

Project 3

Designing stencil font in Devanagari script

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Guide – Prof. GV Sreekumar

Introduction

- Stencil typefaces are typeface with **slits in their strokes**
- Adding **tracking or slits** will make it more effective for spray paint and rough planking
- If the same content has to be printed over and over again on different places or surfaces, **the easiest method is to make stencil of that content**. This method has been in use traditionally since long back.

Problem statement

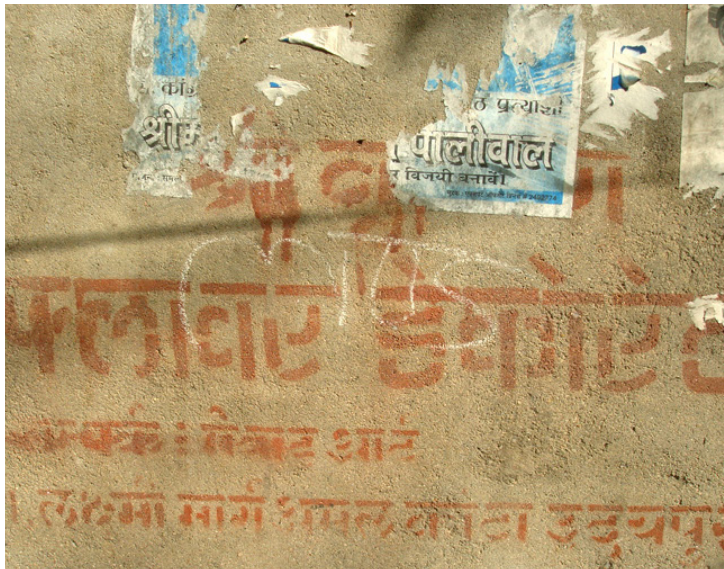
- To create a set of stencil which can be used by sign-board painters to create Devanagari letter forms with improved legibility and to supplement it with digital font.
- To increase readability and harmony of the Devanagari font which is used traditionally in India.

Context of stencil typeface

- Train, Buses, Metro, Armed force vehicles



- Post box, Post office, Product packaging
- Surface where traditional printing is not possible
& used by untrained workers

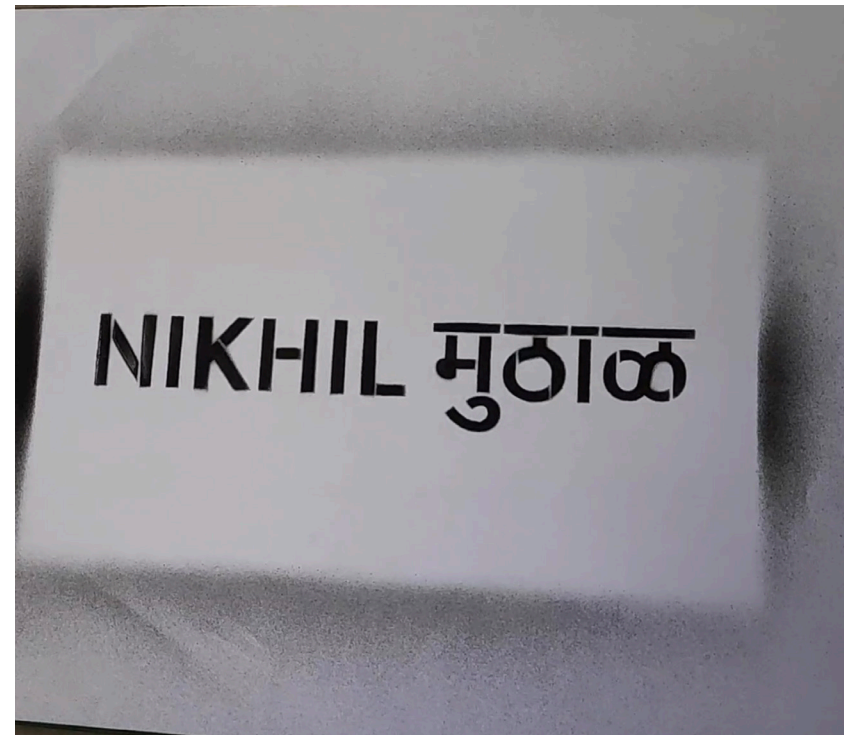


Scope of project

- Though the technology has developed, traditional method of using stencil to write public notices is still in use by peoples.
- This is an attempt at creating a typeface which is **designed especially for use of stencil and to standardize the random usage of fonts.**

Design Methodology

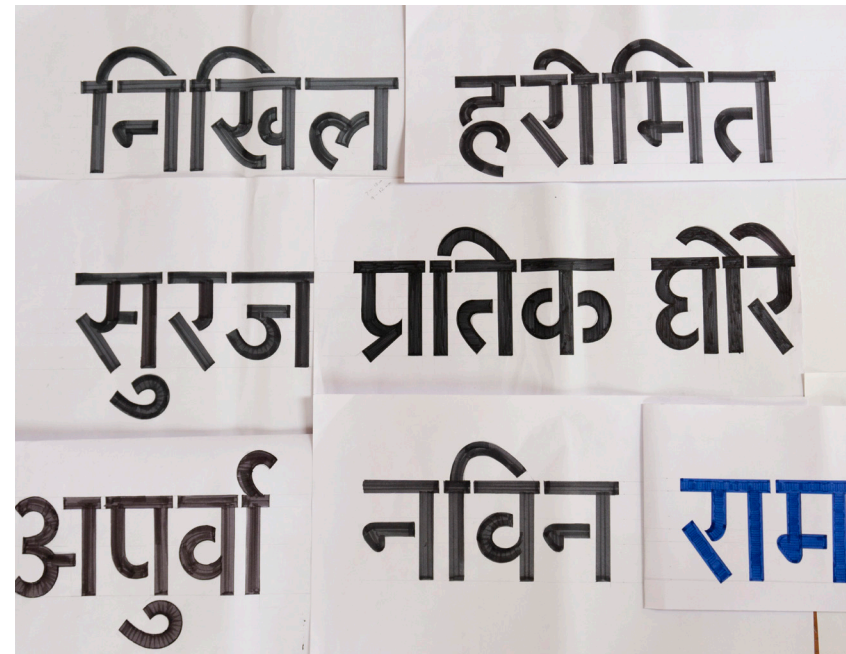
Trial mock up



Challenges

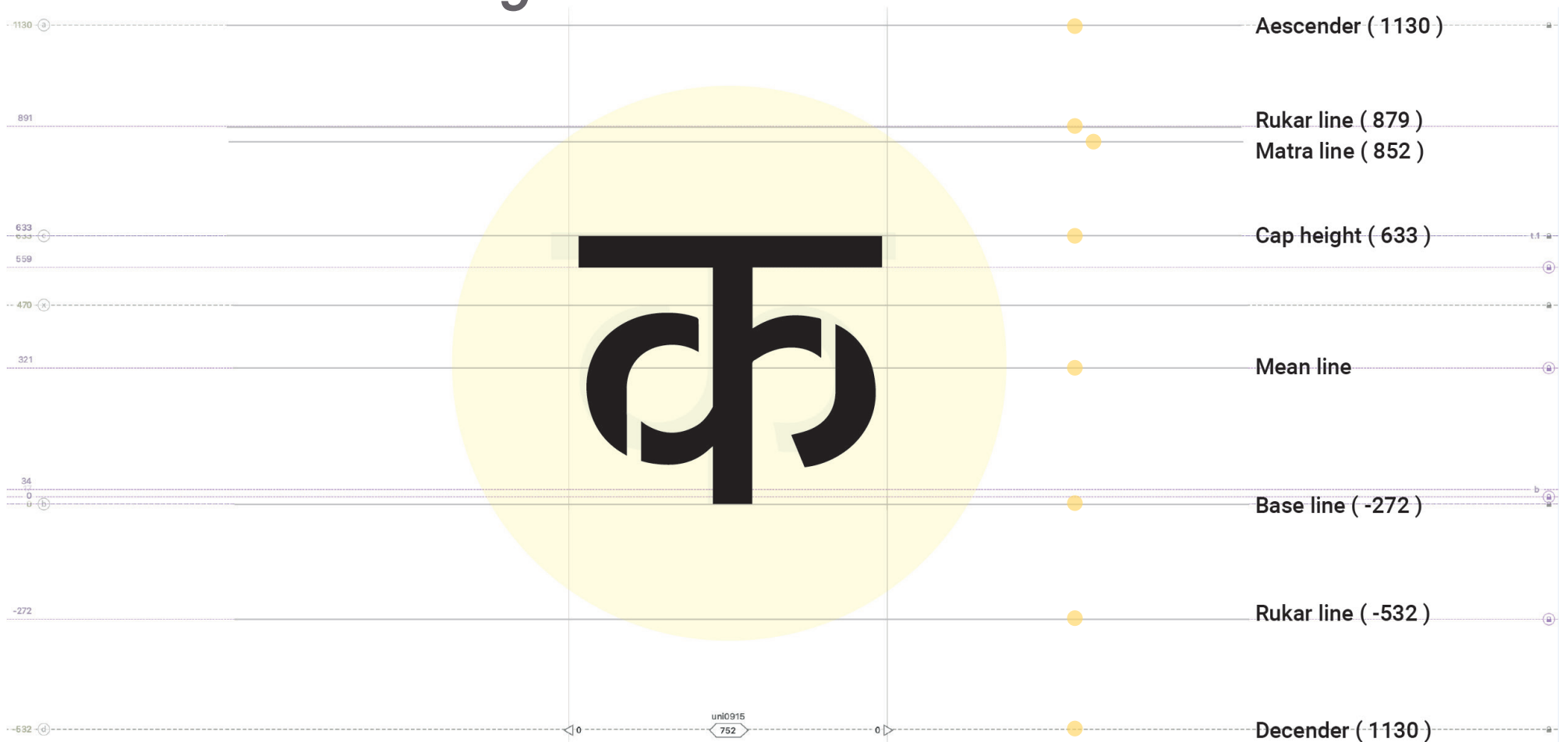
- Legibility
- Ink trap
- Counter form
- Letter Spacing
- Smudging of ink
- Overlapping of strokes
- Complexity of letters

Initial handwritten glyphs sketches



Terminology

Dimension & guideline



Terminology of font

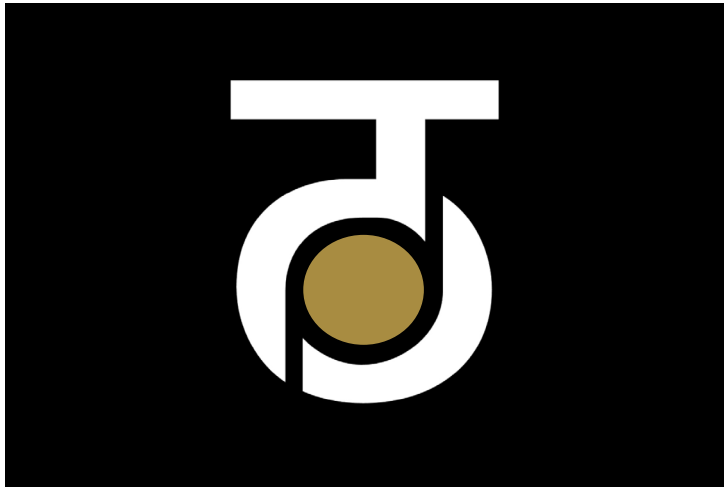
Basic tool – Mono linear font



Construction – Broken (Stencil)



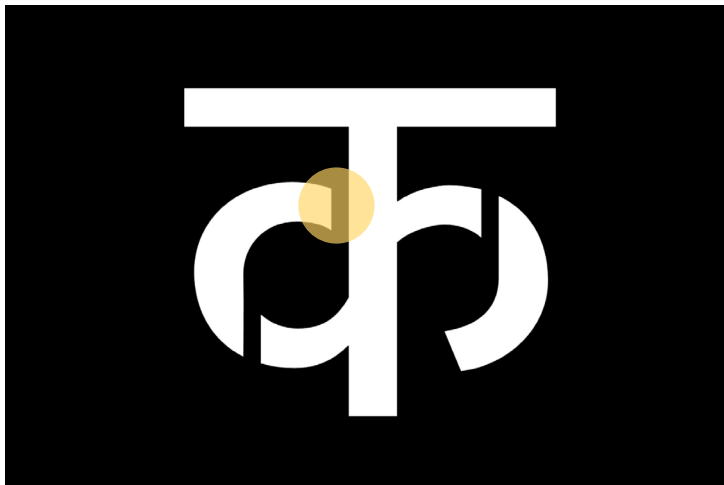
Curves – Oval



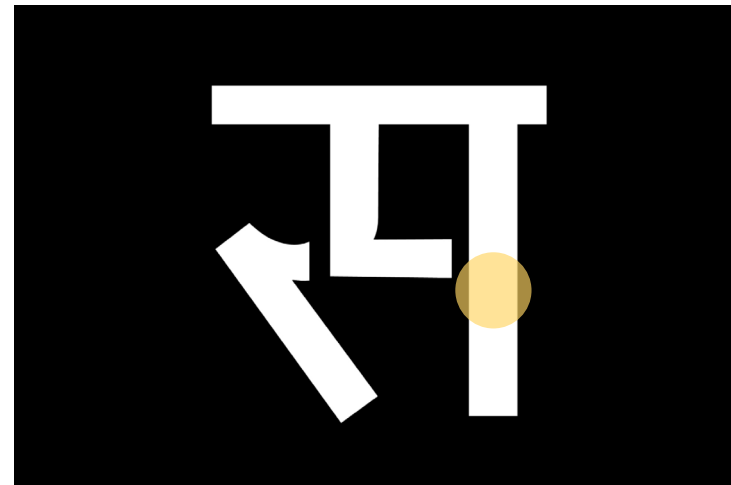
Turn – Curvilinear



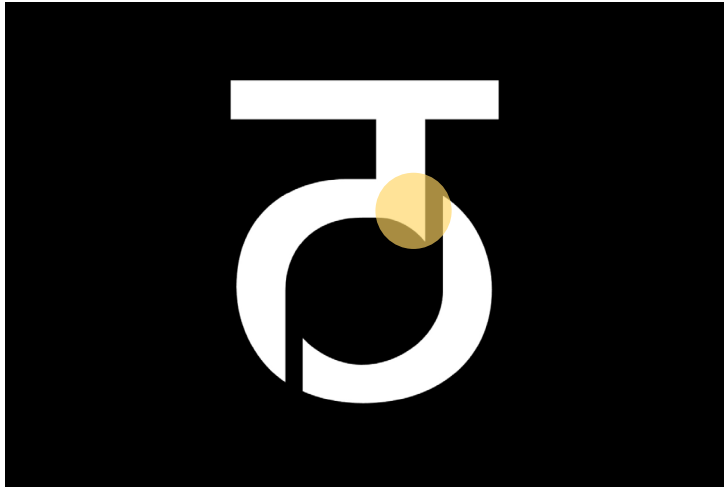
Counter – Open counter



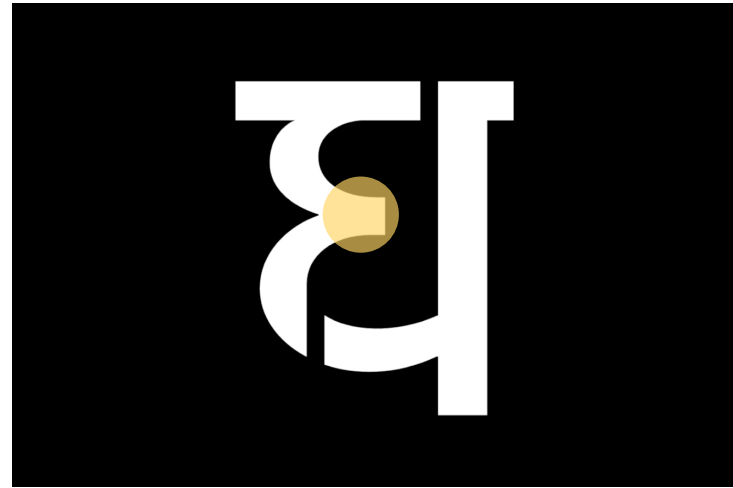
Vertical stem – Parallel



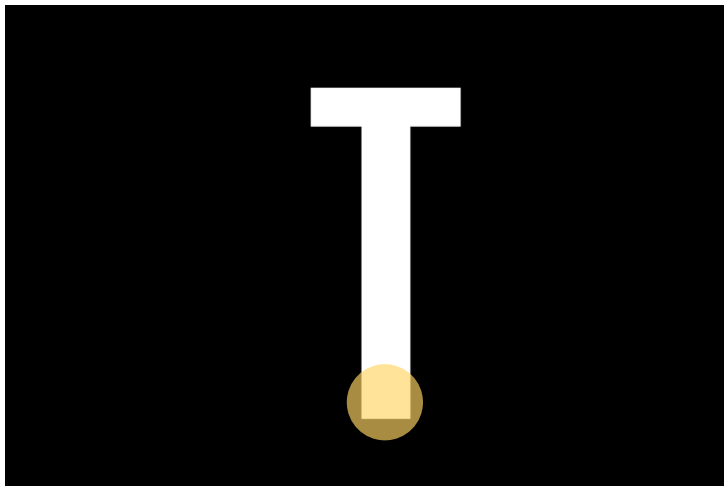
Stem to neck joineries - Acute



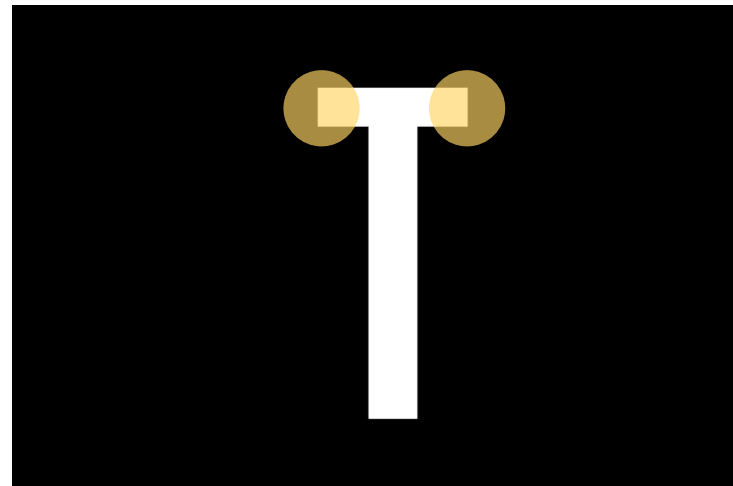
Curve joineries - Un-looped



Vertical terminal - Horizontal



Horizontal terminal - Vertical



Glyph design

Initial glyphs



कोण कोण कोकण जाणार
कोण कोण कोकण जाणार

Suggestion & feedback

भ भ ग ग
ल ल ल

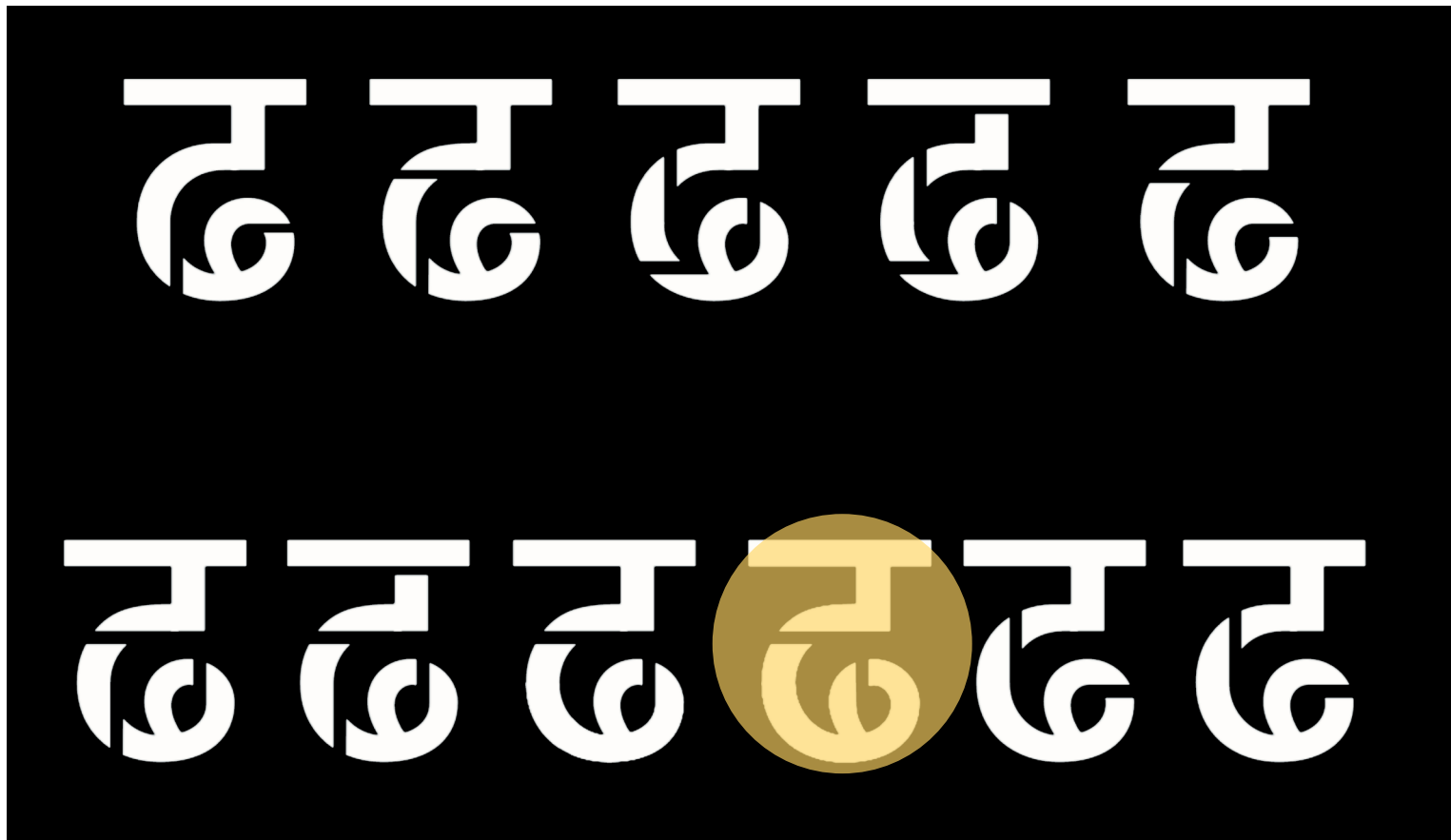
अ अ म म
स स

Suggestion & feedback

उएआकखगघ
डचछजझञण
तशदधनपफ
बयरळवषसह

भारतीय राजघराणा काफी बडा है. भगाओ ना
कोरोना को कोई. हम कीसी स कम नहीं है.
हमको कीसीस कोई मतलब नहीं है. ती एक
काळराज होती. एक एक की एक करना. धरती
माँ एक है. भारत माता की जय. ससा आणि
कासव नावाच मित्र होत. कहाणी हर घर की
घर घर की कहाणी. ऐ तरा नाम का है आग
किनारा कीसकी असाहारा आगधरती है
बाळाच पाय पाळनात होत छोरी हम कीसी स
कामछोरी सीनाजोरी नहीं

Letter with multiple alternatives



Iterations

औकखगघङच
छजझनटठडढ

ओअआइईउऊल
एऐएऐऑओओ

Iterations

णतथदधननप
फबभमयररल

ज्ञक्षकखगजड़
फ़यँअँआँ

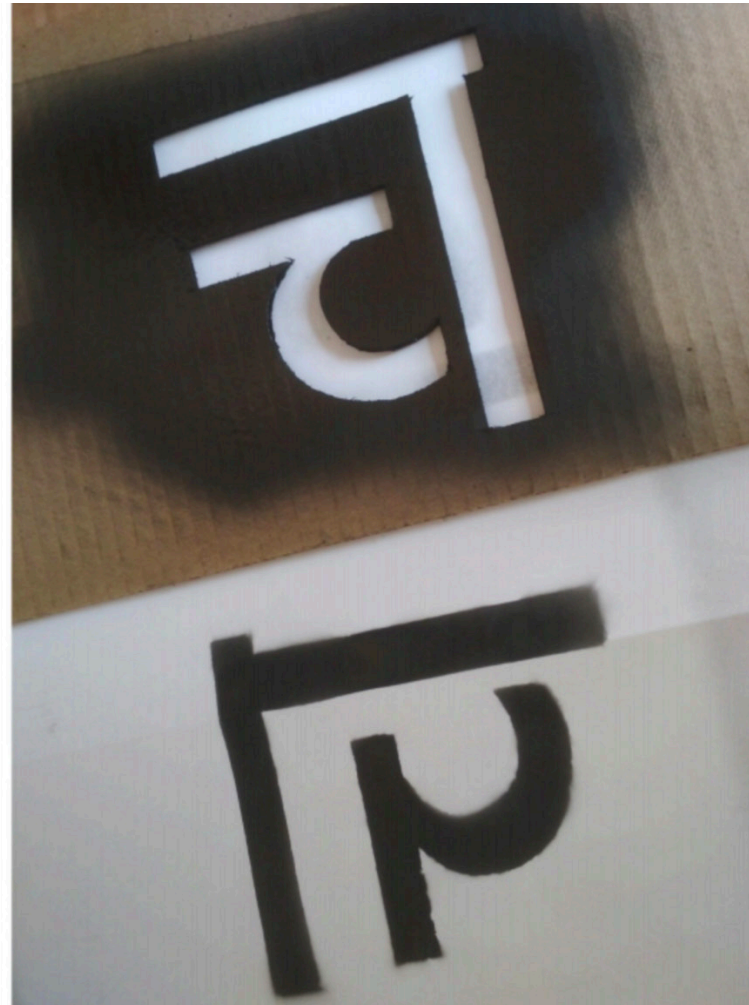
Letters after iterations

झट्टटबषफफएए
पपपययकहअळदस
झट्टटबषफफएए
पपपययकहअळदस
झट्टटबषफफएए
पपपययकहअळदस

Stencil from iteration

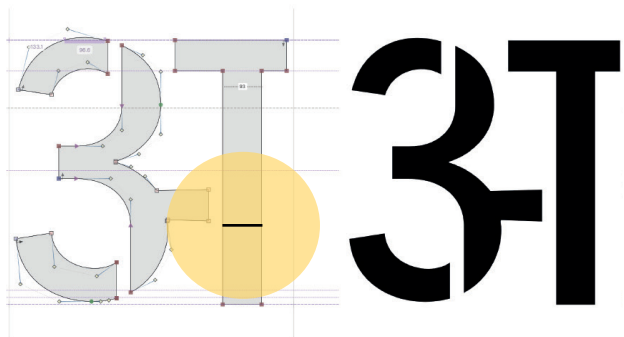


Spraying on glyphs

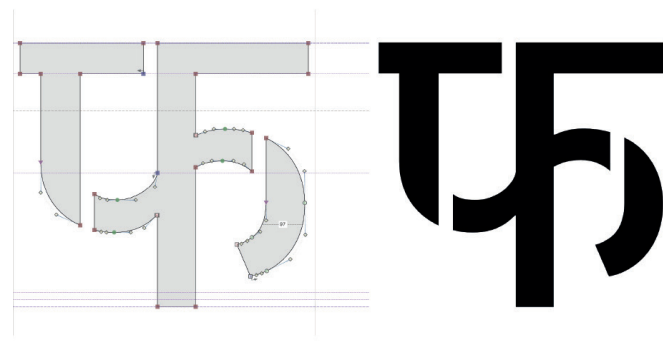
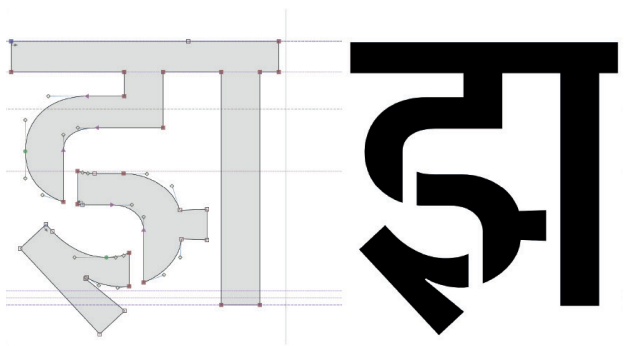
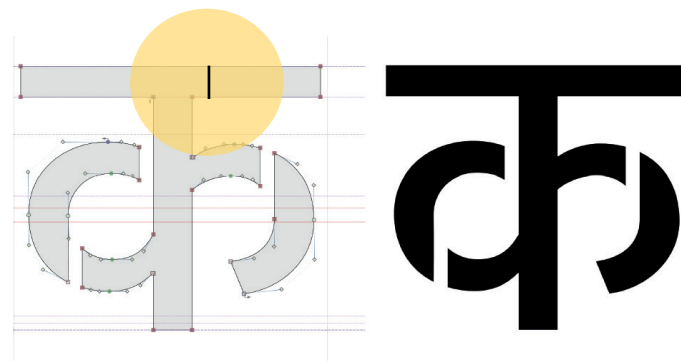


Final glyphs

Vertical bar width – 74



Horizontal bar height – 93

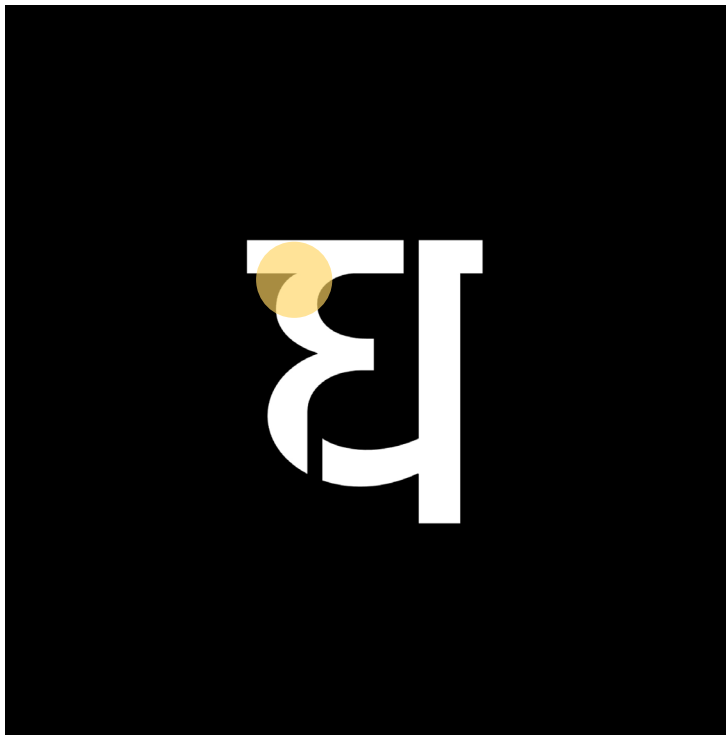


All glyphs in FontLab

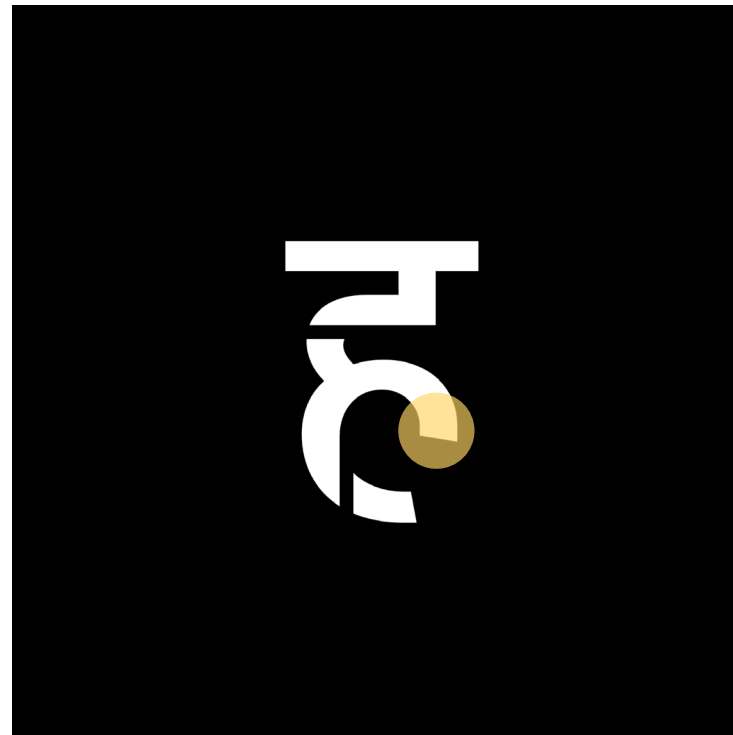


Fine tuning of glyphs

Tuning with joineries



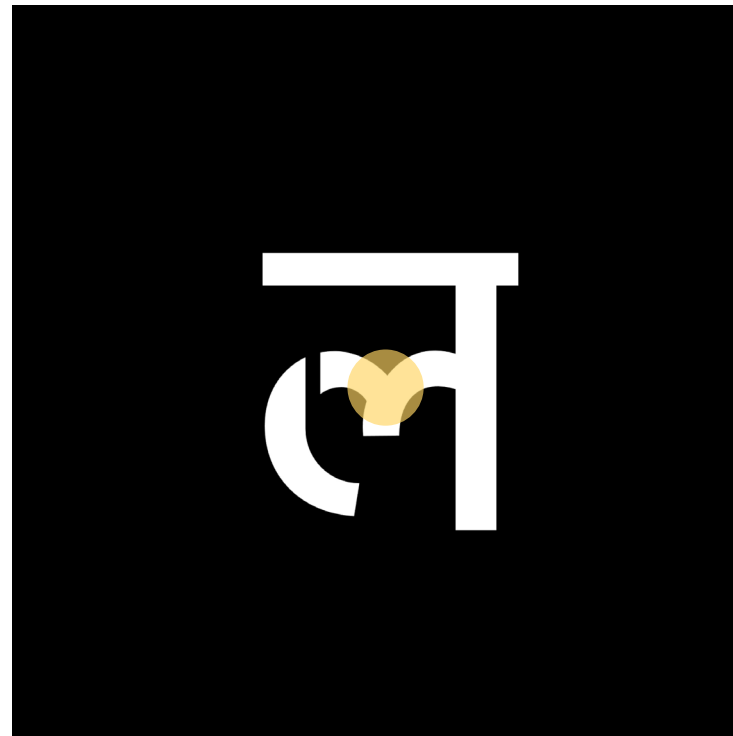
Tuning with end terminal



Tuning with ink trap



Tuning with middle joineries



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

Letter with different matras

Shirorekha Kana Short Ikar Dirgha Ikar Short Ukar Dirgha Ukar Ri Matra E Matra Ai Matra

क का की कि कु कू कृ के कै

Rafar Line
Matra Line
Head Line
Upper Mean Line
Lower Mean Line
Base Line
Rukar Line

Reph O Matra Au Matra Nukta Rakar Chandrabindu Anusvar Visarg

क को कौ क कं कः

Rafar Line
Matra Line
Head Line
Upper Mean Line
Lower Mean Line
Base Line
Rukar Line

Conjuncts, matras

ि + स + त्र = स्त्रि

ल् + थ = ल्थ | अ + ओ = ओ

म् + प = म्प | ज + ई = जी

Alternatives & extra letters

श | श ल | ल
श त्र ऋ

Letter KA with AA matras

क क क

क का की कु कू कृ कि के कै कं कः

Letter AA with matras

अअंअःओअँअ
आआँओओऔ
अअंअःओअँअ
आआँओओऔ

अ

Word composition (18pt)

कधी आला नदीला पूर...
वाहून गेले घरदारं.
गेले पाण्याखाली शेतातले उभे पीकं!
कधी खचली जमीन...
गाडले गेले गाव.
झाले अवघे जीवन भुईसपाट!
कधी झाली अतिवृष्टी...
कोसळेल या इमारती.
गेले पाण्याखाली वाहते रस्ते!
कधी पडला दुष्काळ...
तहानभूकेने झाला जीव व्याकूळ.
थांबता थांबेना डोळयांतला महापूर!

“જિંકળે મ્હળજે નેહમી ફક્ત
પહિલા યેળે અસે નસતે,
એઝાદી ગોષ્ટ પૂર્વીપેક્ષા જાસ્ત
ચાંગલી કરળે મ્હળજેચ જિંકળે હોય.”

કધી ડાલી અતિવૃષ્ટી.
કોસલેલ યા ઇમારતી.

आति तेथे माती
आभिकल्प विद्यालय

कोव्हिड - कोरोना व्हायरस हा विषाणूंचा एक गट आहे.

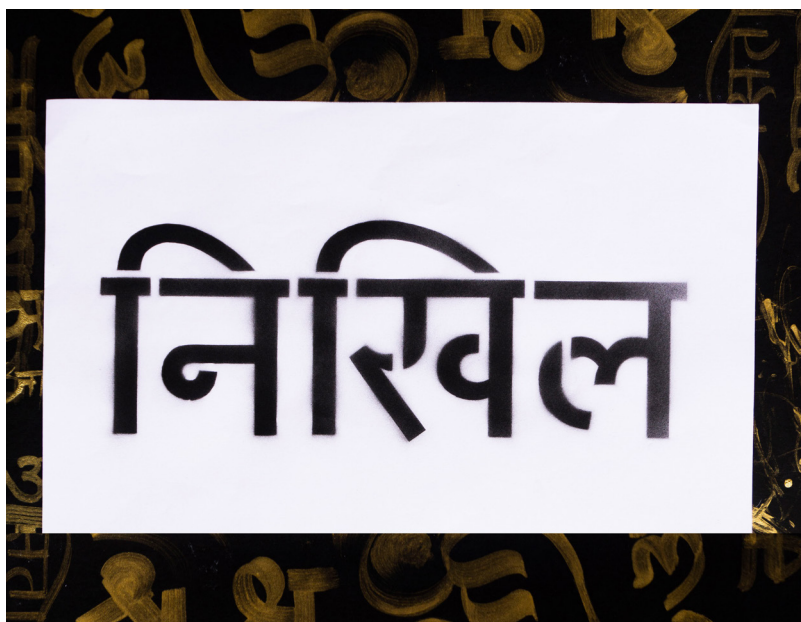
कृपा करा सर !

Word composition (15 Pt – 40pt)

कधी झाली अतिवृष्टी. काका !!!!
कोसळेल या इमारती.

कंबनचे रामायण लोकप्रिय झाले. कंबन
आपले रामायण गायला लागला की लोक
तल्लीन व्हायचे आणि वाहवा करायचे.
कंबन जाईल तेथे त्याचा आदर व्हायचा.

Output after final glyphs design



Possible application

Image of stencil font on wall

Before

કોલ્લી સમાજ સમ્પૂર્ણ સાક્ષરતા અભિયાન

After

કોલ્લી સમાજ સમ્પૂર્ણ સાક્ષરતા અભિયાન

Image of stencil font on bus

Before

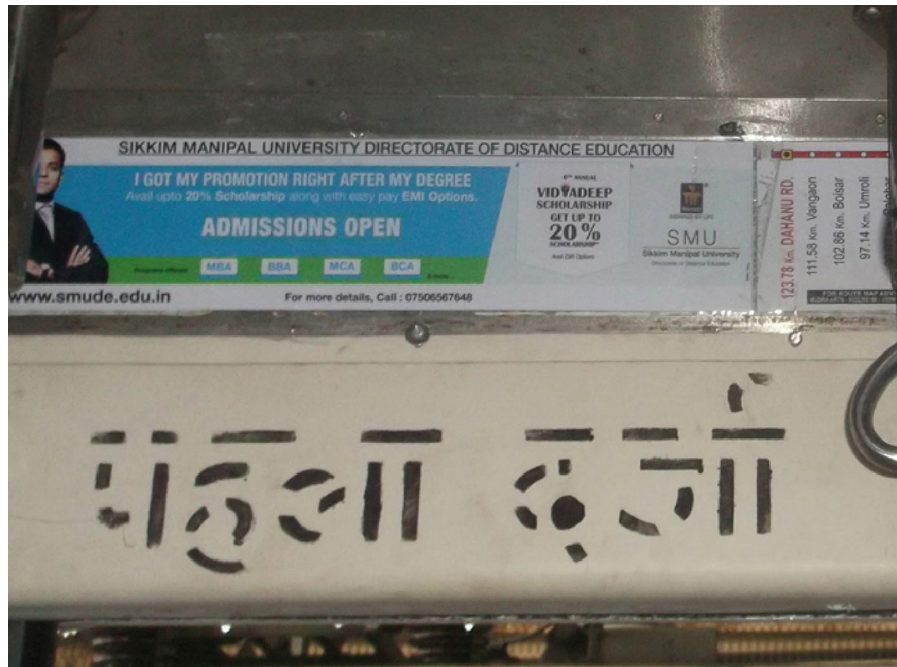


After



Image of stencil font on local

Before



After

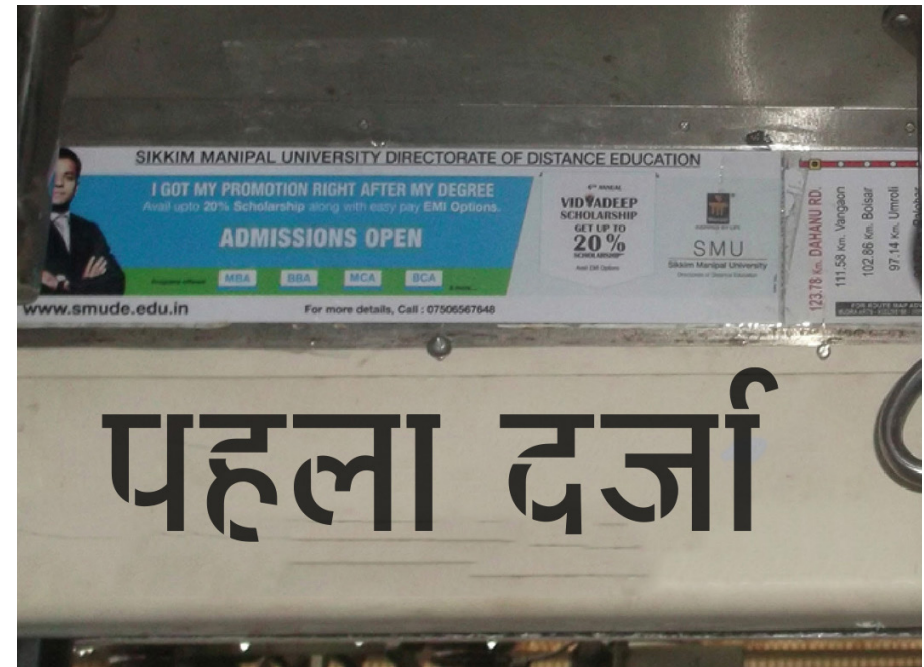


Image of stencil font on toilet wall

Before



After



Image on rough surface

Before



After

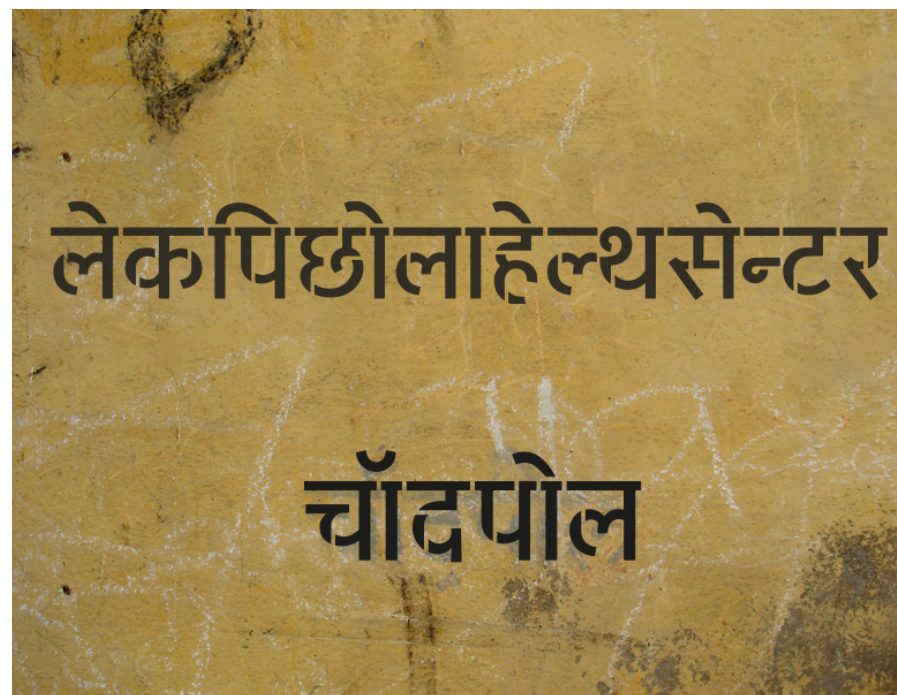
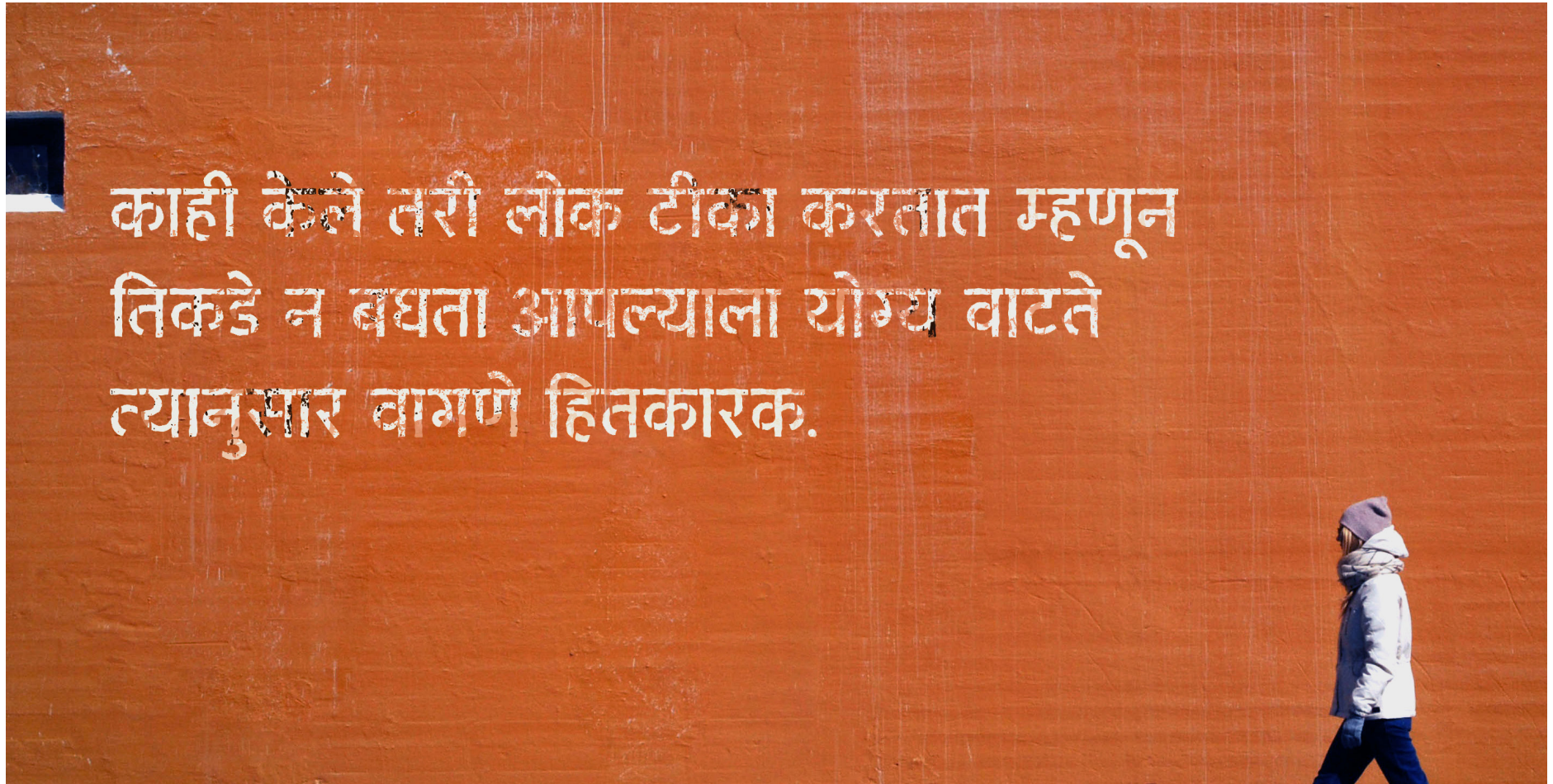


Image of stencil font rough wall



References

1. http://www.typoday.in/2017/spk_papers/pallavi-shedge-typoday-2017.pdf
2. <https://fonts.google.com/specimen/Mukta>
3. <https://www.indiantypefoundry.com/designers/hitesh-malaviya>
4. https://www.smithsonianmag.com/photocontest/detail/mobile/snail-mail-indian-postal-services/?ordering=-uploaded_at&filters=
5. <http://www.dsource.in/tool/devft/en/terminology.php>
6. WGoogle image

Thank you