



# Designing A Variable Devanagari Typeface

A Summer Internship Project (P1)

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# Project Details

Design A Devanagari Typeface which is

- Variable
- Monolinear
- Neither Too Squarish nor Too Roundish
- Appealing to All Ages
- Aesthetically pleasant

# Initial Study

- Understanding OpenType Technology
- Studying Parameters Considered in Devanagari Typeface Design
- Comparative Study of Some Monolinear Devanagari & Roman Typefaces

# OpenType Technology

- A Format for Scalable Computer Fonts
- Works on Different Platforms
- Allows Extensive Character Sets
- Uses Post Script (PS) Coding
- Post Script is a Language used by Printers
- This format is used when user wants to preserve the changes done after PS coding

# Parameters Considered in Typeface Design

- Character Parameters
- Structural Parameters
- Width Parameters
- Joinery Parameters
- Proportional Parameters

# Comparative Study of Typefaces

- Studying Different Typefaces in Devanagari & Roman
- Readability at Different Sizes
- Ease in Differentiating Among Certain Letters
- Weight, Contrast and other such Typographical Parameters
- Balance between Positive Space and Negative Space

# Comparative Study of Typefaces

Century Gothic

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

Optima

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

Helvetica Neue

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

Myriad Pro

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz

# Comparative Study of Typefaces

## जीवनाशी एकरूप झालेले

एकत्र कुटुंबपद्धति: हिंदू समाजातील एक वैशिष्ट्यपूर्ण संस्था. हिंदूमध्ये एकत्र कुटुंब हे केवळ जास्त पिढ्यांचेच असते किंवा जास्त काळपर्यंत अस्तित्वात असते असे नसून, अशा कुटुंबास एक विधिमन्य दर्जा आणि त्यांच्या घटकांस काही वैशिष्ट्यपूर्ण अधिकार प्राप्त झालेले आहेत.



## एकवचन

यात्री कृपया ध्यान दे, प्लॅटफॉर्म क्रमांक ६ से, ३ बजकर ४५ मिनीटकी अंधेरी जानेवाली, फास्ट लोकल आज प्लॅटफॉर्म क्रमांक १ पर आएगी।

# 15 अगस्त 1947

‘दुनिया का नंबर एक खिलाड़ी बनूंगा!’  
वारकरी संप्रदायातील एक सुप्रसिद्ध संत

## सनी लियोनी

जोधपुर के लिए और मिली 64 करोड़ की सौगात

## विस्कोन्सिन

विस्कोन्सिन राज्य के ओक क्रीक शहर में एक गुरुद्वारे में हुई गोलीबारी की

## बेल्जियम

## सूचना और प्रसारण

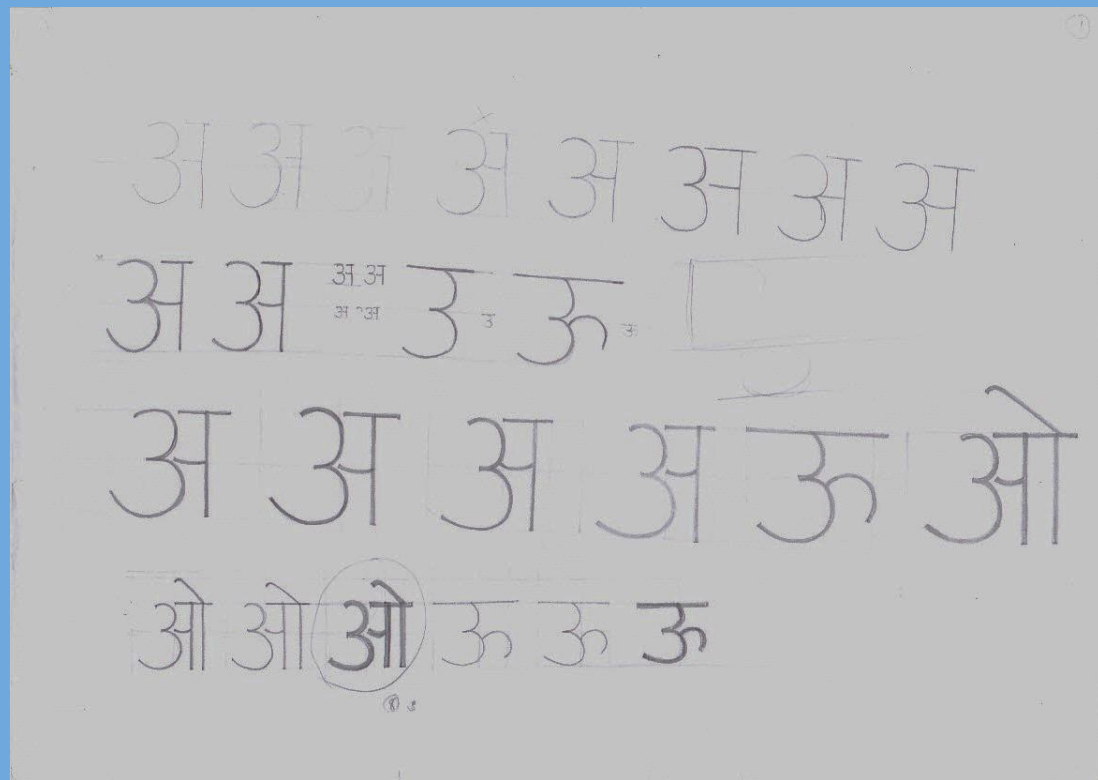
प्रधानमंत्री के निर्देश पर सलाहकार पंकज पारीसी ने बीबीसी से वार्तादाता इस्तीफा देना दिया है और इसे वंगुली के लिए राष्ट्रपति के पास भेज ले इस बात की पुष्टि कर दी है कि कृष्णा ने प्रधानमंत्री के पास अपना दिवा आया. कृष्णा ने दलितों को समाजित फेडरेशन से निकट दो दिन

## जट रिस्की, आफ्टर विस्की

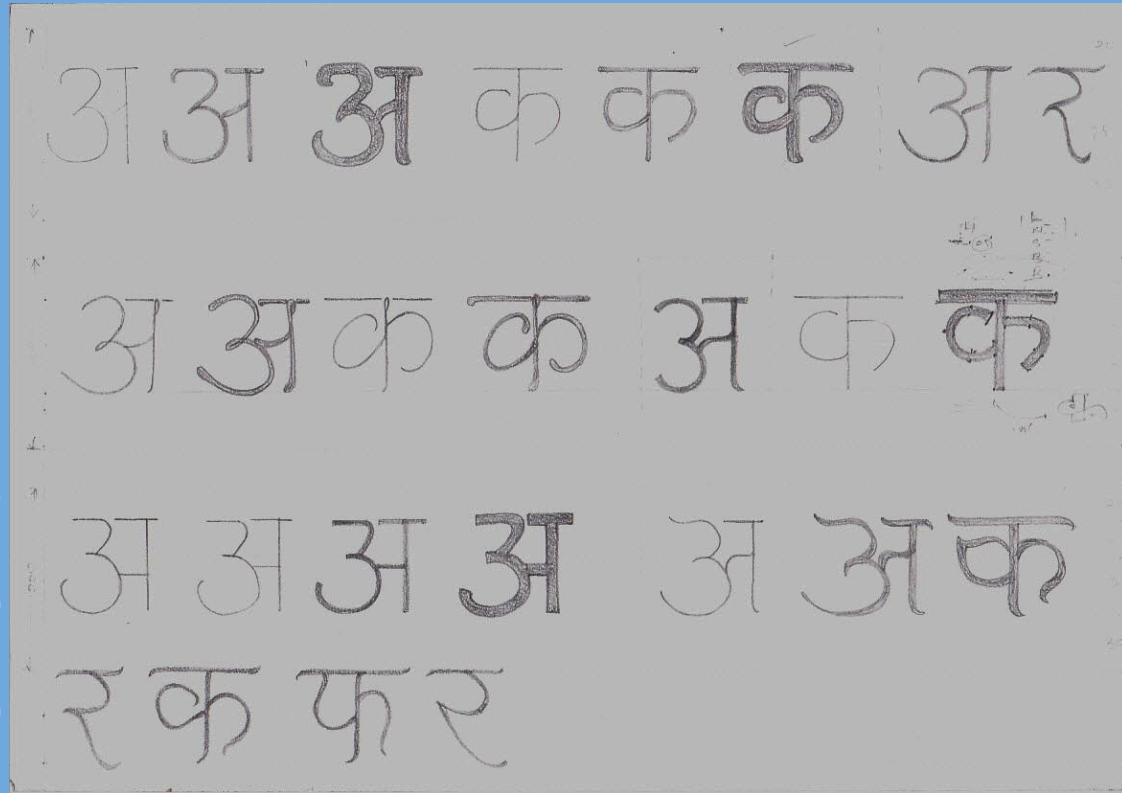
# Rendering The Glyphs

- Initially done on White Paper
- Then on Graph Paper to get Precise and Clean Outlines
- More Iterations and Modifications
- Tracing Final Designs in Illustrator
- Importing them in FontLab Studio
- Further Modifications

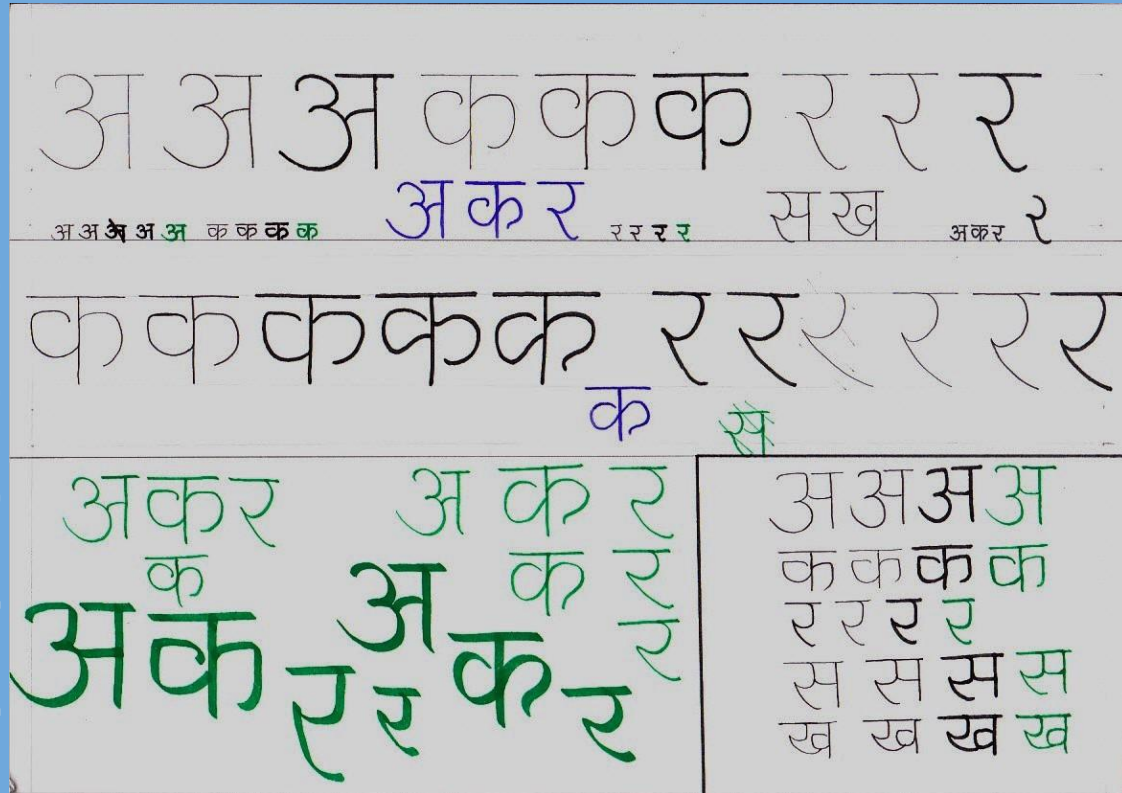
## Rendering The Glyphs



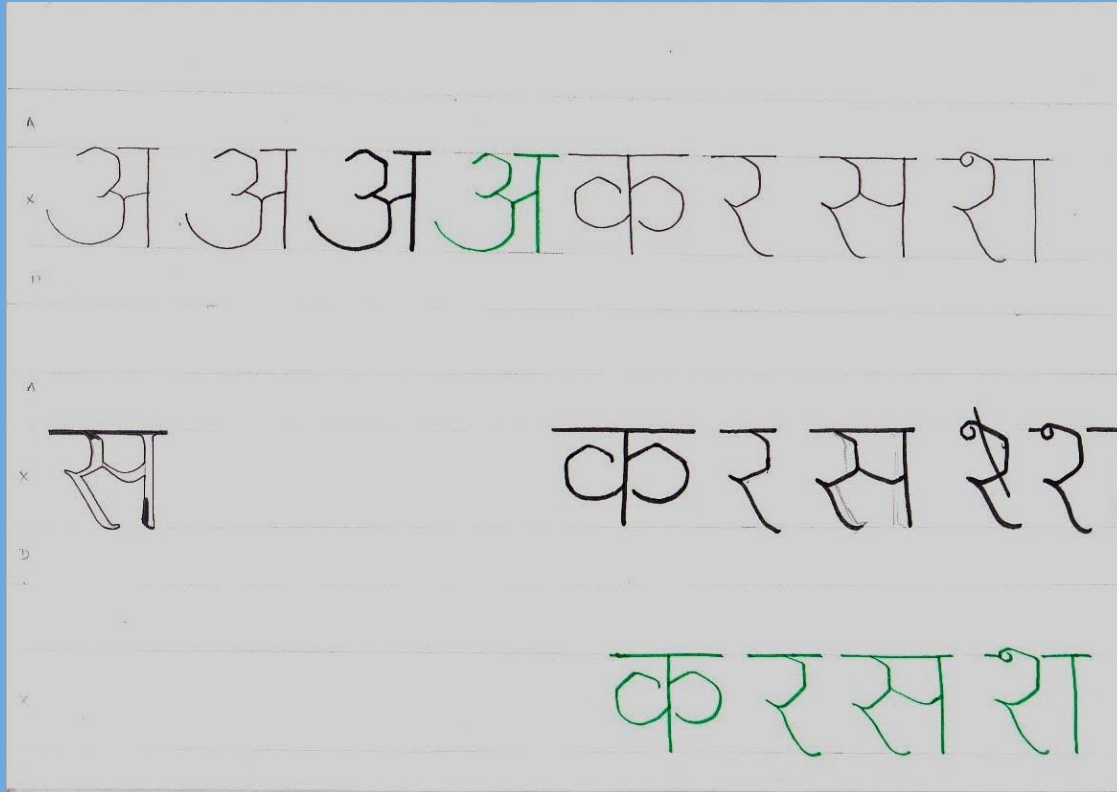
## Rendering The Glyphs



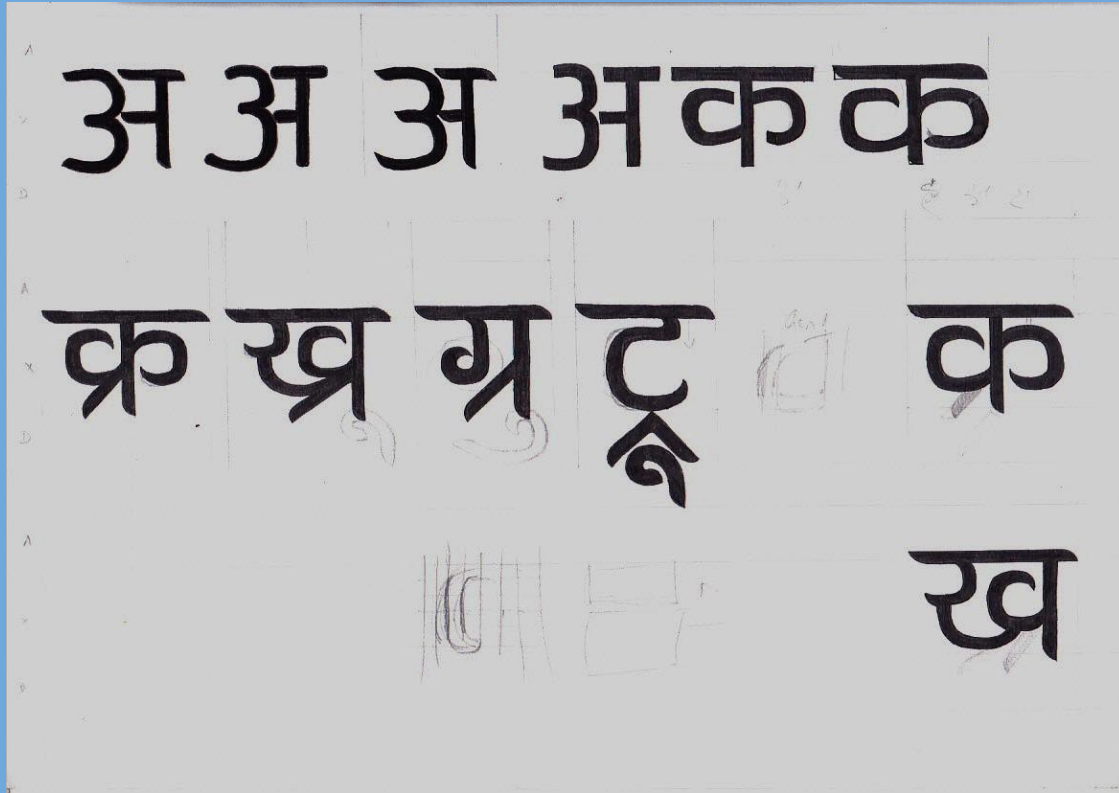
## Rendering The Glyphs



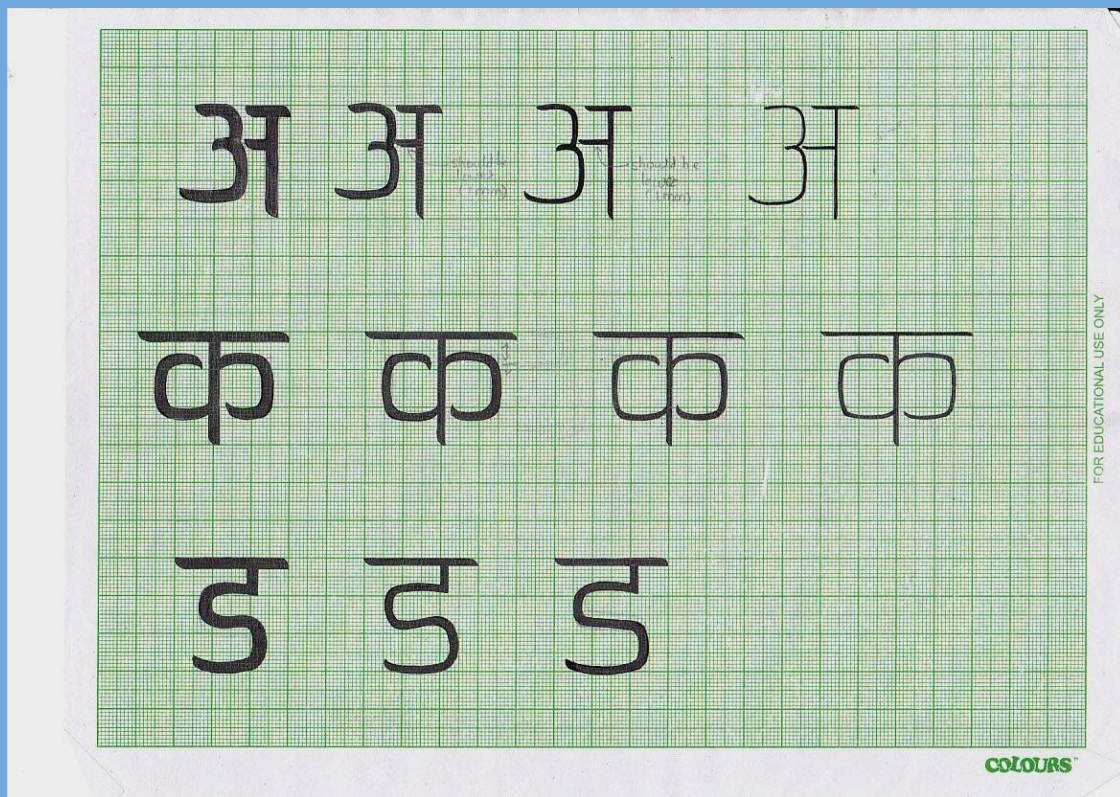
## Rendering The Glyphs



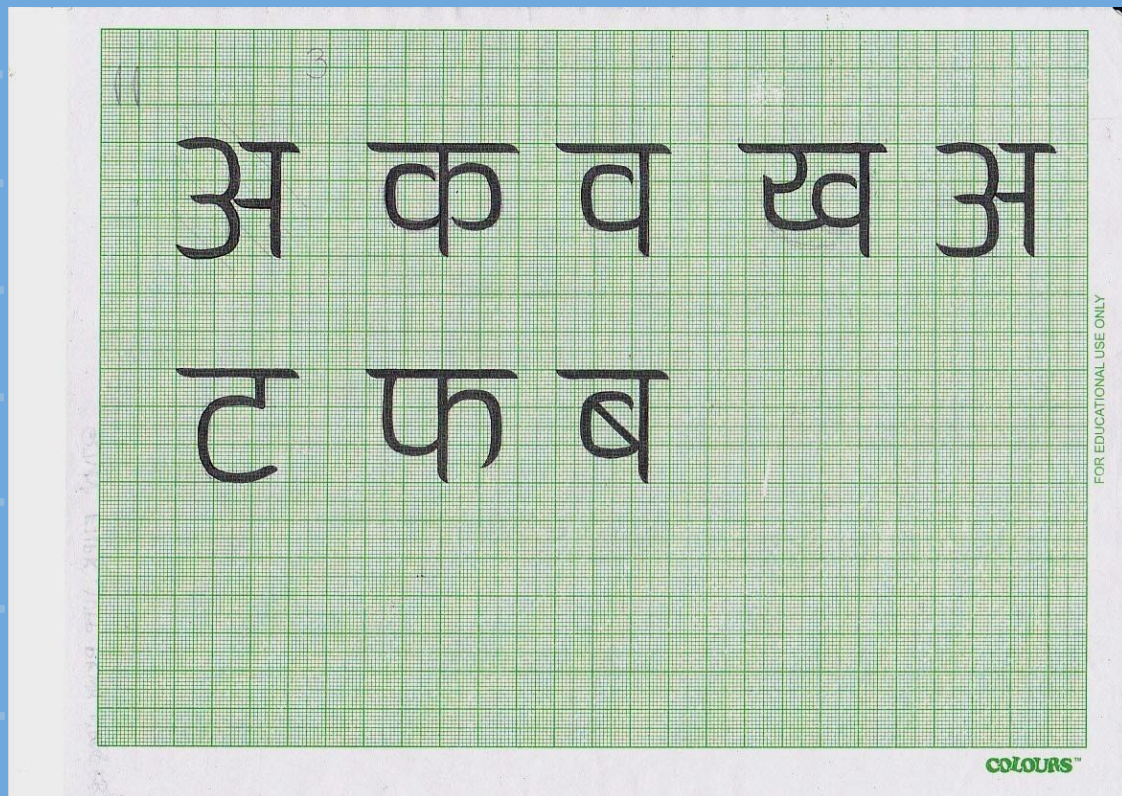
## Rendering The Glyphs



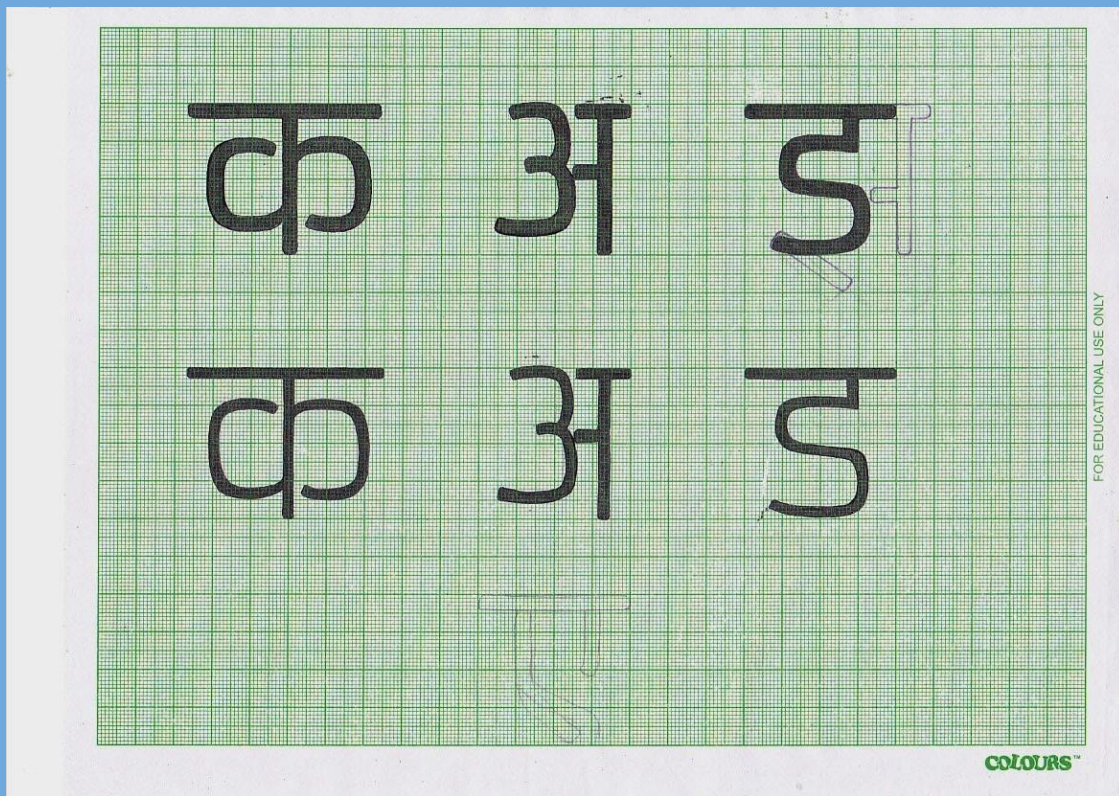
# Rendering The Glyphs



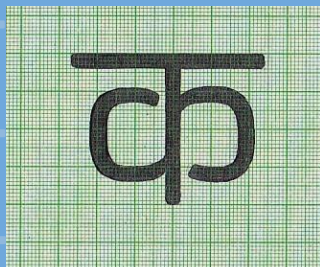
# Rendering The Glyphs



# Rendering The Glyphs



## Rendering The Glyphs



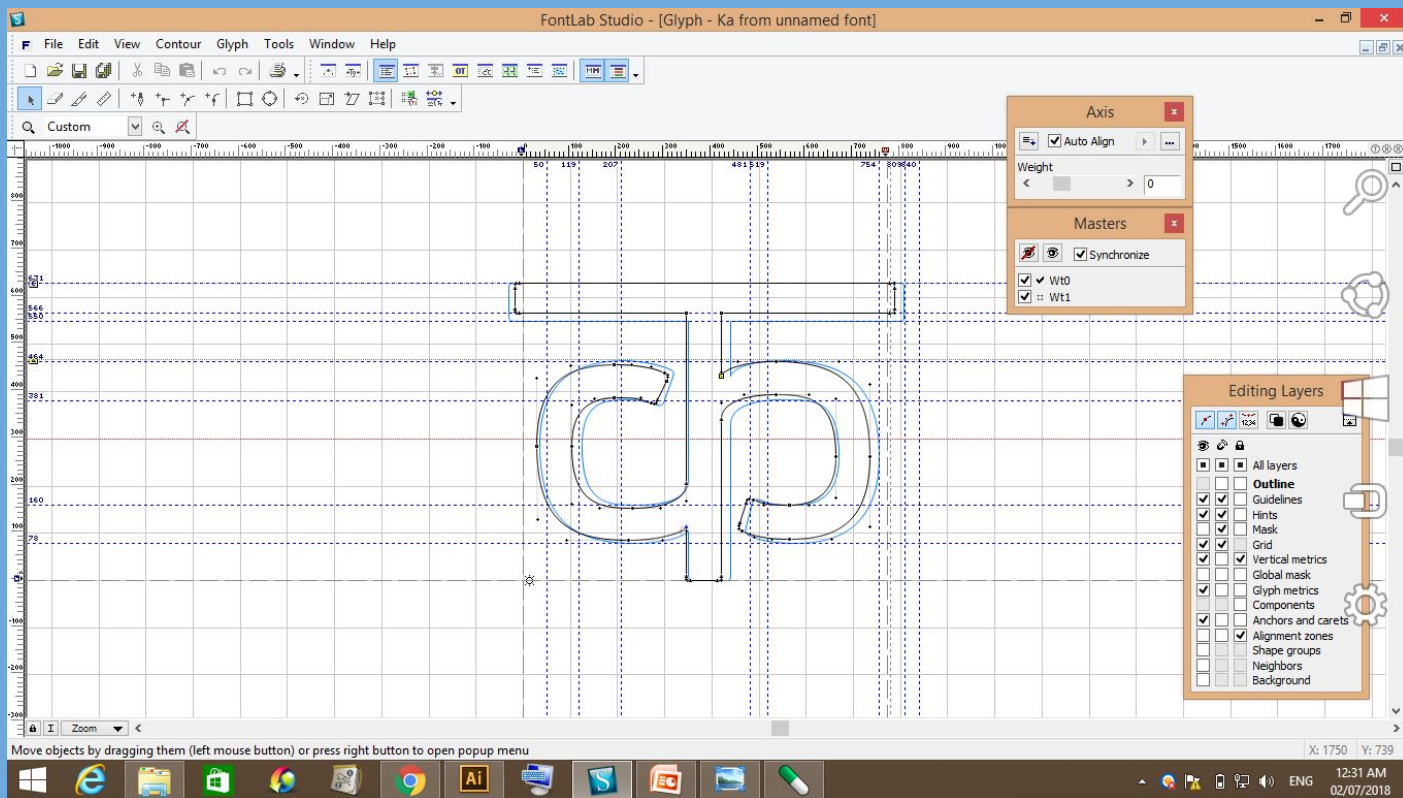
# Rendering The Glyphs

The screenshot displays the FontLab Studio interface for a font project named "Font - Untitled [D:\...FontLab\new\_v3\_2 - Copy.vfb]". The main window shows a grid of glyphs, including standard Latin characters, punctuation, and various diacritics. The glyphs are rendered in a serif font style. The interface includes a menu bar (File, Edit, View, Contour, Glyph, Tools, Window, Help), a toolbar with various editing tools, and a status bar at the bottom. The status bar indicates the current glyph is "Ka" and the font is "OOff". The bottom of the screen shows the Windows taskbar with several open applications.

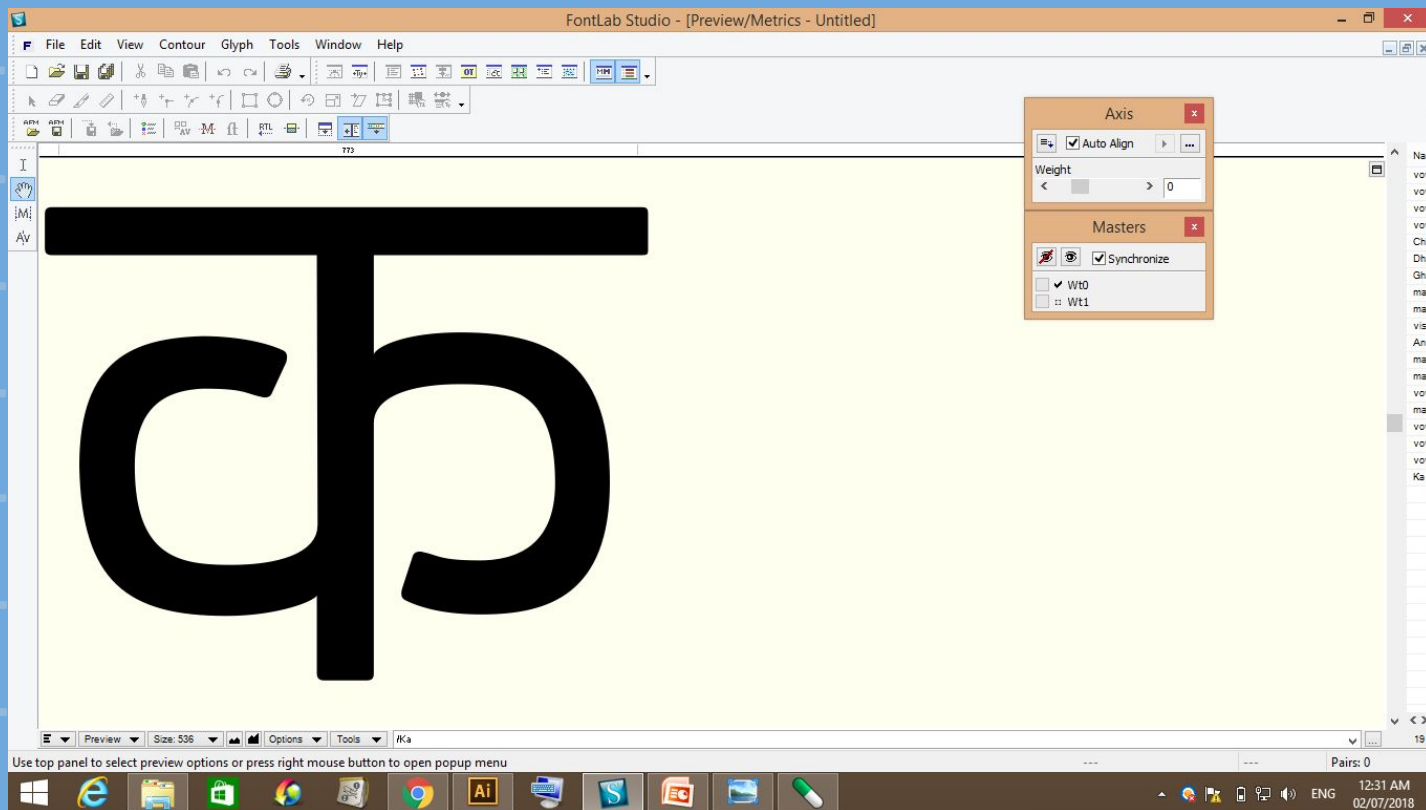
Use left mouse button to select one or more glyphs

Ka OOff S: 1 T: 19 12:32 AM 02/07/2018

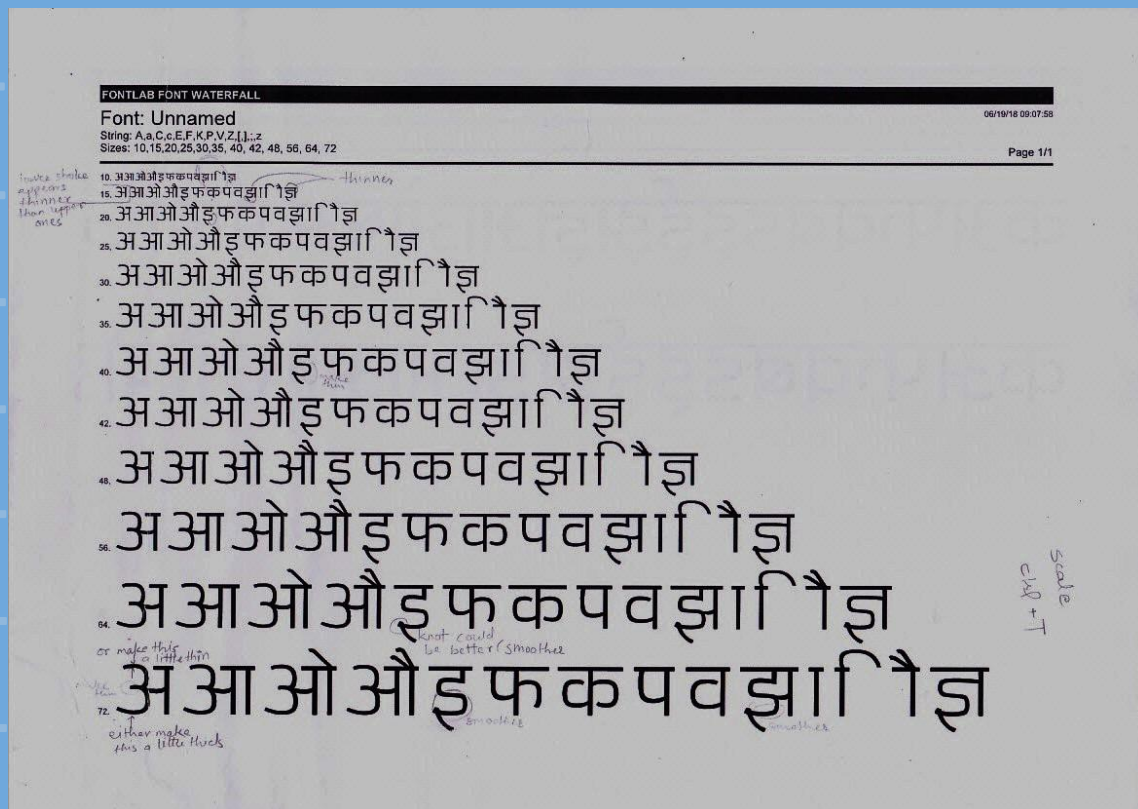
# Rendering The Glyphs



# Rendering The Glyphs



# Rendering The Glyphs





# Rendering The Glyphs

## FONTLAB FONT WATERFALL

Font: Unnamed

06/19/18 18:45:14

String: /vowelA/Dda/vowel.I/vowel.EE/Jha/vowelAA/vowelO/vowelAU

Sizes: 5,10,15,20,25,30,36, 40, 48, 56, 64, 72,80

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5. अडइईझआओऔ

10. अडइईझआओऔ

15. अडइईझआओऔ

20. अडइईझआओऔ

25. अडइईझआओऔ

30. अडइईझआओऔ

36. अडइईझआओऔ

40. अडइईझआओऔ

48. अडइईझआओऔ

56. अडइईझआओऔ

64. अडइईझआओऔ

72. अडइईझआओऔ

८० अडइईझआओऔ

# Rendering The Glyphs

## FontLab FONT WATERFALL

Font: Unnamed

06/20/18 18:20:19

String: /Ka/vowelA/Fa/Va/Ba/Dda/vowel.I/vowel.EE/Jha/Dnya/vowelAA/vowelO/Shha/vowelAU/Pa/matraO/Dda/matral/Ka/matraAO/Dda/matraA/Pa/matraEE/Shha/matraEE  
Sizes: 10,15,20,25,30,36, 40,48, 56, 64, 72

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10. कअफवबडइईझज्ञआओषऔपोडकिौडापीषी

15. कअफवबडइईझज्ञआओषऔपोडकिौडापीषी

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48. कअफवबडइईझज्ञआओषऔपोडकिौडापीषी

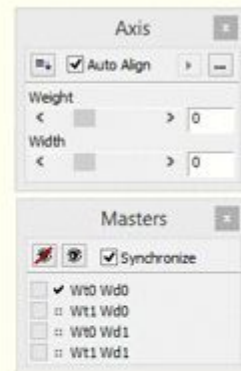
56. कअफवबडइईझज्ञआओषऔपोडकिौडापी

# Making Typeface Variable

- Multiple Masters
- Design Axes:  
Weight (light/bold),  
Width (condensed/expanded),  
Style (serif/sans serif),  
Optical Size etc.
- Interpolate/Extrapolate the Primary Fonts to Obtain Intermediate Fonts
- 1-Axis Font: 2 Masters
- 2-Axes Font: 4 Masters
- n-Axes Font:  $2^n$  Masters

# Making Typeface Variable

cp



# Things I'm Yet To Learn

- Manipulating Design Coordinates
- Tools in Multiple Masters Panel
- Kerning
- Font Generation
- Hinting
- Implementing the Font

## References

- <https://docs.microsoft.com/en-in/windows/desktop/DirWrite/opentype-variable-fonts>
- [http://designwithfontforge.com/en-US/Designing\\_Devanagari\\_Typefaces.html](http://designwithfontforge.com/en-US/Designing_Devanagari_Typefaces.html)
- <https://font.is/fontlab-using-illustrator-to-draw-fonts-for-importing-in>
- <https://www.youtube.com/watch?v=sY3eNLHfbs&t=2791s>
- <https://www.youtube.com/watch?v=7ht5nYk2iFE&t=1102s>

Thank You!