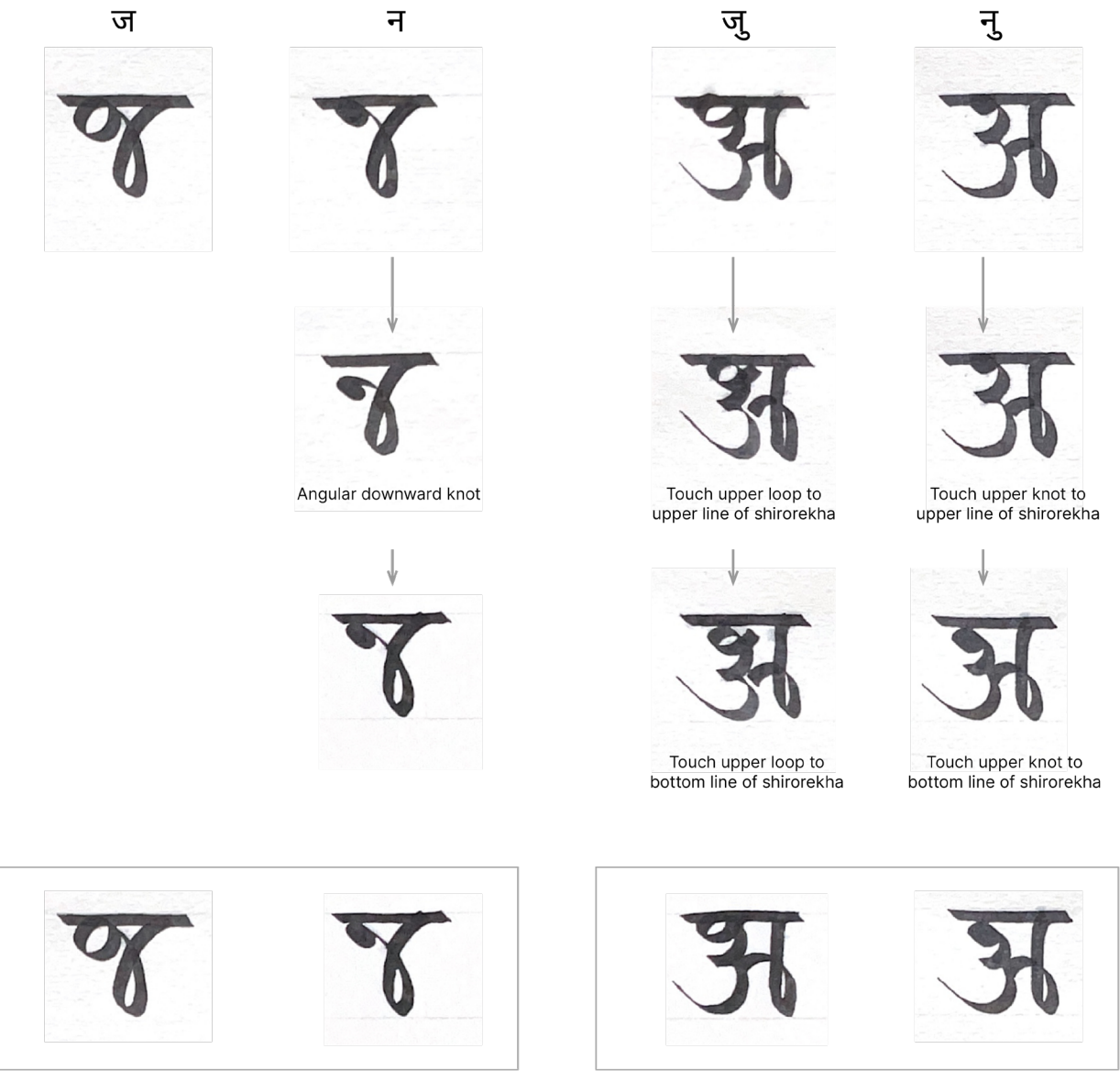
Case 4

Such principles are applied to the root letter forms in the same way as those for their respective Modi letters का, या, फा, and भा. Because of this, the modifications used to recognize the foundational characters (क, य, फ, and भ) are seen in all these vowel modified and conjunct forms, creating a unified and memorable visual language in the script.



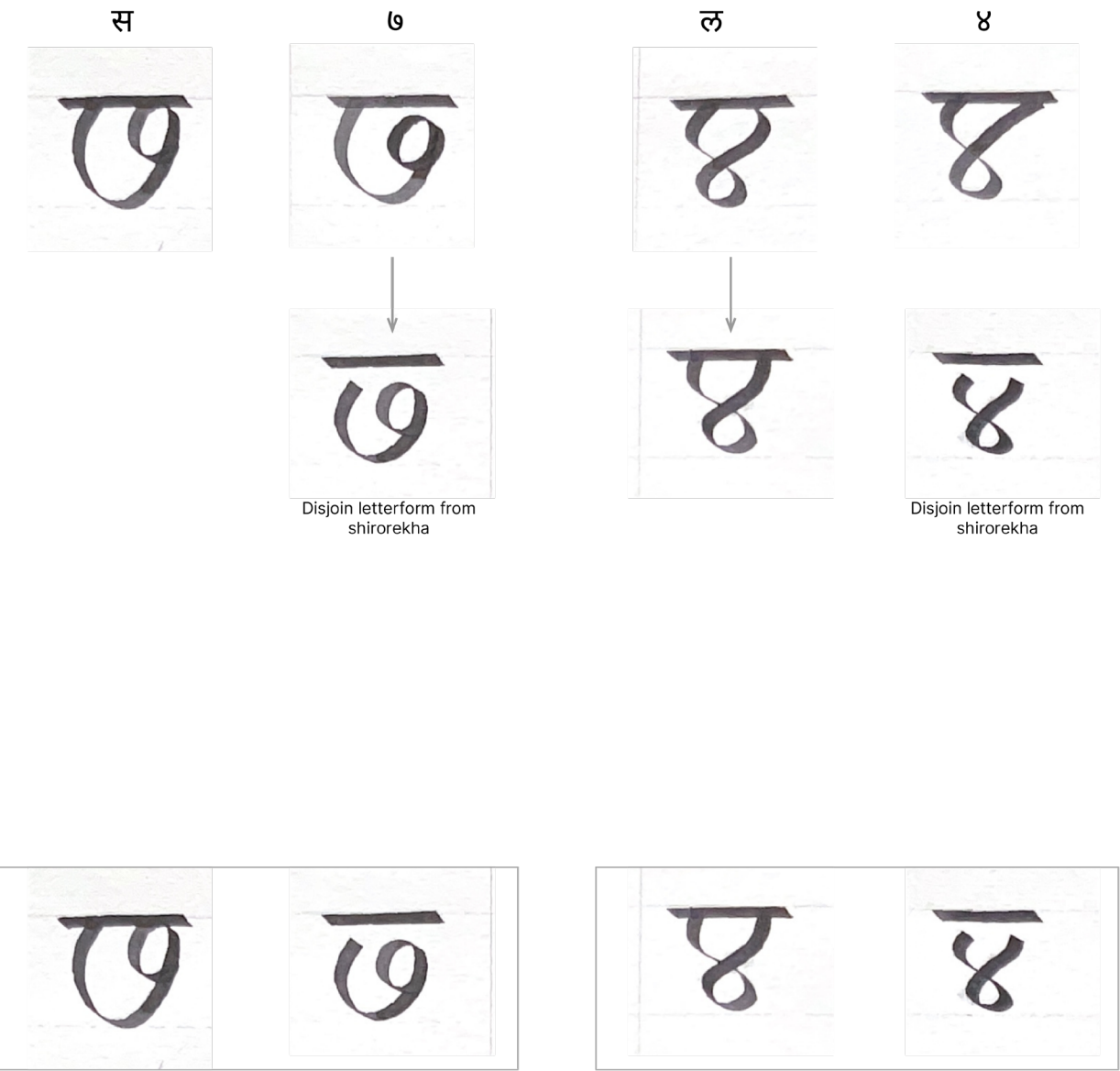
Case 5

The Modi letters ज, न, जु, and न can be confused because they share the same upper left loop formation. In order to make it more distinctly visible, the size of ज was increased and for न,, the vertical position of closed loop was reduced. The adjustment here was made to sense more immediately the characteristics of the loop and therefore increase character recognition.

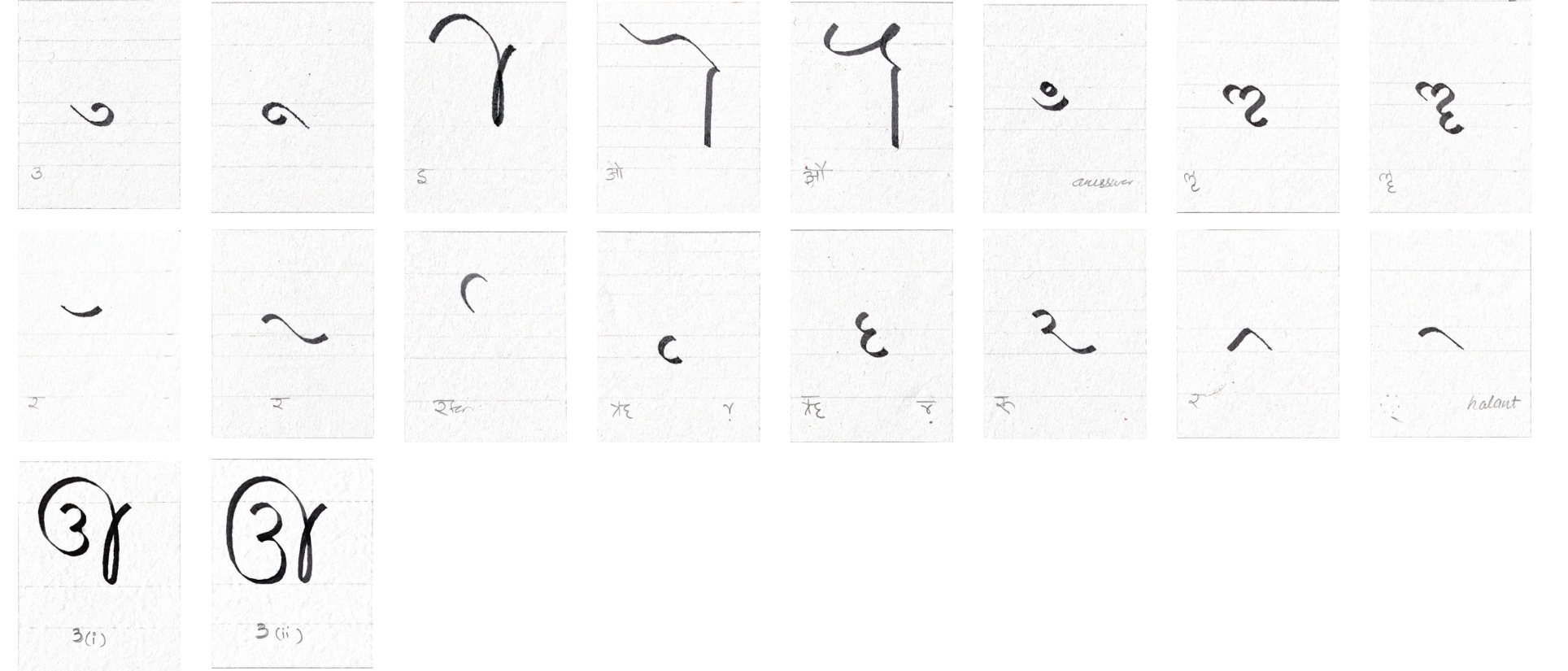


Case 6

Modi letter स like numeral 7 letter ल and numeral 4 also have same form which makes it difficult to identify. The shirorekha also would be detached from the numerals so that they might be distinguished visually. By separating the two deliberately, the visual cue made identifying the numbers distinct from the corresponding letters.



Final Glyph Cards



Designing in FontLab

The subsequent phase involved glyph development within FontLab. To determine appropriate weight, width, and height parameters, a limited set of letterforms that showcased diverse forms and orthographic representations were designed.

Glyphs

अ

आ

इ

उ

क

ग

ज

ड

ण

त

थ

अ

भ

म

य

र

ल

व

स

त्र

म




This subset included glyphs featuring detached, attached kana, loops, double loops, knots, curved stems, conjuncts. This approach enabled to conduct firsthand evaluations of readability and legibility of the glyphs across diverse forms.

Reflection


The glyphs went through extensive research at different point sizes to detect orthographic irregularities. The analysis showed that the glyph weight caused visual unclarity which reduced readability primarily in tiny point sizes.

A disruption formed between counters and loops and knots caused the overall visual language of the font to break down.


Thin weight glyphs demonstrate a thin stroke weight



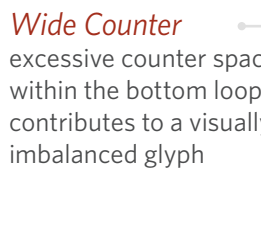
High Contrast hampers readability at small sizes. Thin strokes become extremely fine. At small point sizes, these very thin strokes essentially disappear




Compact loop small loop formations, when rendered at reduced point sizes, are perceived as filled knots




Wide Counter excessive counter space within the bottom loop contributes to a visually imbalanced glyph




Irregular angularity angle of the slant is not consistently maintained



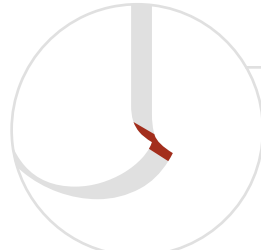
Thin shirokeha stroke weight significantly less than that necessary for visual balance within the glyph



Visual Inconsistency Certain letterforms featuring detached kana (stem) have inconsistencies that deviate from the established visual language

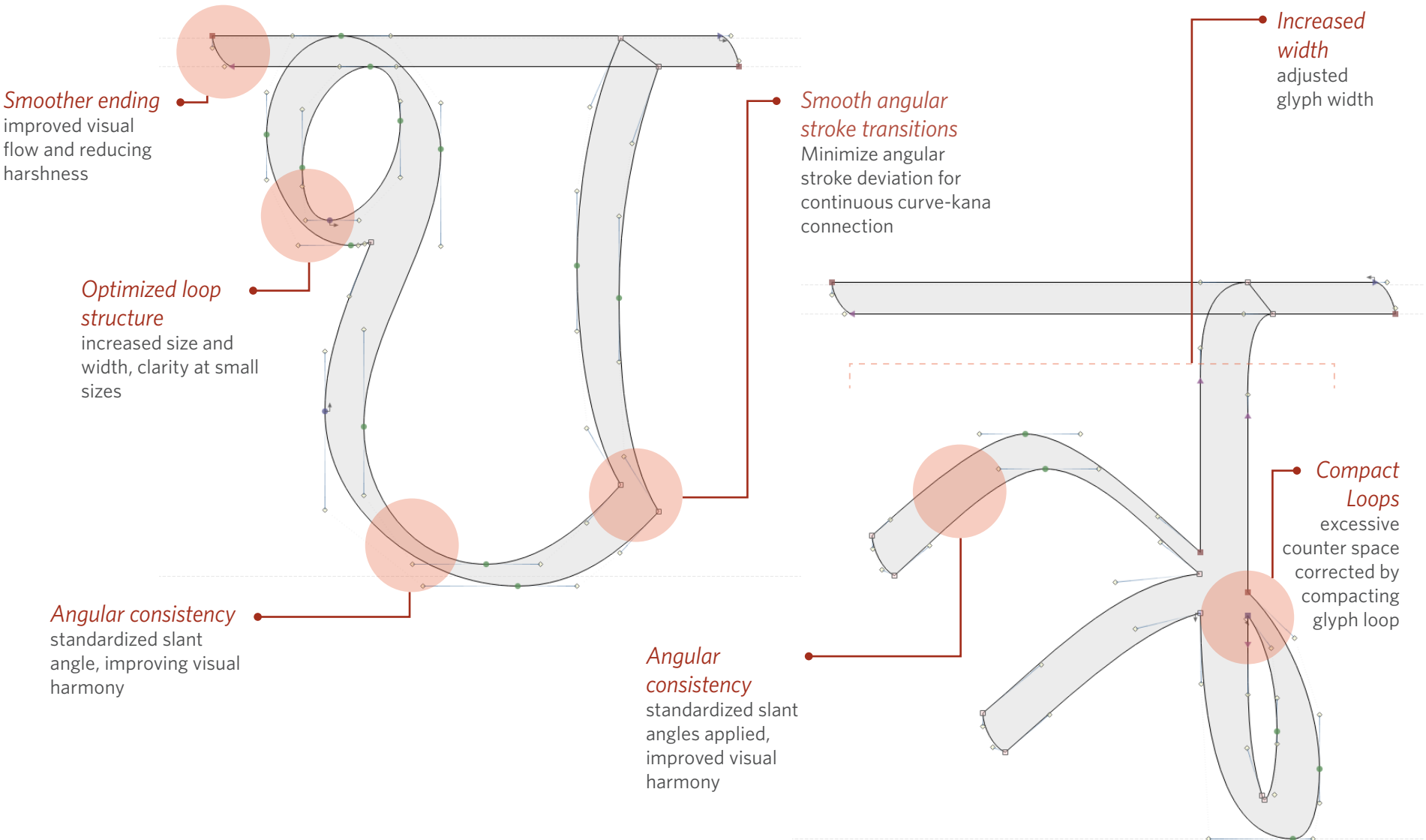
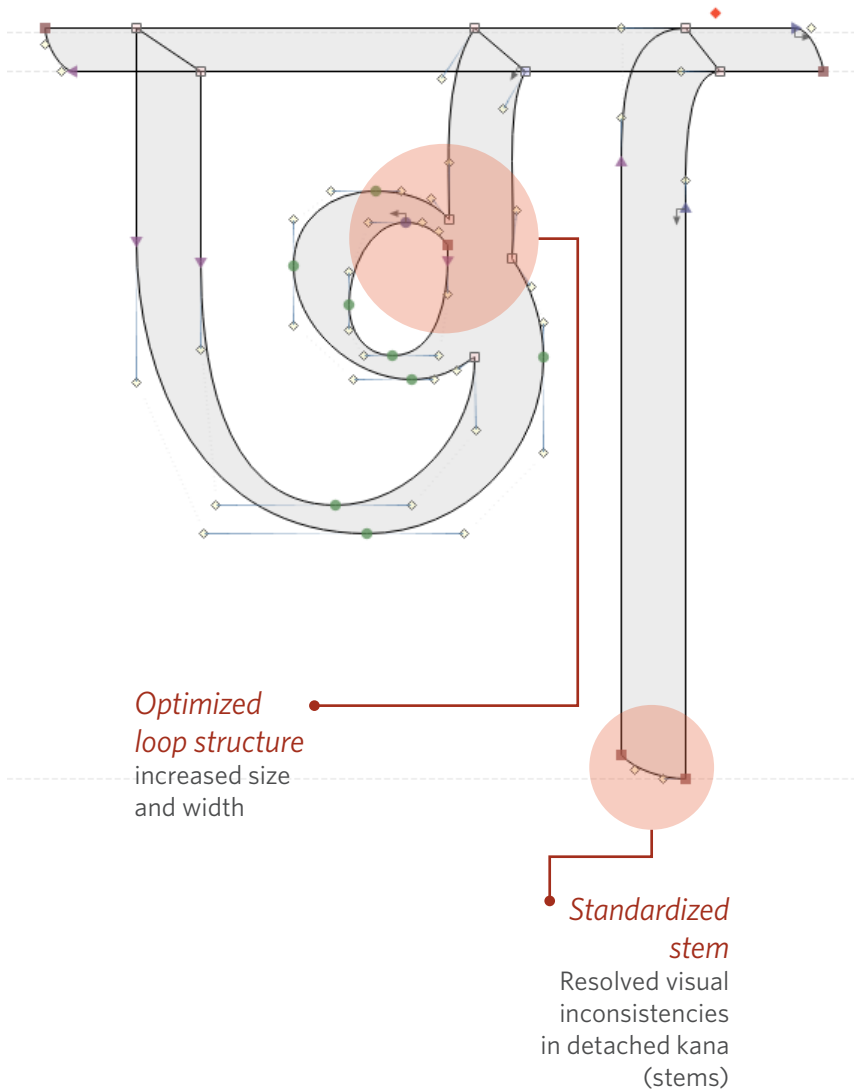
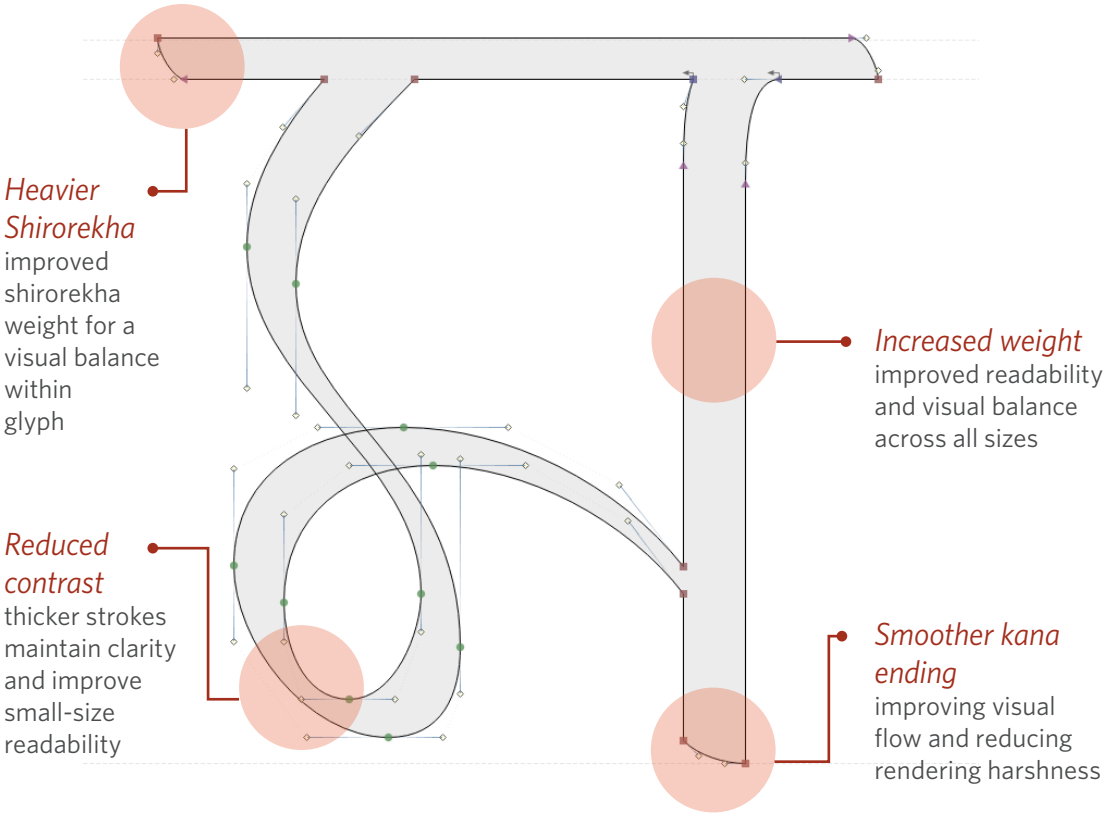


Angular stroke at smaller sizes, angular strokes appear to disconnect kana from curves



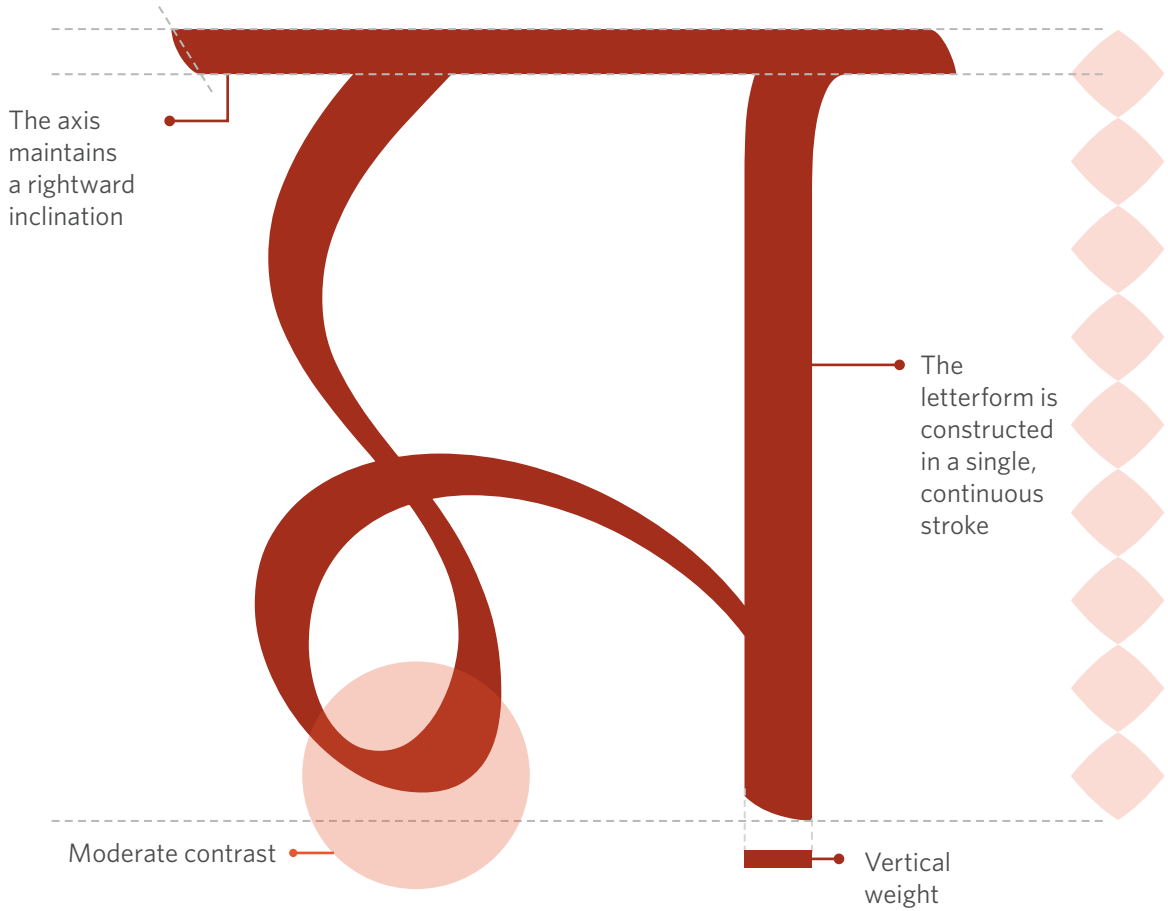
Improvements

The font received critical glyph analysis that allowed developers to make improvements which boosted the visibility of characters and readability. The extension of weight and character width improved visual clarity because of vision problems.

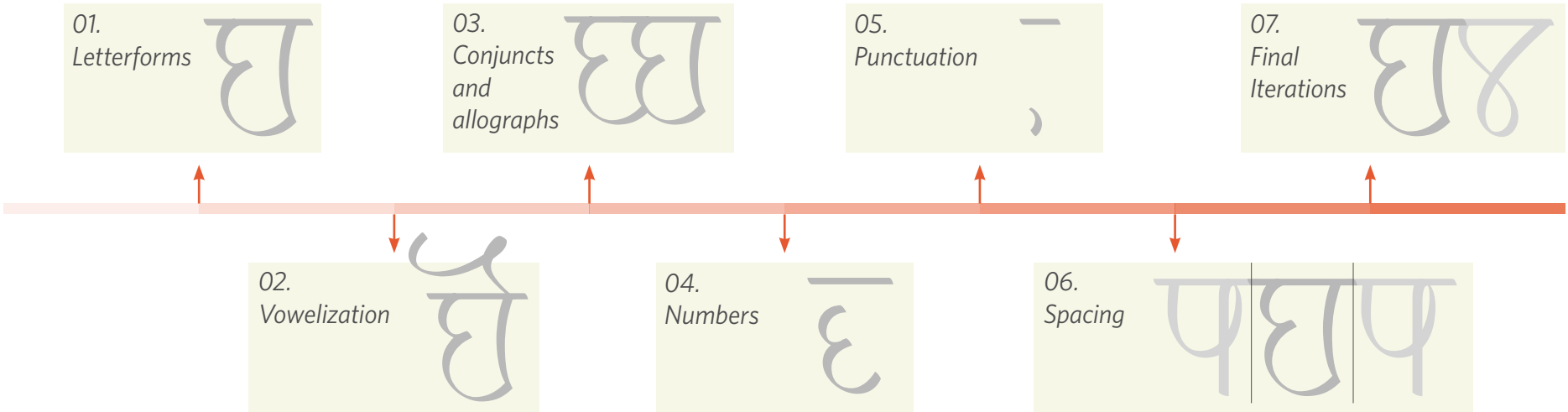


Final Style

Impression	Clean, Organic, Humanistic, Delicate
Historical Accuracy	High
Style	Regular Bold Slant Ink
Contrast	Modulated
Impression	Clean, Organic, Humanistic, Delicate



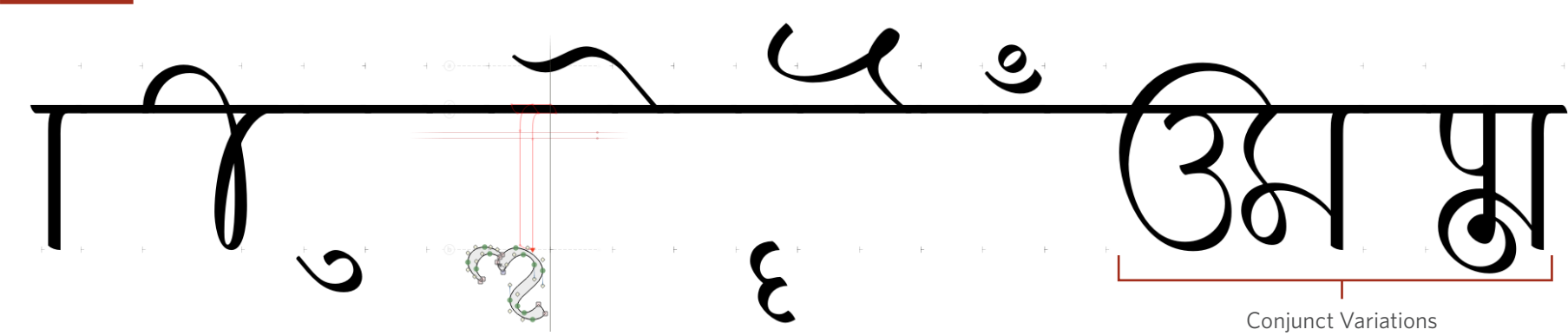
The Process



01. Letterforms

।	॥	॥	अ	आ	इ	ई	उ	ऊ	ऋ	ॠ	लृ	ॡ	ए	ऐ	ओ
uniA830	uniA831	uniA832	A_iv	AA_iv	I_iv	II_iv	U_iv	UU_iv	VocR_iv	VocRR_iv	VocL_iv	VocLL_iv	E_iv	AI_iv	O_iv
ॐ	ॐ	ॐ	ग	घ	ङ	ञ	ट	ठ	ड	ढ	ण	त	थ	द	ध
AU_iv	Ka	Kha	Ga	Gha	Nga	Ca	Cha	Ja	Jha	Nya	Tta	Ttha	Dda	Ddha	Nna
Ta	Tha	Da	Dha	Na	Pa	Pha	Ba	Bha	Ma	Ya	Ra	La	Va	Sha	Ssa
ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ	ॐ
Sa	Ha	Lla	AA_dv	I_dv	II_dv	U_dv	UU_dv	VocR_dv	VocRR_dv	VocL_dv	VocLL_dv	E_dv	AI_dv	O_dv	AU_dv

02. Vowelization



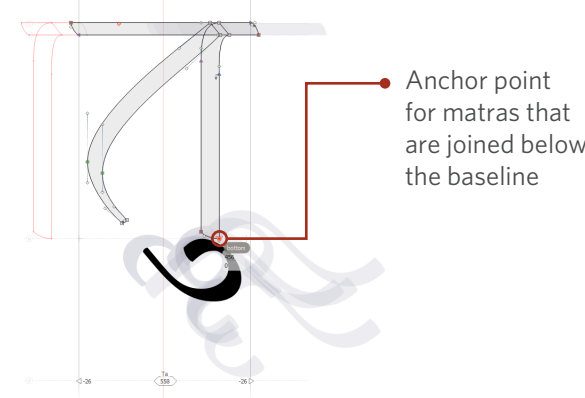
Modi utilizes a system of vowel-consonant conjuncts. This means that vowel sounds are often represented by diacritical marks (matras) that are added to consonants. These matras can be positioned above the shirorekha (the horizontal line running across the top of the letters) or below the baseline, depending on the specific vowel sound.

However, the characters for short (hrasva) and long (dirgha) 'ekar' (ॠ, ॡ) and 'ukar' (ॢ, ॣ) are identical, as well as their diacritical marks.

The rendering of the diacritical marks themselves is important. The image above shows the visual style of the matras, how curved, straight or looped they are, and how they relate to the general visual language of the typeface.

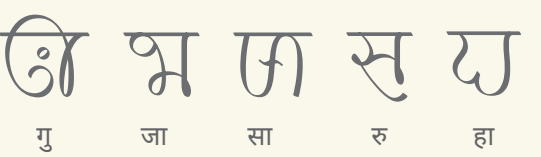
Anchoring the marks

The position of diacritical marks becomes precise through anchor points which creates balanced and visually attractive character designs.



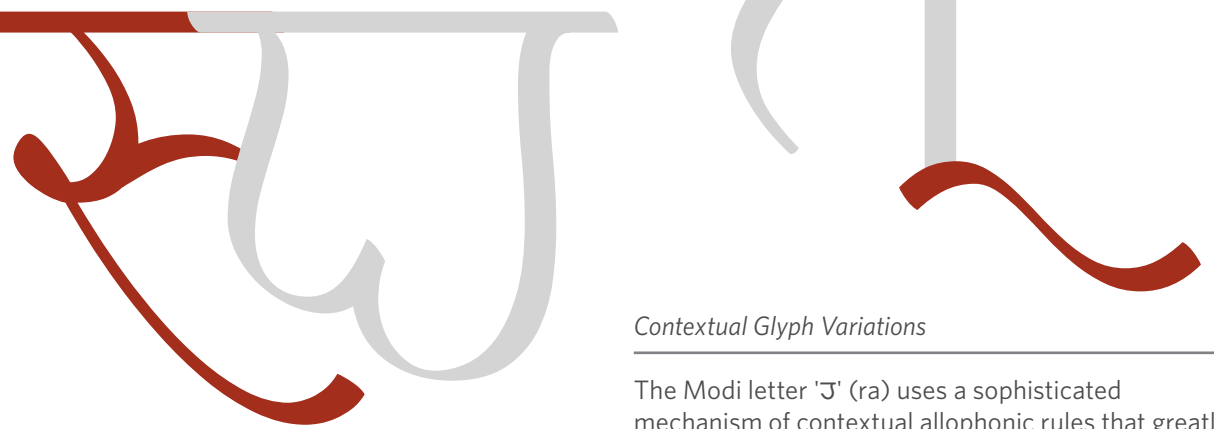
Conjunct Variations

Specific vowel-consonant combinations lead to vowel mark substitution or base letter shape transformation for their development. Here are a few examples-



03. Conjuncts

Modi utilizes a system of vowel-consonant conjuncts. Like most Indic scripts This means that vowel sounds are often represented by diacritical marks (matras) that are added to consonants.



Contextual Glyph Variations

The Modi letter 'र' (ra) uses a sophisticated mechanism of contextual allophonic rules that greatly affects how it appears inside conjuncts. All glyphs with contextual sensitivity underwent design work to display the detailed orthographic rules and visual patterns of the Modi script properly.

Half consonants

Some consonants of the modi script follow the half letter (*halant*) forms as seen in Devanagari. Specific consonant forms are employed to indicate the suppression of the inherent vowel. The modified versions of complete consonants function as indicators for their prounciation within letters.

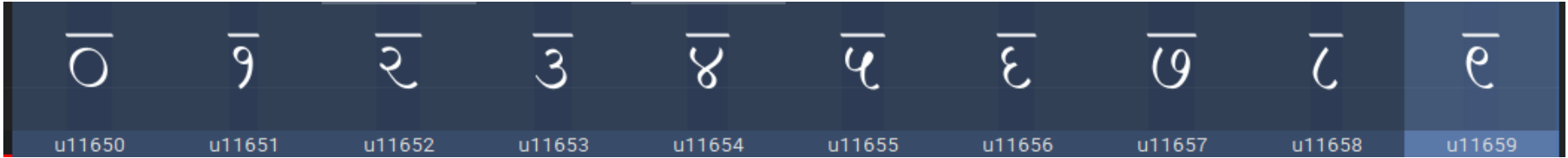
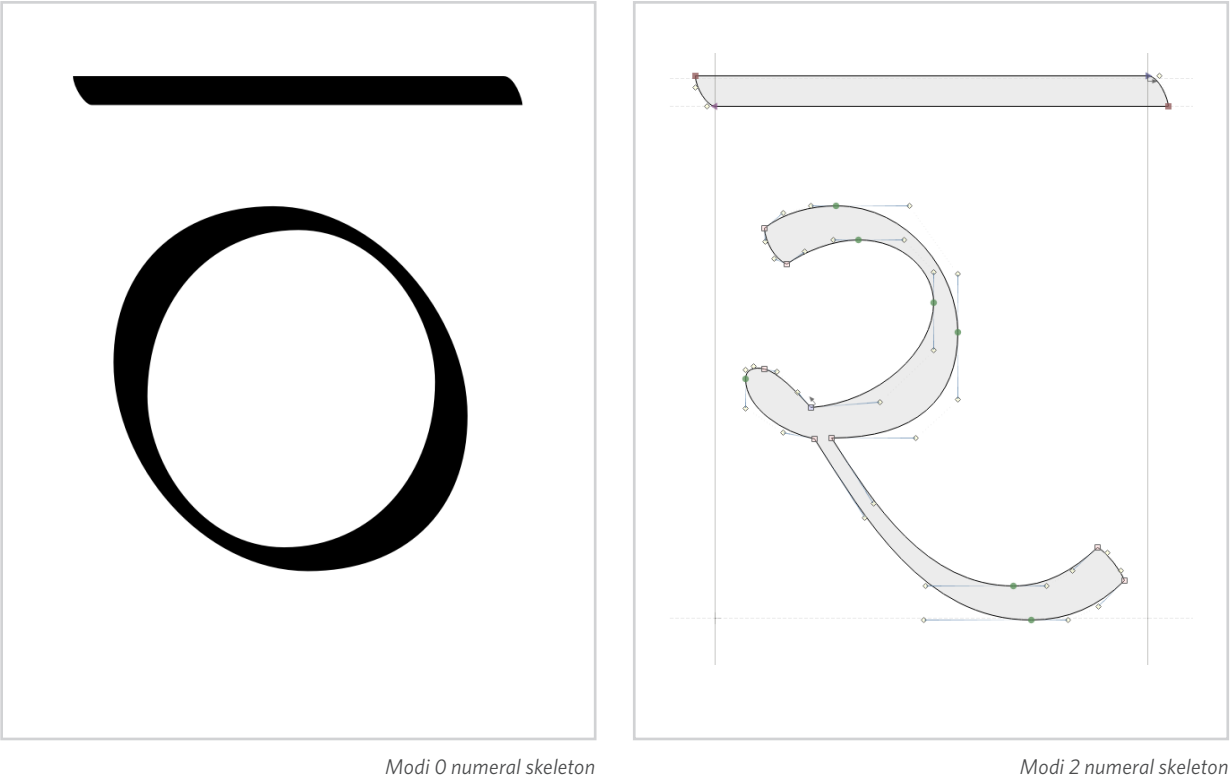
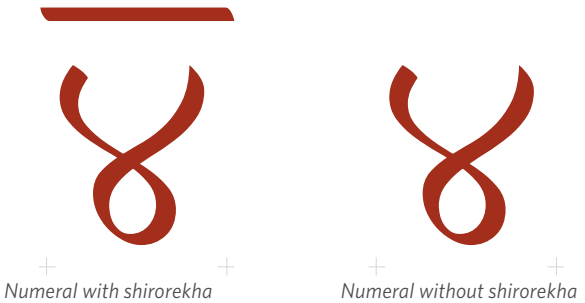
Contextual Glyph Variations

Most consonant clusters in follow standard creation patterns yet some sequences produce substantial irregularities between their original parts. The letters ऋ and ॠ demonstrate exceptional development because they transform into completely new independent glyph forms. The transformations happen beyond basic consonant stacking because each new symbol evolves as a separate visual form that people need to learn on its own.



04. Numbers

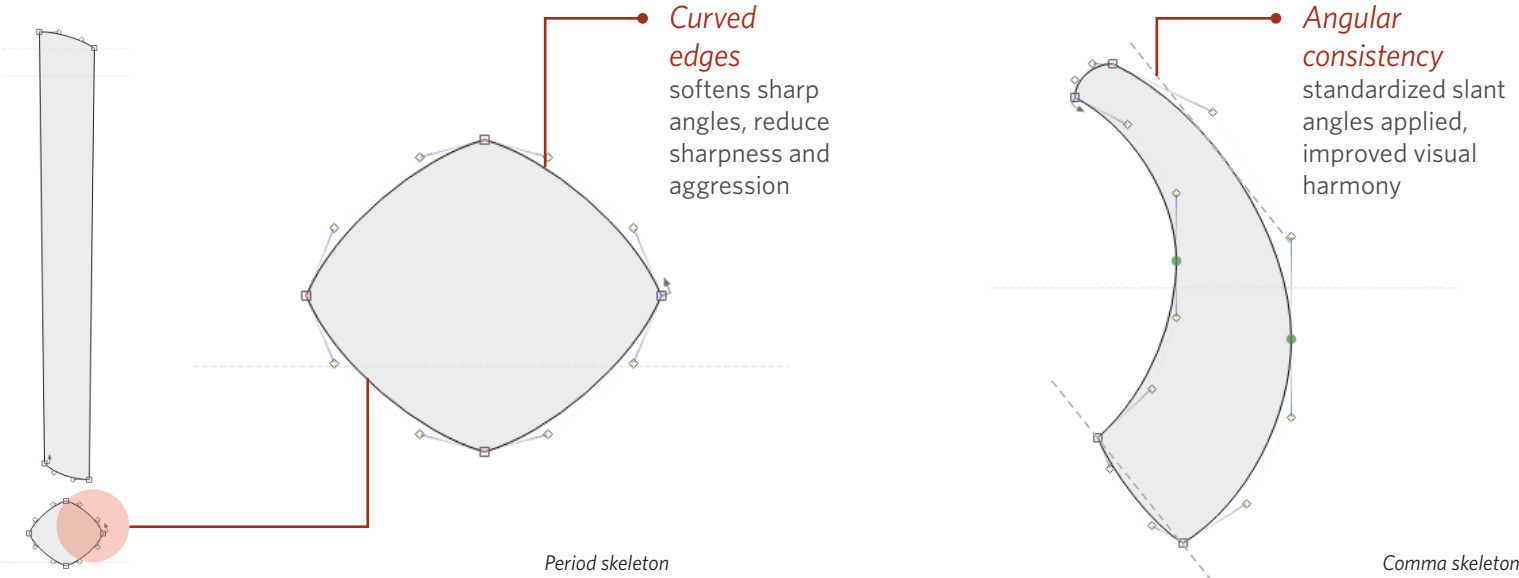
Due to their visual compatibility with Devanagari the Modi numerals experience additional complexities which stem from traditional writing methods of the past. Back in ancient times the positioning of numerals varied because of drawn shirokekha practice which either caused the numbers to touch or exist significantly lower than this line. To prevent confusion by spacing the Modi numerals differently since other characters shared similar shapes which could affect readability. The script adopts two different forms of numerals.



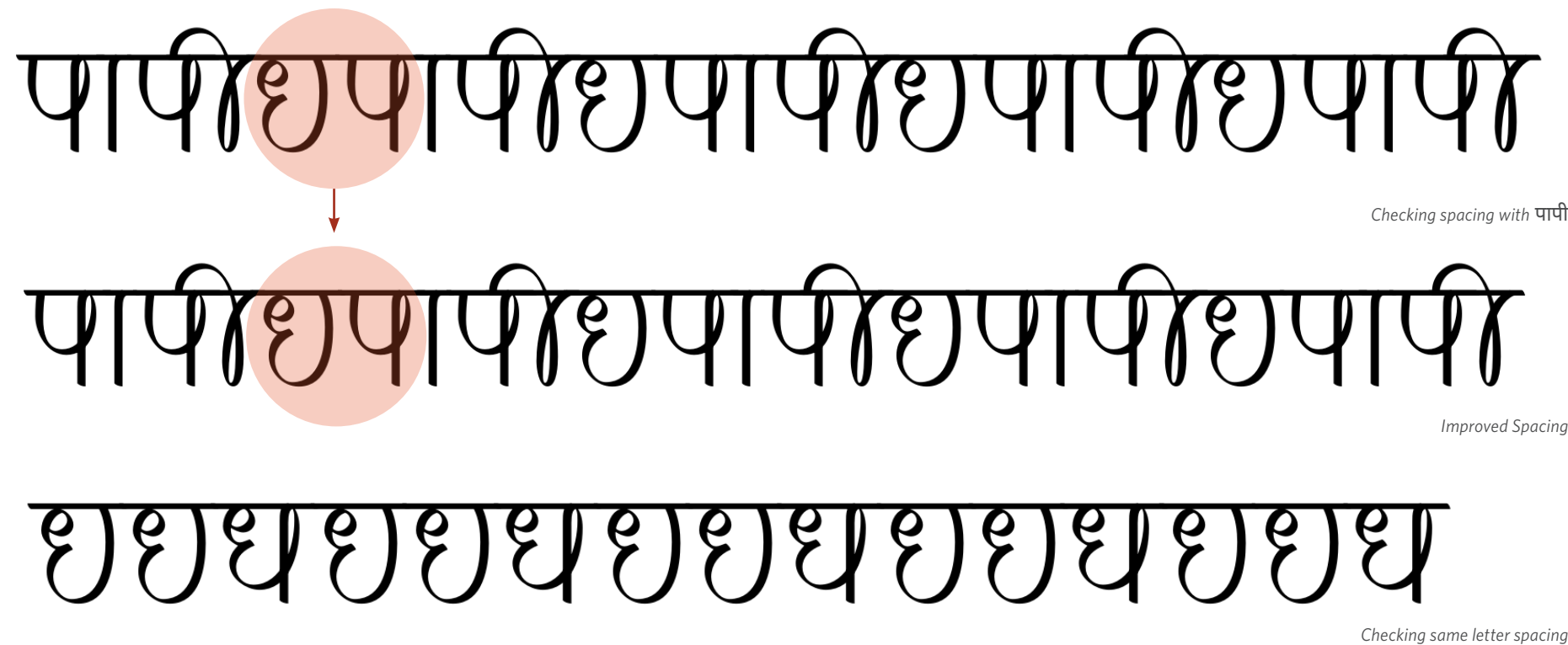
05. Punctuations



Modi script typically does not utilize many punctuation marks. Standard punctuation needs to be used for contemporary transcription and translation according to current user requirements. Adding the complete punctuation system from modern Devanagari writing will enable effective communication in present-day situations.



06. Spacing

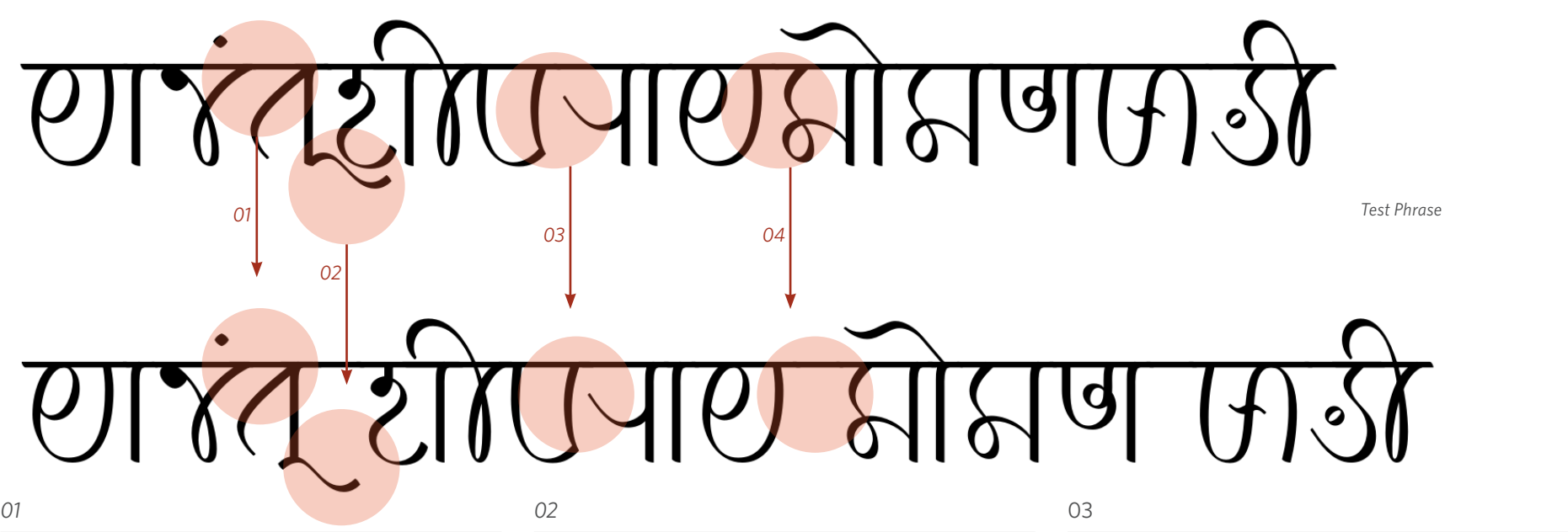


A careful process of adjustment was carried out to achieve optimal spacing of metrics alongside character balance. The letterforms faced a spacing analysis by testing the word "पापी" within the evaluation process. This phrase is placed in front of characters and behind them to help adjust the space.

Letterform combinations were created for analyzing how to obtain harmonious right and left spacing elements. The strategic positioning of letters in multiple contexts allowed for complete assessment of spacing dimensions in each individual letterform. Letterform combinations were created for analyzing

how to obtain harmonious right and left spacing elements. The strategic positioning of letters in multiple contexts allowed for complete assessment of spacing dimensions in each individual letterform.

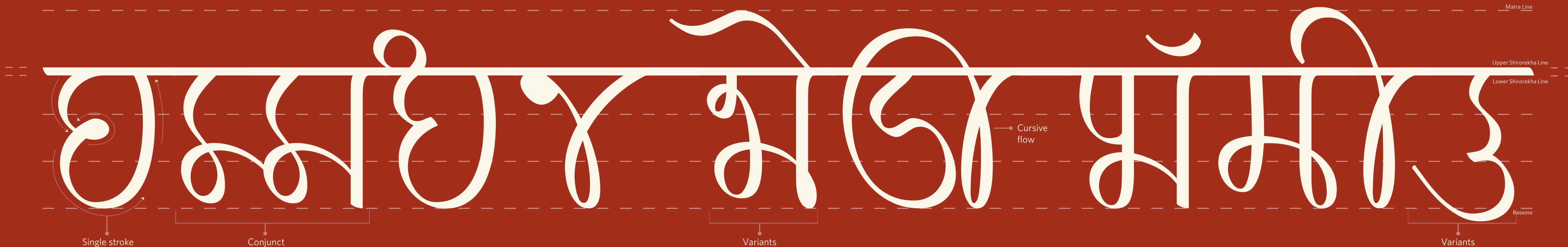
07. Final Iterations



- 01
- The first rounds of metrics produced unsightly inconsistency in letterform spacing which occurs typically when different orthography shapes are applied. The evaluation of test phrases helped detect particular kerning pairs which needed correction. A visual inspection revealed that the pairing of 'ज' (outward curve) then 'त' (inward curve) required immediate reduction of their spacing distance. The issue was resolved by making the letters closer together.
- 02
- A kerning problem arises from the 'ꣳ' conjunct because letter shapes have elliptical designs which produce visual effects. Because the 'ꣳ' character creates overlapping elements between letters the visual display becomes affected. Kerning values underwent adjustment to eliminate the overlapping effect, enhancing their word spacing. Conjuncts belonging to the similar form family present similar issues of spacing irregularities. Their placement with respect to the base letter was modified.
- 03
- Letterforms with inward curves and outward protrusions require tighter kerning.
- 04
- Several letters in Modi script are linked by its flowing nature. The characters in Modi show no distinct sapcing which turns into an absence of word separation. Standard word spacing is used since it makes text easier to read and allows transcription.

Modi Script Type Design

Dakkhan Modi Typeface



Dakkhan Modi Regular

//01
Calligraphic style

The Dakkhan Modi family contains four separate style choices including Regular, Bold, Italic as well as Ink. The typeface embodies the very essence of the Modi script- the cursive nature. The contemporary digital typeface mirrors traditional hand-written feel a boru pen and ink to preserve the scripts historic beauty for modern needs. Although respecting the script's functional aspects the typeface integrates attractive designs to enhance its letterforms.

//02
Single-stroke charaters

A single extended pen movement by the scribe produced all Modi letterforms. The cursive nature of this script emerged as its distinct defining characteristic from this writing system. Each character within the Dakkhan Modi Typeface follows this cursive design principle by offering an easy single-stroke path for writing like pen movements of the hand. The historical authenticity remains intact which produces a harmonized visual effect.

//03
Context specific characters

Contextual adaptability is one of the reasons why the Modi script shows its extraordinary beauty and structural intricacy. The script contains characters that need specific changes or unique presentation depending on word placement or letter pairing and phonetic requirements of each syllable.

//04
Multi-style characters

The Modi script, with its historical roots in rapid, handwritten communication, naturally developed a degree of flexibility in its letterforms. This resulted in the presence of allographs – different visual representations of the same underlying character. The Dakkhan Modi typeface includes these allographic variations, adding to the scripts beauty.

//05
Multi- era style

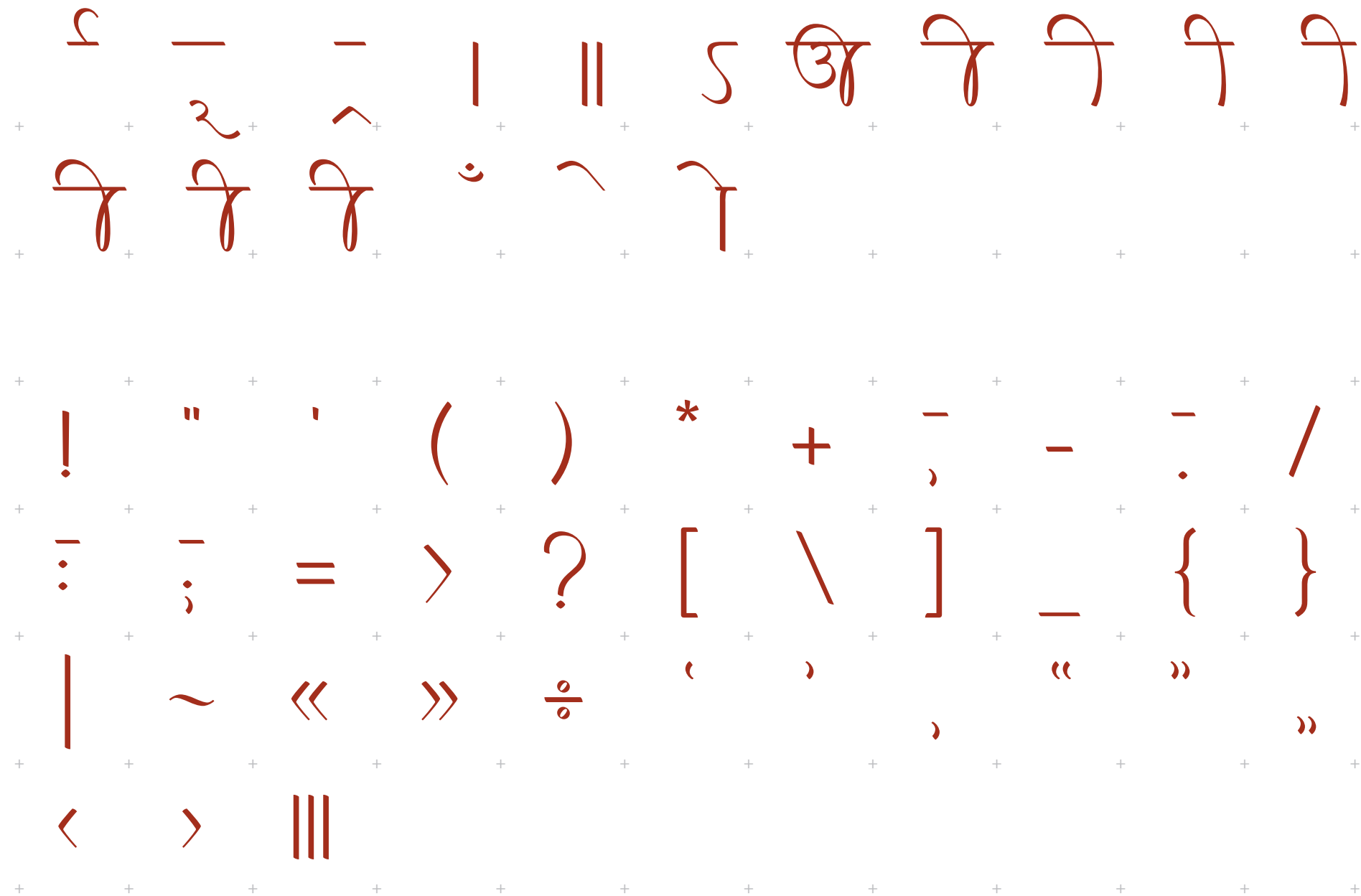
The Dakkhan Modi typeface embraces a multi-era stylistic approach, intentionally drawing inspiration from the evolution of the script across different historical periods. Rather than adhering strictly to a single era's conventions, each weight and style presenting a unique facet of Modi's rich history. This fusion allows the typeface to embody the efficiency and stylistic nuances that developed over time.

ય ધ ઇ ઈ ઊ ઊ ઋ ઋ લ લૃ ઈ
 ૈ ે ૆ ળ ઇ ગ ઘ ઙ ઞ છ જ
 ઙ ઞ ટ ઠ ડ ઢ ણ ત પ ઇ ઈ
 જ પ પા ઇ મ મ ઇ ડ ઢ ઇ થ
 ષ ડ ઇ ઠ ડ ઇ થ

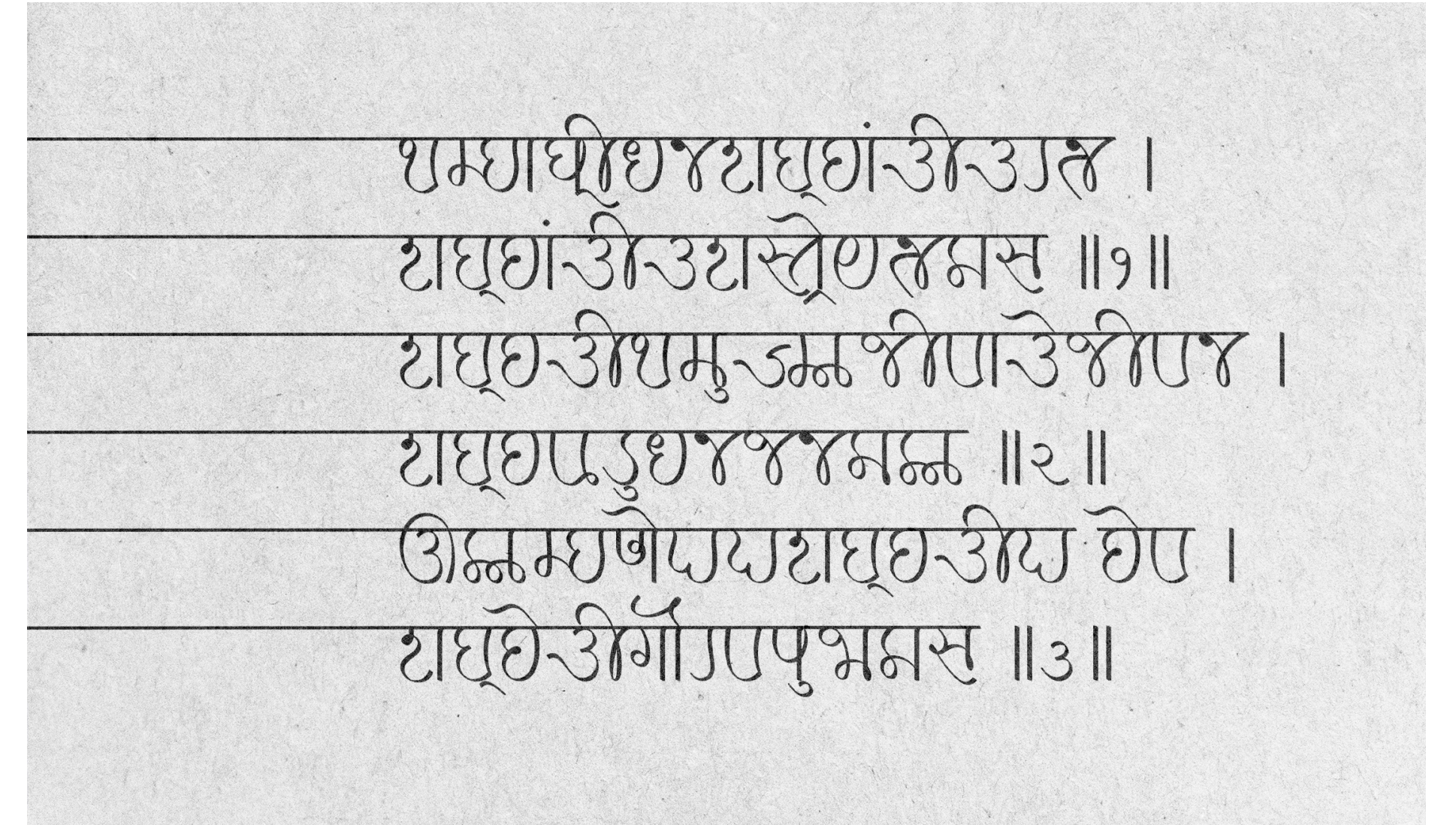
ઠ ઠ ઠ ઠ ઠ ઠ ઠ ઠ ઠ ઠ

ઊ મ મ્ મ્ પ્ પ્ ણ સ ણ ડ ડ ડ
 ડ ડ ડ ડ ડ ડ ડ ડ ડ ડ
 ડ ડ ડ ડ ડ ડ ડ ડ ડ ડ
 ડ ડ ડ ડ ડ ડ ડ ડ ડ ડ

ડ ડ ડ ડ ડ ડ ડ ડ ડ ડ
 ડ ડ ડ ડ ડ ડ ડ ડ ડ ડ



Sample Text



Variations

Digital Modi script fonts operate within a deficient environment because they lack various weight-level options. This means that for most Modi fonts available today, one will typically find only one or perhaps a very limited selection of styles, usually a regular or standard weight. Here we explore the potential possibilities to arrive at the optimal style for the typeface.

Reduced weight (-2)

Increased weight (10)

Reduced weight (-5)

Slant angle 5°

Slant angle 10°

Reduced width

Increased weight (10)

Faded Ink Effect

Family

01// BOLD

Weight Bold

02// INK

Weight Regular

03// SLANT

Weight Regular

Style Heavy

Style Ink Bleed

Style Italic

Dakkhan Modi// Regular

સદા

Dakkhan Modi// Bold

સદા

Dakkhan Modi/ Slant

સદા

Dakkhan Modi// Ink

સદા

Sample Text

અમ્મા ઘી ઇજ ટાઘાંતીન્ડ ડલે ।
ટાઘાંતીન્ડ ટાસ્ત્રે ઇજ મસ ॥૧॥
ટાઘ્ઠતી ઇમુન્ઝ઼ જીપાતે જીપજ ।
ટાઘ્ઠ ડડુ ઇજ જજમ઼ ॥૨॥
ઊ઼ મ્ઘળે ડઢ ટાઘ્ઠતી ડ ઇપ ।
ટાઘ્ઠેતી ગોગપ પુખ મસ ॥૩॥

Bold 18 pt

અમ્મા ઘી ઇજ ટાઘાંતીન્ડ ડલે ।
ટાઘાંતીન્ડ ટાસ્ત્રે ઇજ મસ ॥૧॥
ટાઘ્ઠતી ઇમુન્ઝ઼ જીપાતે જીપજ ।
ટાઘ્ઠ ડડુ ઇજ જજમ઼ ॥૨॥
ઊ઼ મ્ઘળે ડઢ ટાઘ્ઠતી ડ ઇપ ।
ટાઘ્ઠેતી ગોગપ પુખ મસ ॥૩॥

Slant 18 pt

અમ્મા ઘી ઇજ ટાઘાંતીન્ડ ડલે ।
ટાઘાંતીન્ડ ટાસ્ત્રે ઇજ મસ ॥૧॥
ટાઘ્ઠતી ઇમુન્ઝ઼ જીપાતે જીપજ ।
ટાઘ્ઠ ડડુ ઇજ જજમ઼ ॥૨॥
ઊ઼ મ્ઘળે ડઢ ટાઘ્ઠતી ડ ઇપ ।
ટાઘ્ઠેતી ગોગપ પુખ મસ ॥૩॥

Ink 18 pt

Character Design Devanagari

- Introduction
- Varnamala
- Features of Modi
- Integrating Modi
- Glyph Cards
- Font Design Workflow
- Final Typeface

Introduction

This typeface reimagines Devanagari by drawing inspiration from the historical Modi script. Modi, lends its fluidity and efficiency to address some of Devanagari's inherent structural limitations. Here we explore design that seeks to enrich contemporary Devanagari typography.

The aim is to provide a fresh, yet historically grounded aesthetic, expanding the stylistic options available to Devanagari, and ultimately enhancing its versatility and visual appeal in the modern context.

Devanagari remains a vital script for millions across India, Nepal, and beyond, creating a growing demand for typefaces that are both functional and aesthetically diverse. By incorporating elements of Modi in Devanagari, it forges a connection with the past while pushing the boundaries of modern design. A visually similar multi script typeface enhances accessibility and visual relatability, proving invaluable for modern readers and digital humanities projects that frequently involve the transcription and translation of historical documents.

Varnamala

Vowels

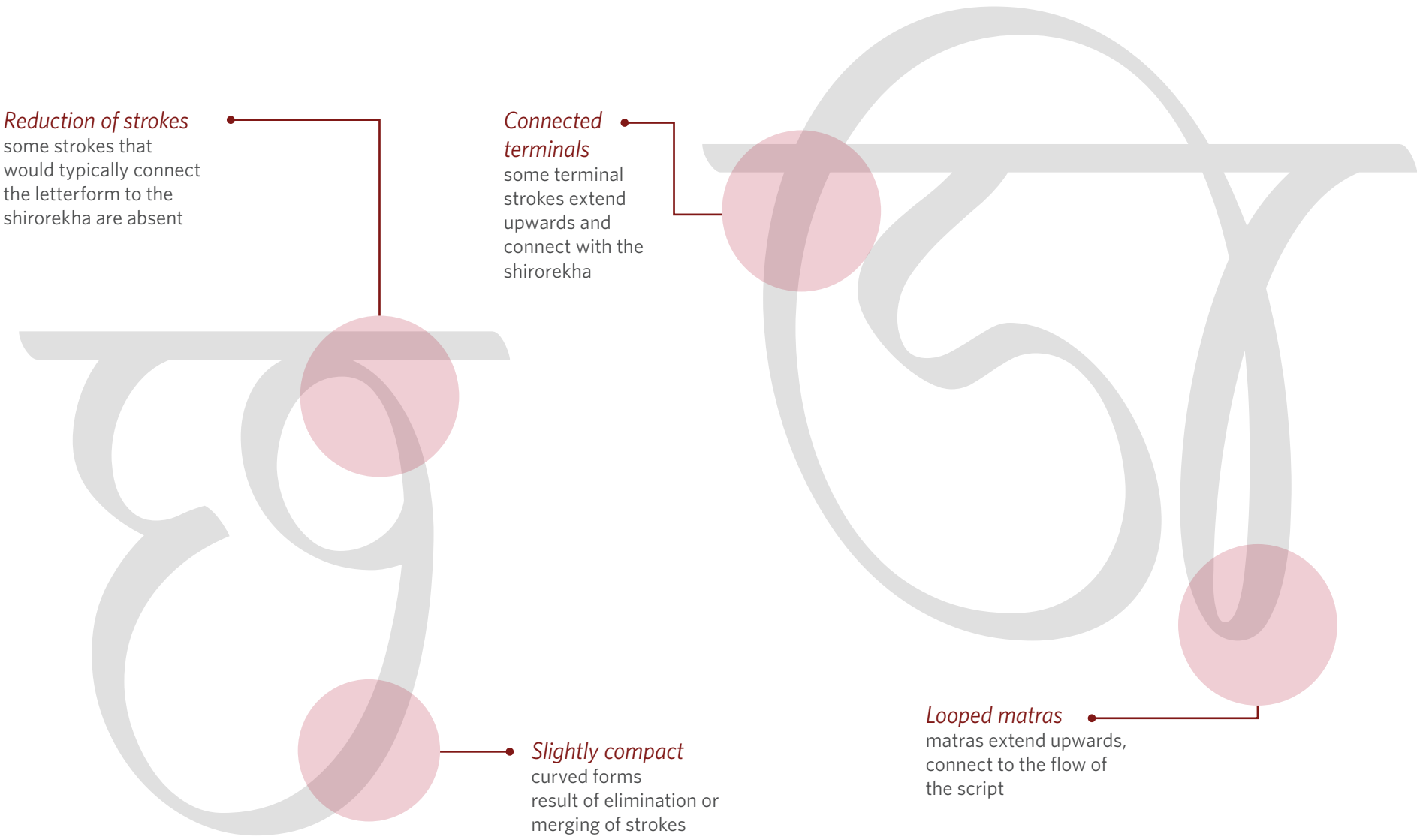
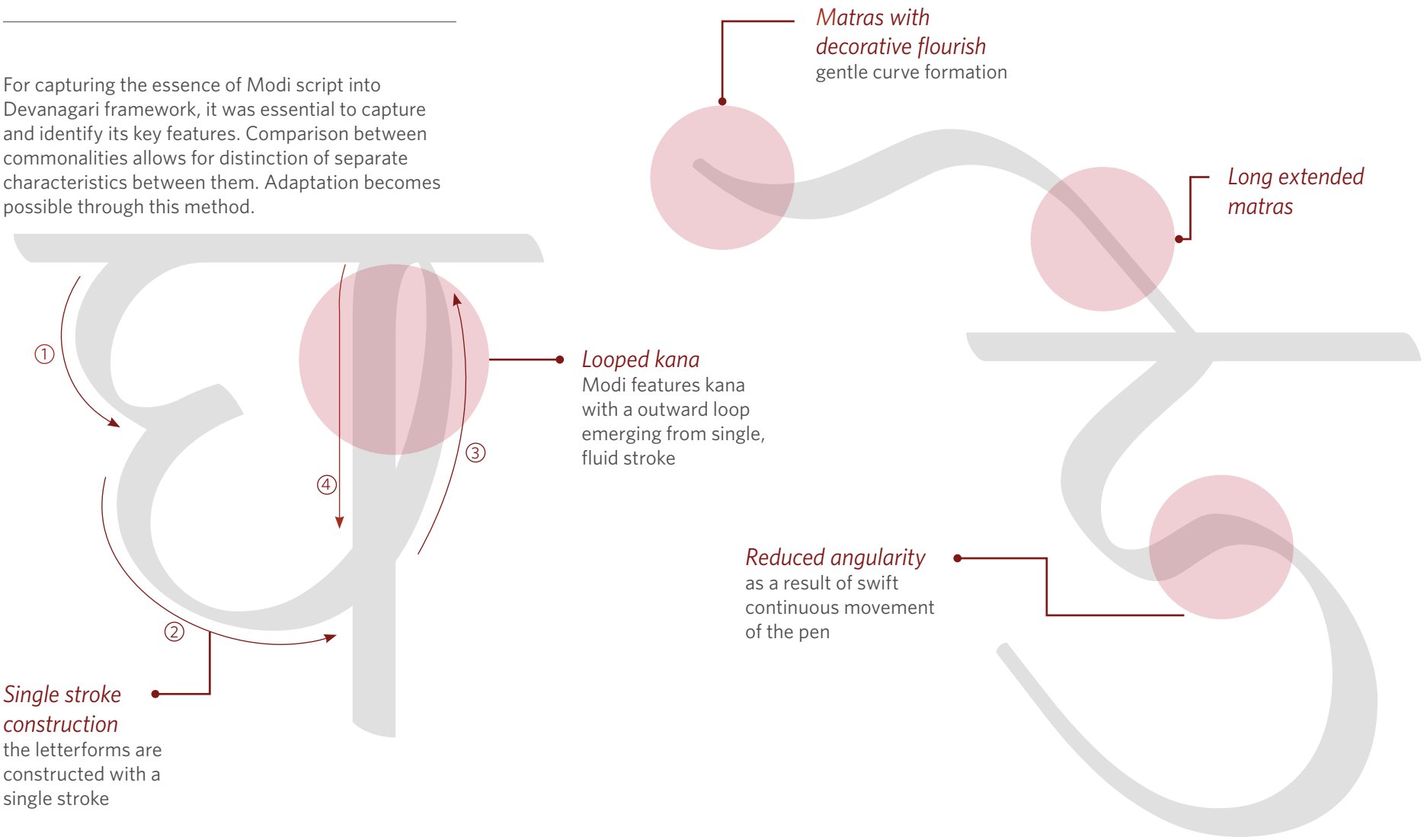
अ आ इ ई उ ऊ ए ऐ ओ औ अं अः

Consonants

क ख ग घ ङ च छ ज झ ञ
ट ठ ड ढ ण त थ द ध न
प फ ब भ म य र ल व श
ष स ह ळ क्ष ज्ञ

Features of Modi

For capturing the essence of Modi script into Devanagari framework, it was essential to capture and identify its key features. Comparison between commonalities allows for distinction of separate characteristics between them. Adaptation becomes possible through this method.



Similar Characters

Characters

An analysis between Devanagari script and Modi script validated their common visual characteristics. The character set's relationships spanned from identical forms to entirely dissimilar ones which did not show any shared visual characteristics.

Observe the highlighted letteforms in table 2. Here the highlighted letteforms from Modi as well as Devanagari are either identical or share similar visual characteristics.

MODI	DEVANAGARI	MODI	DEVANAGARI	MODI	DEVANAGARI
अ	अ	ग	ग	ध	ध
आ	आ	घ	घ	न	न
इ	इ	ड	ड	प	प
ई	ई	उ	च	फ	फ
उ	उ	छ	छ	ब	ब
ऊ	ऊ	ज	ज	भ	भ
ऋ	ऋ	झ	झ	म	म
ॠ	ॠ	ञ	ञ	य	य
ल	ल	ट	ट	र	र
लृ	लृ	ठ	ठ	ल	ल
ए	ए	ड	ड	व	व
ऐ	ऐ	ढ	ढ	श/श	श/श
ओ	ओ	ण	ण	ष	ष
औ	औ	त	त	स	स
क	क	थ	थ	ह	ह
ख	ख	द	द	ळ	ळ

Table 02

Form wise Categorization

Recurring form

Family

उ

अ आ उ ऊ ओ औ

ड

इ ई ड झ ड ह

त्र

ऋ ॠ त्र

ए

ए ऐ

c

क ब व ळ

र

ख थ य र श श स

ग न

ग न भ म

Recurring form

Family

ध

घ छ ध

ञ

ज ज

ट

ट ठ ढ द

प

ण प फ ष

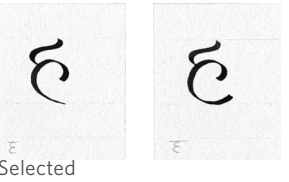
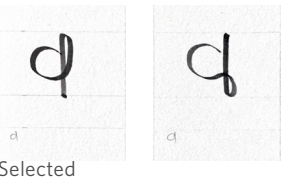
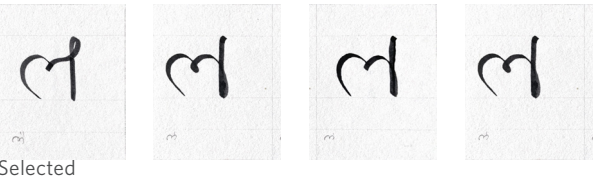
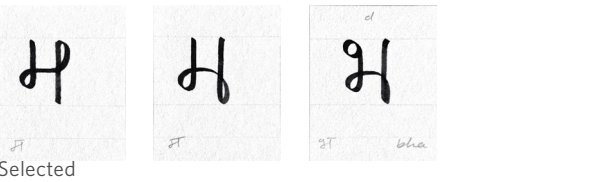
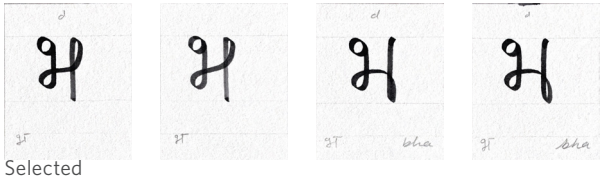
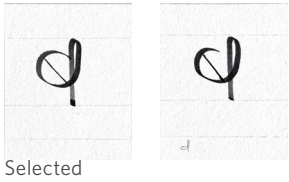
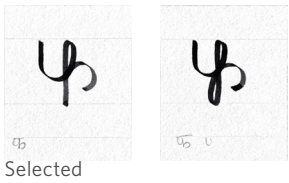
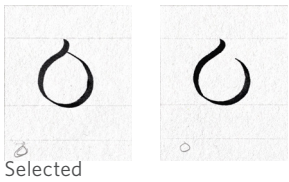
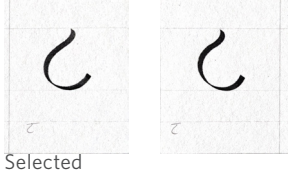
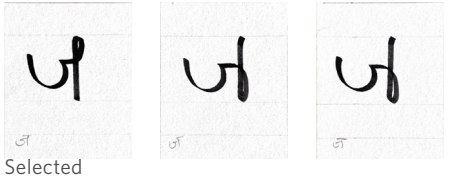
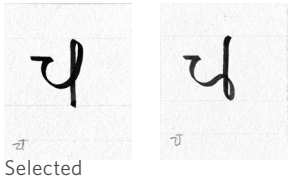
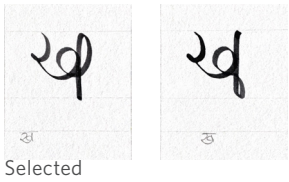
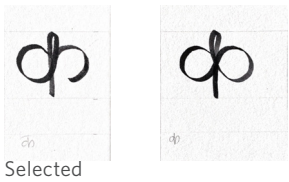
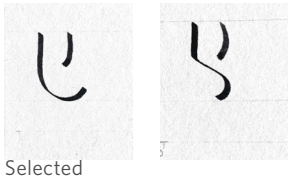
ल

ल लृ लृ

च

Explorations

Explorations were done to chose the most legible character that refelcted the essence of Modi, by adapting its features, and visual characteristics.



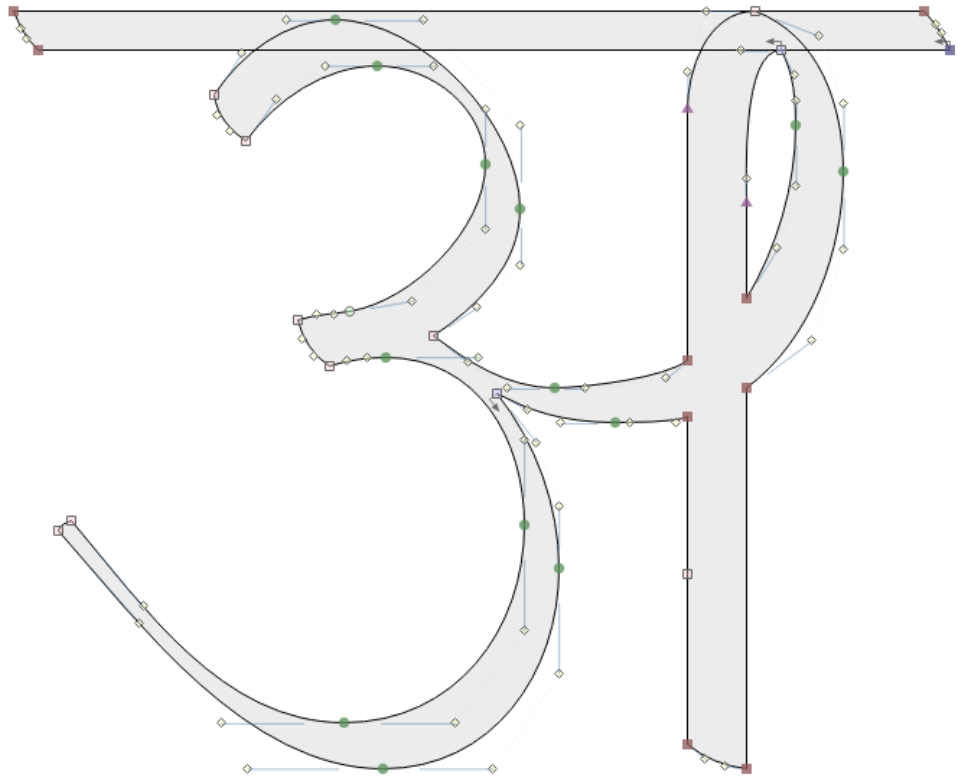
Final Glyph Cards

Designing in FontLab

The subsequent phase involved glyph development within FontLab. To determine appropriate weight, width, and height parameters, a limited set of letterforms that showcased diverse forms and orthographic representations were designed.

Glyphs

क	च	ज	न
Ka क	Cha च	Ja ज	Na न
म	ब	भ	व
Ma म	Ba ब	Bha भ	Va व
श	ढ	फ	ल
Sha श	Dda ढ	Pha फ	La ल



Reflection

The designed glyphs underwent rigorous analysis at various point sizes to identify any orthographic anomalies. This analysis revealed that the glyph weight, particularly in smaller point sizes, resulted in visual haziness, hindering readability.

The inconsistent distribution of weight across counters and loops along with knots created disruptions in the visual elements of the font design.

Sharp bar
small vertical stems appear sharp

Rigid bar
the bar connecting the loop and the kana appear very rigid

Inconsistent flow
glyphs demonstrate a thin stroke weight

Compact loop
some curves of loops appear compact

Small loops
small lops with small counter spaces appear as knot at smaller point sizes

Illegibility at lower point sizes
closed spaced knots appear as loops

Tight loops
result in sharpness in the loop

Angular stroke
at smaller sizes, angular strokes appear to disconnect kana from curves

The Process

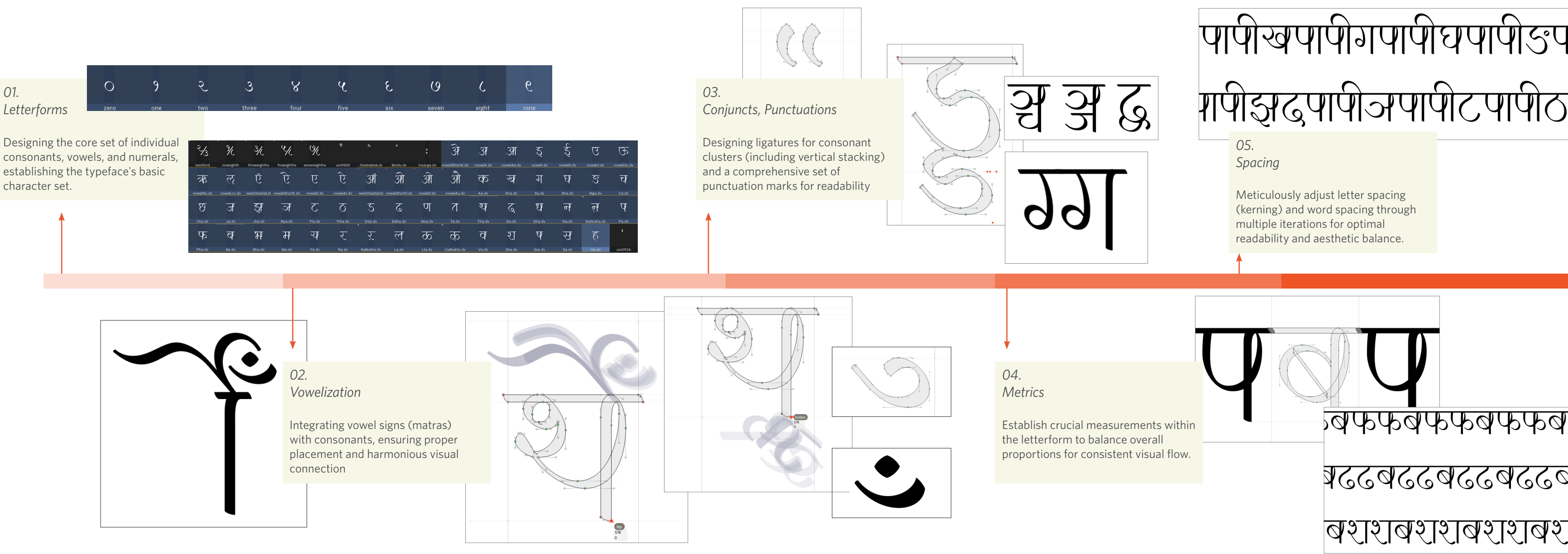
Phase 1
Foundational Glyphs
The initial phase involves the designing of the core character set: individual consonants, independent vowels, and numerals, establishing the fundamental visual framework of the typeface.

Phase 2
Vowel Integration
Integration of vowel diacritics (matras), emphasizing accurate placement and harmonious visual connection to ensure phonetic accuracy.

Phase 3
Conjunct Ligatures
Conjunct ligatures (including vertical stacking) and a set of punctuation marks are designed to facilitate clear and accurate representation.

Phase 4
Metric Spacing
Overall proportional relationships within the glyph as well as in its relationship with other glyphs are established in this phase to ensure consistent visual rhythm and legibility across the typeface.

Phase 5
Spacing and Refinement
The final phase involves process of spacing and iteration, adjusting inter-glyph spacing (kerning) and inter-word spacing to optimize readability.



Modi-inspired Devanagari Script Type Design

Dakkhan Devanagari Typeface



Dakkhan Devanagari Regular

//01
Calligraphic style

The Dakkhan Devanagari family incorporates four style variants of calligraphic modulated typeface- Regular, Bold, Italics, and Ink. This typeface discounts its design from the flowing structure of Modi's writing script. The boru (reed pen) with ink served as inspiration to create this typeface which maintains historical charm in its present-day applications. The script keeps its functional aspect while the typeface bestows artistic elegance.

//02
Modi inspired characters

The Modi letterforms exist as a result of writing strokes that stay continuous without interruption. The script achieved its exclusive fluid and natural rhythm through this approach to writing. Each character in the Dakkhan Devanagari Typeface follows this cursive heritage principle to merge natural hand movement into single-stroke writing. The typeface upholds historical authenticity because its coherence elements maintain consistent design elements.

//03
Multi-lingual support

While the Modi script was specifically used to write Marathi, the Deccan Devanagari typeface supports a broader system of languages written in the Devanagari script. These languages include- Hindi, Marathi, Konkani, Kashmiri, Nepali, Rajasthani, Sindhi and Sanskrit and Bodo.

अ	आ	इ	ई	उ	ऊ	ऋ	लृ	ए	ऐ	ओ
औ	क	ख	ग	घ	ङ	च	छ	ज	झ	ञ
ट	ठ	ड	ढ	ण	त	थ	द	ध	न	प
फ	ब	भ	म	य	र	ल	व	श	ष	स
ह	ळ	ल	क्ष	ज्ञ	ॐ	ऋ	लृ			

0 1 2 3 4 5 6 7 8 9

क ख ग ज ड ढ फ़ य टा म औ

ॐ अ आ इ ई उ ऊ ऋ ए ओ ऌ ड ण

ँ ं ः ऄ अ आ इ ई उ ऊ ऋ

कक कख कज कझ कट कण क्त कथ
 कढ कन कप कफ कम कय कल कव
 कश कस खख खा खन खम खय खव
 खश गग गघ गज गण गढ गध गन
 गव गम गम गय गल गव गस घू
 घम घय च्च च्छ चू चम ज्ञ झन
 झम झय ञ्छ ञ्श णट ण्ठ णड णढ

णण णम णय णव त्त त्त त्त त्त
 श्व धू ध्म ध्य ध्व न्क न्ग न्च
 न्छ न्न न्प न्फ न्म न्म न्छ न्व
 न्श न्स न्ह ण्छ ण्ट णा प्प प्प
 प्फ प्म प्य प्ल प्व प्श प्स प्ज
 फट फ्त फथ फप् फफ फय फल फश
 ब्ब ब्ढ ब्ब ब्ब ब्म ब्य ब्व भ्य

भ्ल भ्व म्ना म्ढ म्भ म्प म्फ म्ब
 म्म म्म म्य म्ल म्व म्श म्स म्ह
 म्य ल्क ल्य ल्ग ल्व ल्ज ल्ढ ल्ठ
 ल्ढ ल्ढ ल्ना ल्थ ल्ढ ल्प ल्फ ल्ब
 ल्भ ल्थ ल्ना ल्ब ल्श ल्स ल्ह ल्ळ
 ल्ना ल्ब ल्ह ल्क ल्छ ल्श ल्भ ल्थ
 ल्क्ष ल्थ ल्श ल्क ल्छ ल्ठ ल्ण ल्प

ष्फ ष्मा ष्य ष्व ष्ष स्क् स्ख स्त्
 स्ता स्थ स्ढ स्न स्प स्फ स्ब स्म
 स्य स्त स्व स्स प्रा पश म्श ल्श
 श्क श्छ श्त् श्ता श्म श्य श्व श्श
 ल्क क्ल ग्ल ल्ल प्ल फ्ल ब्भ भ्ल
 म्ल ल्ल ब्भ स्त द्व्य न्य भ्य ह्य
 क्त्व क्प क्थ्य ह्मा ह्य ह्व क्स्त् क्स्ता

क	ख	ग	घ	ङ	च	छ	
ख	ख	म	म	म	म	म	फ
ज	त	थ	न	न	न	न	न
द	द	द	द	द	द	द	द
अ	इ	इ	इ	इ	इ	इ	इ
ट	ट	ट	ट	ट	ट	ट	ट
ह	ह	ह	ह	ह	ह	ह	ह

।	।	।	।	।	।	।	।	।	।	।
।	।	।	।	।	।	।	।	।	।	।
।	।	।	।	।	।	।	।	।	।	।
।	।	।	।	।	।	।	।	।	।	।
।	।	।	।	।	।	।	।	।	।	।
!	"	#	%	&	'	()	*	+	,
<	=	>	?	[\]	{		}	'

Family

01// BOLD

अ

Weight Bold

Style Heavy

02// INK

अ

Weight Regular

Style Ink Bleed

03// SLANT

अ

Weight Regular

Style Italic

Dakkhan Devanagari// Regular

अ

Dakkhan Devanagari// Bold

अ

Dakkhan Devanagari// Slant

अ

Dakkhan Devanagari// Ink

अ

Sample Text

आम्हा घरी धन शब्दांचीच रत्ने ।
शब्दांचीच शस्त्रे यत्ने करू ॥१॥
शब्दचि आमुच्या जीवाचे जीवन ।
शब्द वाटू धन जनलोका ॥२॥
तुका म्हणे पहा शब्दचि हा देव ।
शब्देचि गौरव पुजा करू ॥३॥

Regular 32 pt

आम्हा घरी धन शब्दांचीच रत्ने ।
शब्दांचीच शस्त्रे यत्ने करू ॥१॥
शब्दचि आमुच्या जीवाचे जीवन ।
शब्द वाटू धन जनलोका ॥२॥
तुका म्हणे पहा शब्दचि हा देव ।
शब्देचि गौरव पुजा करू ॥३॥

Regular 18 pt

Applications

CONCEPT 1

Exploring the History of Modi Script:

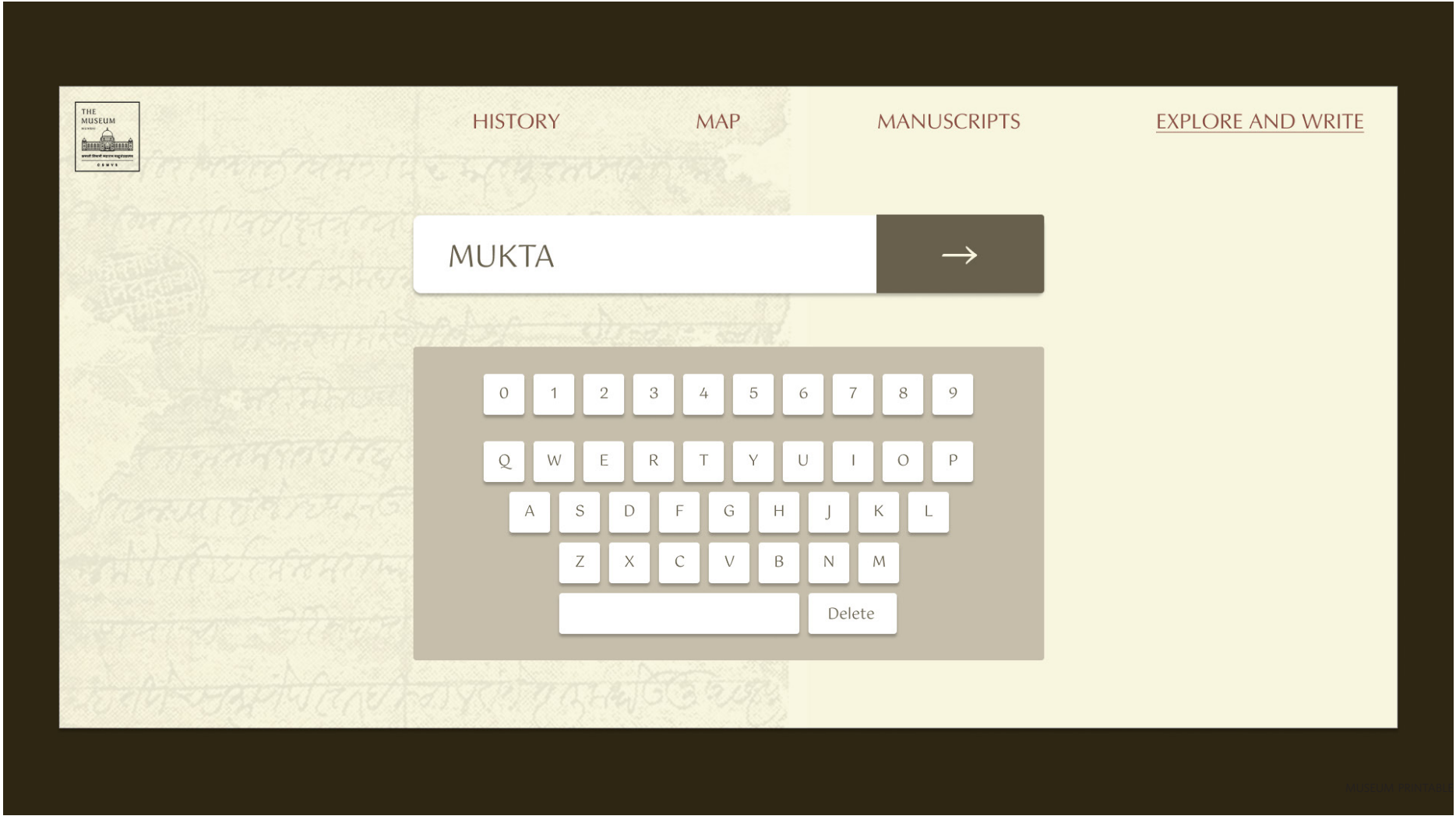
The Modi script information kiosk can serve as a bridge between the past and the present, connecting visitors to the rich history and cultural heritage of the Marathi language. Through interactive exploration and engaging experiences, the kiosk can breathe new life into the Modi script, ensuring its legacy continues to inspire and educate for generations to come.

The kiosk's interactive interface guides visitors through the fascinating history of the Modi script. From its origins as a practical script for administrative purposes to its eventual decline, the kiosk presents a chronological narrative, highlighting key milestones and cultural influences.





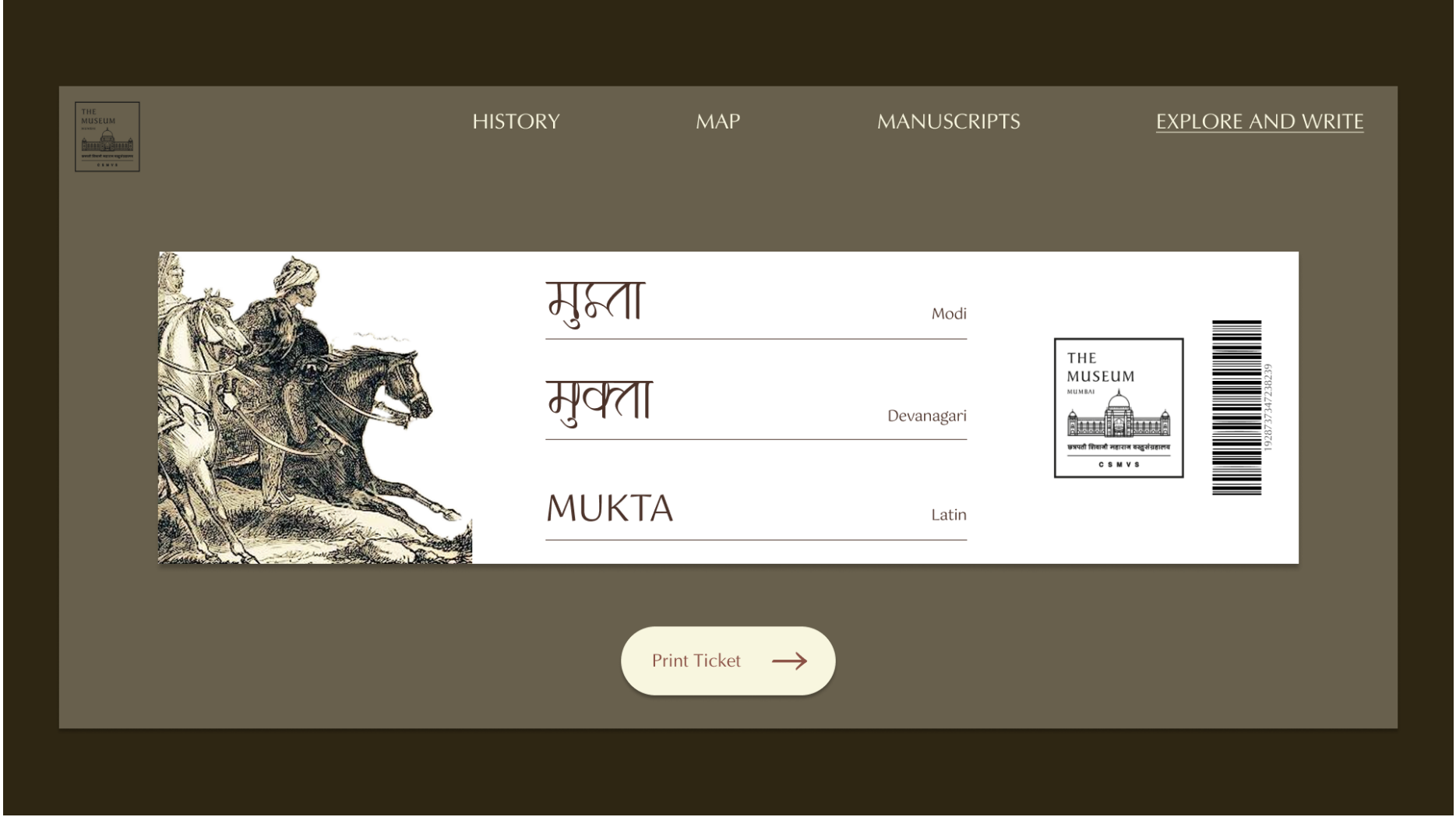
Welcome screen of Kiosk
Tap on 'Interact and Learn' button to enter the Interactive Section.



Type your message/ name.



A new screen will appear with instructions for the tracing activity. Use your finger to trace over the provided path on the screen, following the direction of the arrows or guides.



Displaying a digital ticket with a message or your name written in the Modi script. Preview of how the ticket will look when printed. Look for a button labeled "Print Ticket", tap this button to send the ticket to the printer.

Other Applications



Branding



Publication

Conclusion

The project culminated in the successful design of two typefaces: a Modi script typeface and a Devanagari typeface infused with Modi's aesthetic elements. This achievement not only preserved the historical significance of Modi script but also made it accessible in modern digital contexts.

Throughout the project, I gained valuable insights into the complexities of typographic preservation and adaptation. I learned how to balance cultural authenticity with contemporary design principles, ensuring that the essence of Modi script was retained while enhancing its usability.

The scope of this work extends beyond the creation of these typefaces. It offers a model for integrating historical scripts into modern digital environments, thereby preserving cultural heritage while making it relevant for future generations. The project's outcome has the potential to inspire further typographic innovations, bridging the gap between traditional scripts and modern media.

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