

Communication Design Project 3

# Designing a Variable Devanagari Font

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# देवनागरी मुद्राक्षर अभिकल्प

आई डी सी आरंभ

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# अभिकल्प विद्यालय



भारतीय प्रौद्योगिकी संस्थान, मुंबई

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## Preface // About the Project

Designing typeface in Indic scripts is a much more complex and time taking process compared to Latin. Over the last decade, one can see a considerable amount of efforts by Indian type designers in providing complete, refined, and universal solutions in Indic scripts. However, considering widened boundaries of media and increased audiences, the need to make more and more Indic fonts seems never-ending. Digitization of Indic fonts with Unicode has led to boost their usage on multiple devices for numerous purposes. A single font, if optimized, can work efficiently in both media - print and web due to font technology advancements.

The modulated feature of Devanagari letterforms provides elegance to its complex construction. It is visible in the letterpress specimens, where these intricate letters were cast and widely used for publication. A bold and a light font having such strokes can be used as good display fonts. At the same time,

the regular weight will work well for body text purposes. When we look at existing solutions with multiple weights, such fonts appear less than display fonts, specially modulated fonts.

The technology in font encoding is reaching newer milestones, such as variable features, SVG fonts, etc., but the same isn't fully reflected in the Indic type-scenario yet. There should be more than enough amount of solutions available to designers for Indic typographical needs. With an extension of variable font features, one font can suffice various needs with optimized file count and size. Being a native script user and calligrapher encouraged me to design this font in multiple weights with variable features. With further improvements and additions, this one font can be produced as a universal solution for every typographical design need.

# Introduction

The script is an essential part of the visual system of any culture. The Indian script is known as Lipi, a word derived from the Sanskrit root Lip, i.e., to smear. ‘Devanagari’ is a script of the Indian national language. It is an ancient Indian script that evolved from the old Brahmi script. Devanagari is said to be a script that enables one to write any language in the world.

The Devanagari script is used for writing classical Sanskrit and its modern historical derivative, Hindi. Extensions to the Sanskrit knowledge are used to write other related languages of India, such as Marathi, and Nepal, such as Nepali. In addition, it is used to write in many different languages, including Awadhi, Bihari, Braj Bhasha, Chhattisgarhi, Garhwali, Jaipuri, Konkani, Marwari, Santhali, etc.

The name Devanagari comes from the Sanskrit word Deva meaning God, and Nagari meaning city; together, they represent the script of the ‘City of the gods.’ To write this particular script, one needs to hold the tool at a certain angle with appropriate pressure and maintaining specified proportions of letterforms.

Devanagari consists of 16 Swara (vowels) and 36 Vyanjana (consonants) in its traditional form. The Tamra Patra, Birch bark, wood, clay tablets, cloth, paper, till the ink and pen, the writing techniques of Devanagari has evolved and so its structure.

A. CONSONANTS														
1. Gutturals (कंठ्य)	क	ख	ग	घ	ङ									
	k	kh	g	gh	ṅa									
2. Palatals (तालव्य)	च	छ	ज	झ	ञ									
	c	ch	j	jh	ñ									
3. Cerebrals (मूर्धन्य)	ट	ठ	ड	ढ	ण									
	ṭ	ṭh	ḍ	ḍh	ṇ									
4. Dentals (दंत्य)	त	थ	द	ध	न									
	t	th	d	dh	n									
5. Labials (ओष्ठ्य)	प	फ	ब	भ	म									
	p	ph	b	bh	m									
		Palatals	Cerebrals	Dentals	Dento-Labials									
6. Semi Vowels (अंतःस्थ)	य	र	ल	व										
	y	r	l	v										
7. Sibilants (उष्ण)	श	ष	स											
	ś	ṣ	s											
8. Aspirate (उष्ण)	ह													
	h													
9. Cerebral (मूर्धन्य)	ळ													
	ḷ													
			10. Compounds	क्ष	ज्ञ									
				kṣ	jñ									
					dny									
B. VOWELS														
1. Vowels	अ	आ	इ	ई	उ	ऊ	ऋ	ॠ	ऌ	ॡ	ए	ऐ	ओ	औ
	a	ā	i	ī	u	ū	ṛ	ṛi	ḷ	ḷi	e	ai	o	ou
2. Vowel-signs	-	ा	ि	ी	ु	ू	ृ	ॄ	ॳ	ॵ	े	ै	ो	ौ

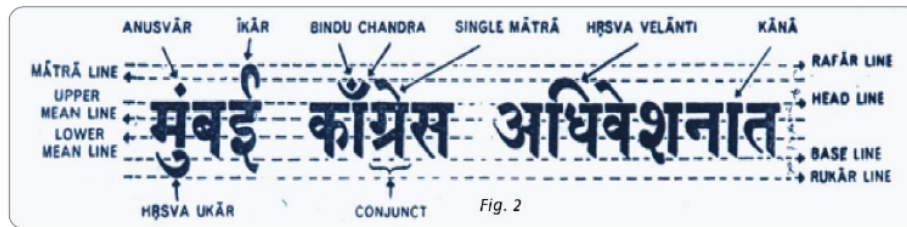
Image source: Page 175, *Typography of Devanagari*, by Bapurao Naik

## Anatomy of the Script

Before sketching out the letterforms, the study of various proportions within Devanagari letterforms' structure is very crucial.

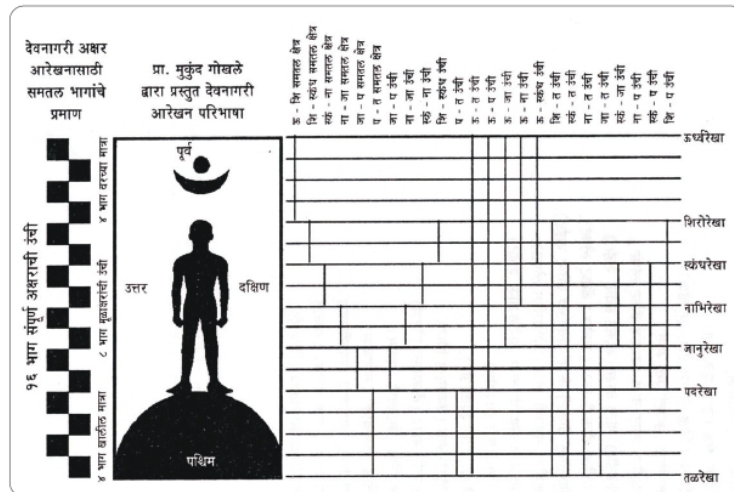
Various approaches have been taken by different type design experts, of which grid suggested by Gokhale can be used for considering the vertical proportions. This approach involves a body paradigm to describe the portions within the structure. Considering the thickness of a pen stroke as a base unit, suggested proportions are a minimum of four strokes for upper and bottom matras and eight strokes for the main character, i.e., 16 units of strokes for the letter's total height. Similarly, proportions for Kana height of the whole family are suggested as - 1:12 for extralight, 1:10 for light, 1:9 for regular, 1:8 for medium, 1:8 for semibold, 1:6 for bold, and 1:5 for extrabold.

Even though we are considering these suggestions, they are not meant to be followed strictly. One can use it in the initial phase of ideation, and further modifications can be done in the grid structure.



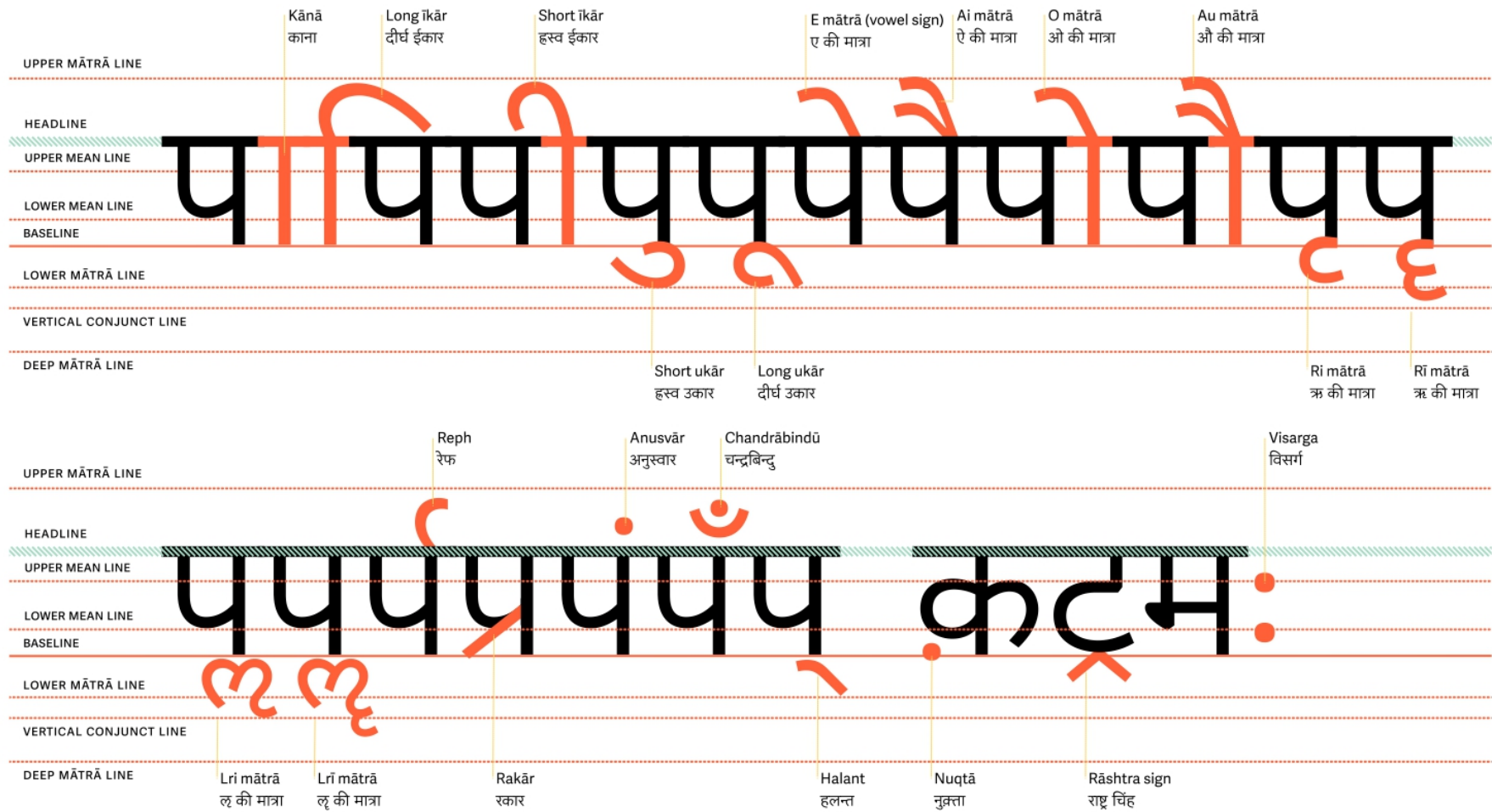
Grid proposed by Bhagwat and Naik,

Image source: Anatomy of Devanagari Typefaces, Dalvi, Design Thoughts 2009



Grid proposed by Gokhale,

Image source: www.type-together.com, Courtesy of Vaibhav Singh



Terminologies in anatomy of Devanagari letterforms, set in Adelle Sans Devanagari,  
Image source: [www.type-together.com](http://www.type-together.com)





Terminologies in anatomy of Devanagari letterforms, set in Adelle Sans Devanagari,  
Image source: [www.type-together.com](http://www.type-together.com)

## Aim of the Project

This project aims to design a Devanagari font in multiple weights using variable font features. This project is a continuation of my work done for P2, i.e., designing a modulated Devanagari font.

Type design is a long and iterative process, and this phase includes the addition of weights. There are various ways a text font is utilized nowadays, depending on the medium, user, and application. Different mediums have different typographical needs. Apart from a typical regular weight, light and extra bold weights also find their own space in visual semantics. To provide a complete solution for typesetting in the Devanagari script, coming up with a family of multiple options could complement my previous work. The variable font technology opens up a new dimension in the type design allowing the designers to widen their visualization and experimentation limits.

The project could be just a starting point for exploring the field because designing a working font in the Devanagari script is challenging. Due to the simple skeleton of the font, it still holds potential for experimentation in the future. But, the current project fits the scope to provide its usability on multiple weights across the variable axis.

खभूरे शुठ बँद्धीकै ट्रिर्नफि आझूग्र

CDAC Surekh

ग्रफि बँकै झूट्रर्न आग्रभूरेख शुद्धीठ

Shreedhar

झूबँठ शुद्धीकै ट्रर्न आग्रफि भूरेख

Natraj

Some earlier modulated fonts still being used

## Current Scenario // Existing Solutions

In today's date, multiple fonts are available in the Devanagari script. However, when it comes to the requirement of Unicode-compliant, open-type modern fonts, there are certainly a limited number of options in the modulated category, such as Murty, Noto Serif, Adobe Devanagari, Adobe Devanagari, which one can consider for the most basic use. Fonts such as Surekh, Natraj, ITR Mitra, and Shreelipi are extensively used in the publishing design.

However, there is a need to design more such fonts in Devanagari, overcoming the earlier fonts' initial limitations using newer technology. The amount of rationalization incorporated in the structure of the font might be subjective. However, by sticking to Devanagari's traditional core structure, a balance can be obtained in the traditionality and modernness of the font.

## Modern Fonts

Considering modern Devanagari modulated fonts, both traditional and contemporary, shown are good available options. However, very few of them provide flexibility in styles such as weights, italics, etc.

Even though they come in more than one weight, fonts ranging from light to extra-bold size are almost none. Such explorations can be done using variable axes, that too with reduced file count and size.

आधुनिक

Adobe Devanagari

Regular, Bold, Italic, Bold Italic

आधुनिक

ITF Devanagari

Light, Book, Demi, Medium, Bold

आधुनिक

Noto Serif Devanagari

Regular, Bold

आधुनिक

Vesper Libre

Regular, Medium, Bold, Heavy

आधुनिक

Murty Devanagari

Regular

आधुनिक

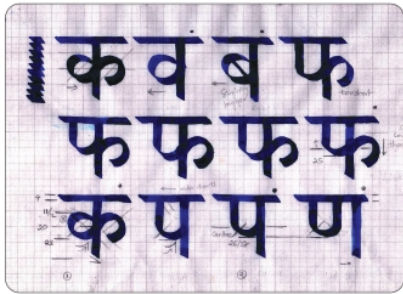
Eczar

Regular, Medium, Semibold, Bold, Extrabold

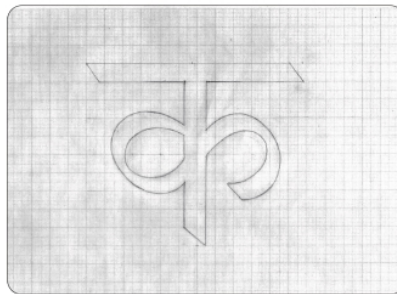


## Journey So Far // Previous Work

### 1. Calligraphic Explorations



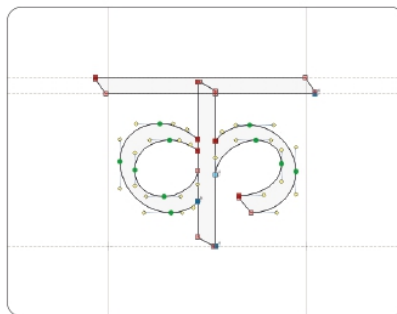
### 2. Drawing the Letterforms



### 3. Tracing and Vectorization



### 4. Fine-tuning in Fontlab



I worked on the project titled, 'Designing a Modulated Devanagari Font,' as my Project-2 in the previous semester. Through calligraphy, letterforms always have intrigued me, especially the Devanagari script. Hence, I decided to work on this project to design my first ever font. It emphasized understanding the type design process, getting myself acquainted with font design software, and coming up with a modulated body-text font with traditional proportions in a single weight. The project went through many stages as below -

- Understanding the structure and anatomy of Devanagari letterforms
- Calligraphic practice and style explorations
- Sketching the letterforms on large sheets of paper to learn the details, and understand the harmony between thick-thin strokes
- Determining proportions and features of the font
- Vectorizing the hand-drawn letterforms into glyphs on Fontlab
- Analyzing, correcting, improvising, and fine-tuning the structure for legibility and visual consistency
- Spacing and Typesetting words for testing

As it is a body text font, room for experimenting with the basic features of Devanagari letterforms was less compared to designing a display font. However, I succeed in creating the basic glyph set to achieve the objectives of the project. The output of the previous stage held the potential to be converted into a whole family and further explorations. Hence, I decided to take it further and work on the other weights to be added alongside regular.

## IDC Aarambh Regular

This is the first weight designed in the family. The main objective was to come up with a solution for body text font. The letterforms have classical proportions and are designed with a balance of traditional and contemporary features. In addition, the contrast between thick and thin strokes is medium making it a better option for screen usage. Scaling and optical corrections are done for better performance at smaller point sizes.

**Application:** This weight works well for all general usage. It is primarily a body text font for efficient reading of a larger body of the text.

**Technical Specifications:**

Width of Shirorekha is 65.

Stroke width : Kana height = 1 : 10



Grid for IDC Aarambh Regular

## Basic Devanagari Character Set

अ आ इ ई उ ऊ ऋ ॠ लृ लृ लृ ए ऐ ओ  
औ अं अः क क्र ख ख़ ग ग़ घ ङ च छ ज  
ज़ झ ञ ट ठ ड ङ ढ ढ़ ण त थ द ध  
न न्न प फ़ फ़ ब भ म य य़ र ऱ ल ल  
व श श ष स ह ळ क्ष ज्ञ  
० १ २ ३ ४ ५ ६ ७ ८ ९ ₹

## Sample text set in IDC Aarambh Regular

- 12 pt श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.
- 16 pt श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.
- 18 pt श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.
- 24 pt श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.

# Variable

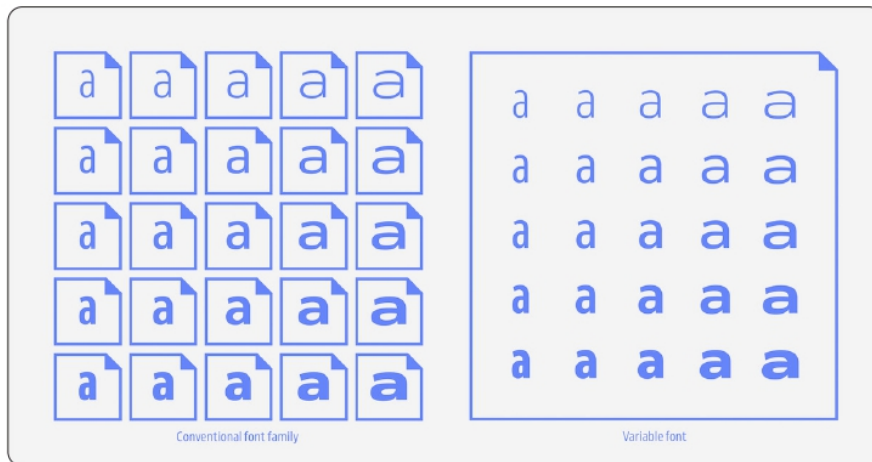
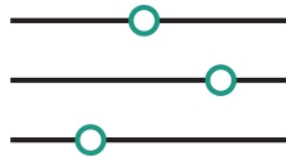


Image source: [www.mediatemples.net/blog](http://www.mediatemples.net/blog)

## What are Variable Fonts?

In 2016, four technology giants - Microsoft, Apple, Adobe, and Google, presented a remarkable new technology - OpenType variable fonts. A variable font is an evolution of OpenType technology, enabling multiple font variations to be incorporated into a single file.

Traditional static font families consist variety of styles, each font requiring a separate file that needs to be downloaded and installed on the system or loaded when used on the web platform. These different fonts would represent particular weight/width/style combinations. Hence, to use one complete font family, the user may need up to 20-30 files.

Also, when it comes to using a web font, more files result in more HTTP requests, requiring more data to be downloaded. The variable font contains all these combinations in a single file, in a considerably smaller file size, providing a continuous range of design variants and an infinite number of styles. Hence, the benefits of this newer upgrade in the technology can be listed as follows:

**Smaller file size** - overall data saving

**Single file** - all variations available in a highly efficient compressed font file up to 70% compression of larger font families

**Creative freedom** - no constraint when it comes to design flexibility, freedom to use any style for every text on the canvas

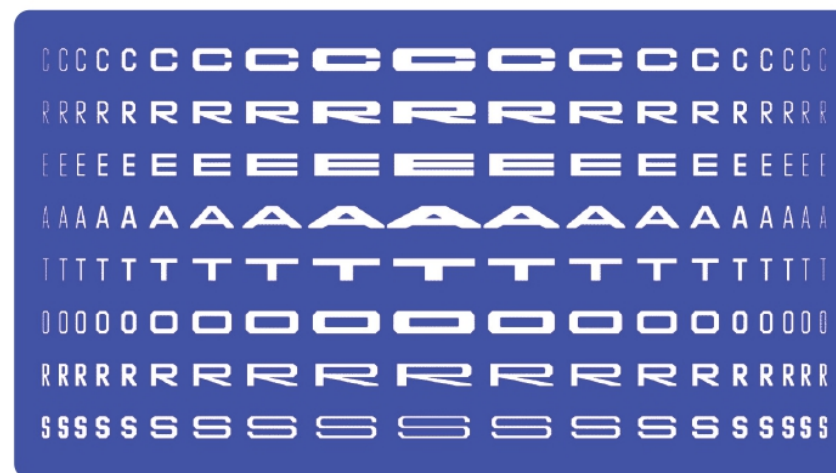


Image source: [www.eyendesign.aiga.org](http://www.eyendesign.aiga.org)





Chikki - by Mota Italic  
Available for use in 3 Scripts

Light 300 विधानसभा चुनाव  
Regular 400 मित्र मंडळ  
Medium 500 नॉर्मल पल्स रेट  
SemiBold 600 बाह्य प्राणायाम  
Bold 700 इसरो मंगलयान  
AND EVERYTHING IN BETWEEN ३०० से ७०० तक हर वज़न

Akshar - by Tall Chai  
Available for use in 2 Scripts



Anek - by Ek Type  
Work in Progress



Multiple fonts announced by ITF  
Work in Progress

## Variable Fonts in Devanagari

Very few working variable fonts are available on today's date. Akshar, Chikki, Akhand, Volt are some of them. Type foundries such as Ek Type and Indian Type Foundry announced their variable fonts this year, and those are work in progress. Variable font generation is at the primitive stage in Indic type design, and soon we will see multiple such fonts. There is much scope in experimenting with Indic scripts and such newer features, contributing to the enrichment of the Indic typography.

Image sources: From respective websites

## Axes Explorations with Devanagari

The masters in the font file are connected with a continuous range, which is called a **variation axis**. The variable font file allows continuous variation along this axis. For example, the design's starting point could be the most typical style, i.e., regular. The other **masters**, i.e., variations that need to be designed, probably light and extra-bold, are on the extremities of this weight axis. The weights in between these masters can be interpolated with the help of font design software. These in-between weights are called **instances**.

We can include multiple axes in our design, commonly - weight, width, slant, optical size, contrast, serif, x-height, etc. For, e.g., in the exploration shown beside, there are two axes, weight, and width. The masters on the weight axis are light, regular, and extrabold. Whereas the masters on the width axis were set as light extra-condensed and light expanded. All the other instances are manipulated. With these two axes, we got 16 style variations in the same letterform. We can also edit these interpolations for quality control with the feature called font master, which creates an editable master on the desired instance.



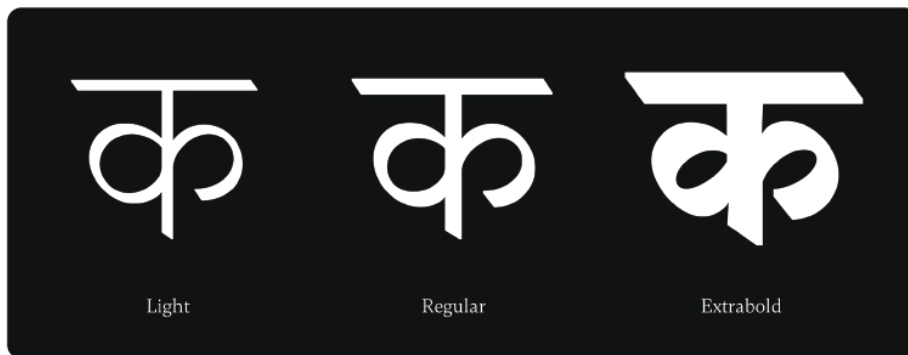
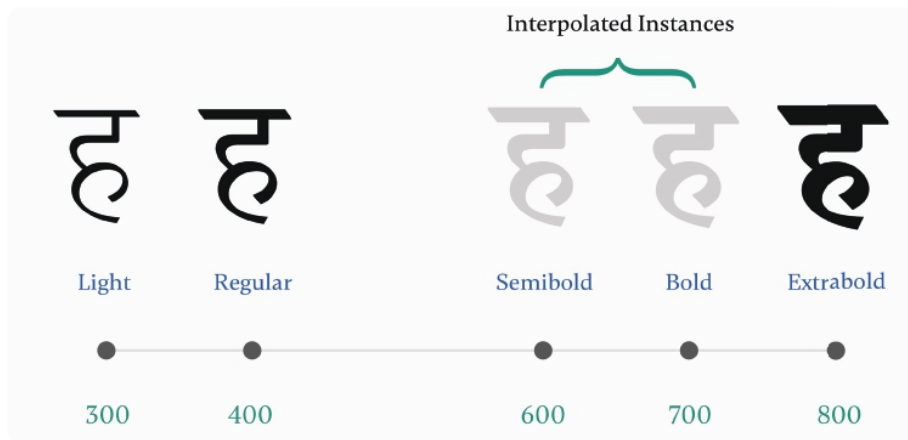
Expanded	फ	फ	फ	फ
Normal	फ	फ	फ	फ
Condensed	फ	फ	फ	फ
Extra-Condensed	फ	फ	फ	फ
	Light	Regular	Semibold	Extrabold



## Defining the Outcome

Even though there is no limit for experimentation in variable axis, considering the complexity of Devanagari and the timeline of the project, we scoped down the objectives to designing variations over one axis. There are multiple factors that we need to consider while deciding on the technical specifications. The amount of black we can incorporate in a letterform for going towards weight extremity also affects its legibility. In the case of complex letterforms and conjuncts, it becomes very crucial. The light version is comparatively less intricate to execute. Though achieving a uniform grey value and eliminating ink traps while maintaining slight contrast in thick-thin strokes is challenging.

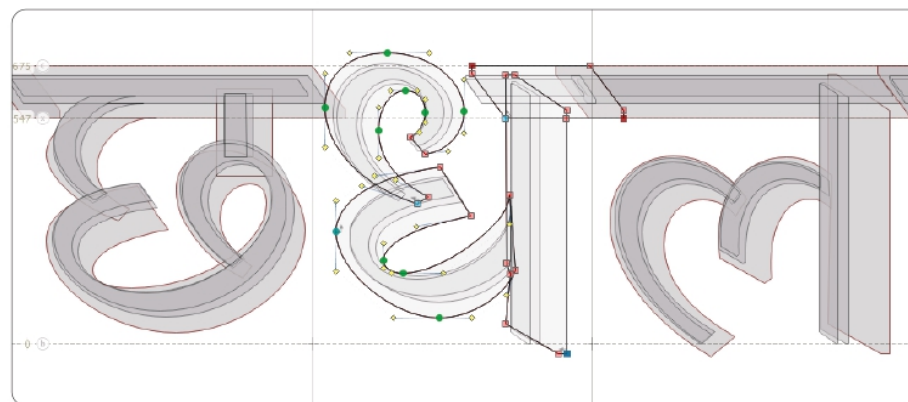
Multiple explorations were done to decide the final weights by gradually adding the flesh to the letter spine while keeping the X-height almost the same for all masters. We already had regular weight as a master. Considering the need, light and extrabold weights were finalized as other masters. Having the extreme weights as masters gives a designer benefit of interpolating the in-between weights. The semibold and bold weights are interpolated as instances.



## Making Extrabold

Designing the extrabold from the reference of regular weight is an essential aspect of the project. It is not just an expansion of the outlines, definitely not in the case of modulated strokes. The design of extrabold letters involves dealing with complex counters and intricate characters. In a variable font, maintaining the visual consistency in font features and strokes while sliding over the axis is the utmost priority to ensure a smooth experience in responsive design. Hence, dealing with the spaces within and outside the character is quite tricky and requires patience to figure out balance.

To start with, it is necessary to decide the amount of expansion in stroke widths. In modulated letterforms, initial explorations were done by trial and error method as there is no hard-bound rule of adding flesh to the spine. Once the letters start taking shape, these vectors can be analyzed repeatedly to balance out the spaces.





Before optical corrections

After optical corrections



## Optical Corrections

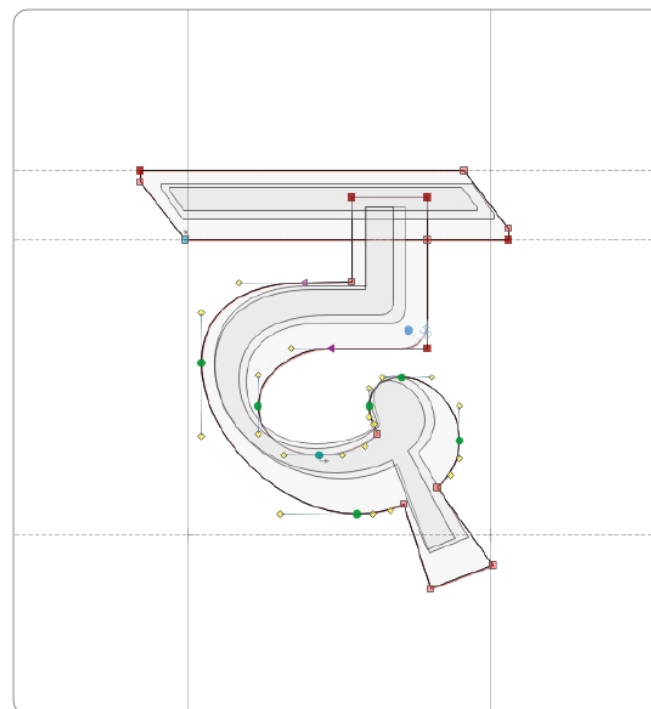
Optical corrections and scaling are must while designing extrabold weights because it deals with critical spaces. Mainly, the inner counters need proper attention as those might get too small due to the expansion of strokes. Similarly, at the joineries, where two strokes combine or join or touch, it creates a bulged-up black patch, and in smaller sizes, characters get blot at joineries. This can be avoided by scaling the strokes inward to create the negative space and reduce blackness at a particular point. The straight paths can also be slanted for this purpose. Many letters need this treatment as complex joineries are one of the distinctive features of Devanagari script.

Also, in letters like क and फ, when there is a continuation of stroke, it is generally lifted up and then follows the path. These minor tweaks help in letter balancing.

## Maintaining Consistency

While designing a variable font, visual consistency among the features and curves within the weights is crucial. Variable fonts are extensively used in responsive web design, where such transitions are pretty frequent. Also, variable fonts are finding places in dynamic logo design and branding.

A mismatched node or curve prevents this smooth transition, and hence all the curves need to be correctly in sync. The number of nodes in all masters needs to be the same for continuous variations over an axis. The side bearings also play an essential role in this. Hence, positioning the side bearing for different should be done by keeping this in mind. The visual grammar of the letterforms like knots, loops, terminals, stroke contrast, the axis is also matched while creating other masters.



## IDC Aarambh Light

This is the first weight of the family. The strokes have lower contrast than the other weights. This ensures its legibility at smaller sizes. Due to low-medium contrast, it can also work well on screen.

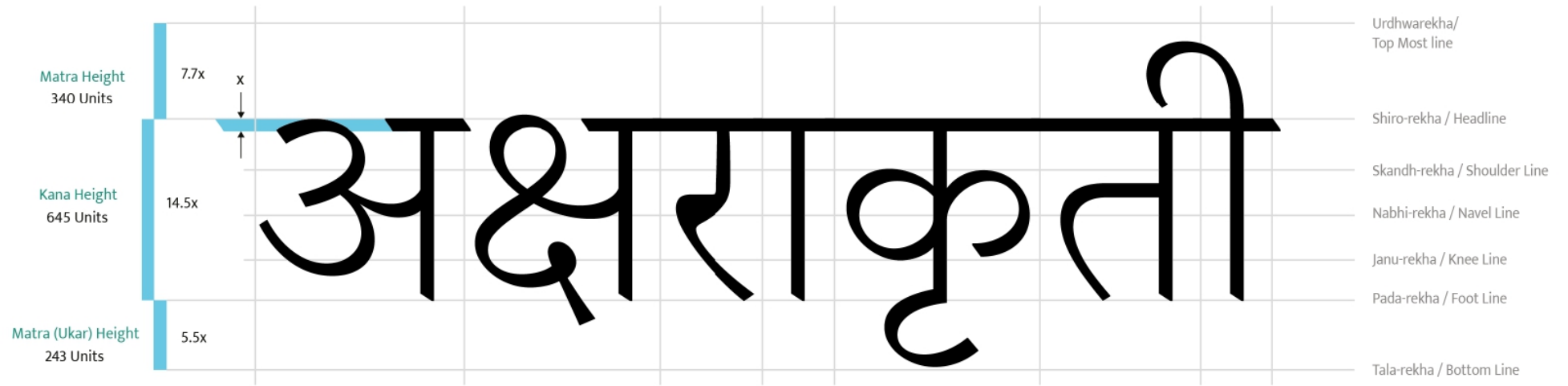
**Application:** This weight can be used as a body text font for general usage, mainly for setting larger texts at smaller point sizes. It can also be used as a display font for comparatively smaller titles. It is best used at 7pt and above.

### **Technical Specifications:**

Width of Shirorekha is 44.

Stroke width : Kana height = 1 : 14.5

अ आ इ ई उ ऊ ऋ ए ऐ ओ औ अं अः  
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



Grid for IDC Aarambh Light

## Sample text set in IDC Aarambh Light

10 pt

श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.

12 pt

श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.

14 pt

श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.

16 pt

श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.

24 pt

श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.



## IDC Aarambh Extrabold

This is the maximum weight in the family. Very few existing typefaces have this font in their family. It is the most challenging weight for design due to the black intensity and complexity of the Devanagari structure. Dealing with the negative space and maintaining the stroke consistencies were some of the main challenges.

**Application:** This weight is primarily for the titles, heading, and subheadings. The contrast between thick and thin strokes is maximum, and the counters are smaller. It can also work well as a display font due to its traditional and curvier strokes. It is best used at 10pt and above.

### **Technical Specifications:**

Width of Shirorekha is 128.

Stroke width : Kana height = 1 : 5.3

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औ अं अः

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





Grid for IDC Aarambh Extrabold

Sample text set in IDC Aarambh Extrabold

16 pt

श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.

24 pt

श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे, नऊ बैल, छोटुसा पांढरा उंदीर, खारुताई इत्यादी प्राणी, पक्षी एकत्र झऱ्याजवळ फिरत असत. तेथे अज्ञात मगरीस प्रवेश नसे.

36 pt

श्रावणात म्हणजे वर्षा ऋतूमध्ये प्रातःकाळी चौदा भारदस्त वाघ, पंधरा सिंह, आठ लांडगे,

सोहम कडवईकर | देवनागरी मुद्राक्षर अभिकल्प  
अभिकल्प विद्यालय

आई डी सी आरंभ	लाइट
आई डी सी आरंभ	रेग्युलर
आई डी सी आरंभ	सेमीबोल्ड
आई डी सी आरंभ	बोल्ड
आई डी सी आरंभ	एक्स्ट्राबोल्ड
	और बीच के सारे वजन



Conjuncts  
Explorations

ह ह्र ष ष ह्र ह्र ह्र

ह्र ङ्र ङ्र ङ्र ङ्र क्स्त्र ह्र

श्र घ्र स्थ्र ख्य्र ध्य्र त्र

न था कुछ तो खुदा था कुछ न होता तो खुदा होता  
डुबोया मुझको होने ने न होता मैं तो क्या होता  
हुआ जब ग़म से यूँ बेहिस तो ग़म क्या सर के कटने का  
न होता गर जुदा तन से तो ज़ानू पर धरा होता  
हुई मुद्दत कि ग़ालिब मर गया पर याद आता है  
वो हर इक बात पर कहना कि यूँ होता तो क्या होता

ब्रह्मपुत्र के स्तर में वृद्धि; अलर्ट जारी  
अझरबैजान ग्रांप्री, बाकू सिटी सर्किट  
केंद्र सरकार और माइक्रोब्लॉगिंग साइट के बीच विवाद बढ़ता ही जा रहा है  
खेलरत्न, ज्ञानपीठ, पद्मश्री





स्पोर्ट्स राऊंडअप

# आवाज कुणाचा, मुंबई इंडियन्सचा

मुंबईचे विक्रमी पाचवे विजेतेपद;  
दिल्लीचे पहिल्या जेतेपदाचे स्वप्न भंगले

दुबई : दिल्ली कॅपिटल्सने यंदा अंतिम फेरी गाठून सर्वांनाच चकित केले. मात्र अंतिम फेरीचा दांडगा अनुभव असलेल्या मुंबई इंडियन्सने ५ गडी राखून बाजी मारली आणि विक्रमी पाचवे विजेतेपद मिळवत दिल्लीकरांचे स्वप्न धुळीस मिळवले. भेदक गोलंदाजी करत दिल्लीला ७ बाद १५६ धावांत रोखल्यानंतर मुंबईने १८.४ षटकांतच ५ बाद १५७ धावा केल्या. मुंबई इंडियन्स सलग दुसऱ्या वर्षी जिंकणारा केवळ दुसराच संघ ठरला. मुंबईने नाणेफेक गमावली, परंतु आपल्या अनुभवाच्या जोरावर त्यांनी दिल्लीला प्रतिकाराची संधी दिली नाही. दिल्लीला मर्यादित धावसंख्येत रोखल्यानंतर कर्णधार रोहित शर्माची बॅट चांगलीच तळपली. त्याने ५१ चेंडूंत ६८ धावा काढताना ५ चौकार व ३ षटकार मारले. डिकॉक

लवकर परतल्यानंतर रोहित व सूर्यकुमार यांनी वेगाने धावा फटकवत मुंबईचा विजय स्पष्ट केला. ईशान किशननेही १९ चेंडूंत नाबाद ३३ धावा करत आपले योगदान दिले. ऋषभ पंत व कर्णधार श्रेयस अय्यर यांची भागीदारी दिल्लीसाठी निर्णायक ठरली. यंदाच्या सत्रातली सर्वोत्तम खेळी करताना पंतने ३८ चेंडूंत ५६ धावांचा तडाखा दिला. अय्यरनेही ५० चेंडूंत ६५ धावांची खेळी करत पंतसह ९६ धावांची शानदार भागीदारी केली. बोल्टने पहिल्याच चेंडूवर अष्टपैलू मार्क स्टोईनीसला बाद केले. आयपीएल अंतिम सामन्यात पहिल्यांदाच पहिल्या चेंडूवर बळी गेला. त्यानंतर रहाणे व फॉर्ममध्ये असलेला धवनही स्वस्तात बाद झाल्याने दिल्लीची घसरगुंडी उडाली.



दीक्षांत  
सभागृह



मुख्य  
भवन



केंद्रीय  
पुस्तकालय



केनरा  
बैंक

विद्युत अभियांत्रिकी

तरलयांत्रिकी प्रयोगशाला

संगणक विज्ञान

प्रचालन अनुसंधान

जैवविज्ञान तथा जैवअभियांत्रिकी

प्रणाली एवं नियंत्रण अभियांत्रिकी

व्याख्यान कक्ष संकुल



शनिवारवाडा

गेटवे ऑफ इंडिया

कोरेगाव पार्क

वांद्रे बँडस्टँड

कोथरूड

चिंचपोकळी

तुळशीबाग

कुलाबा काँजवे

# डॉ. ए पी जे अब्दुल कलाम

अबुल पाकिर जैनुलअब्दीन अब्दुल कलाम, (१५ अक्टूबर १९३१ – २७ जुलाई २०१५) इन्हें मिसाइल मैन और जनता के राष्ट्रपति के नाम से जाना जाता है, भारतीय गणतंत्र के ग्यारहवें निर्वाचित राष्ट्रपति थे। वे भारत के पूर्व राष्ट्रपति, जानेमाने वैज्ञानिक और अभियंता (इंजीनियर) के रूप में विख्यात थे। उन्होनें सिखाया जीवन में चाहें जैसे भी परिस्थिति क्यों न हो पर जब आप अपने सपने को पूरा करने की ठान लेते हैं तो उन्हें पूरा करके ही रहते हैं। अब्दुल कलाम के विचार आज भी युवा पीढ़ी को आगे बढ़ने के लिए प्रेरित करते हैं। इन्होंने मुख्य रूप से एक वैज्ञानिक और विज्ञान के व्यवस्थापक के रूप में चार दशकों तक रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) और भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) संभाला व भारत के नागरिक अंतरिक्ष कार्यक्रम और सैन्य मिसाइल के विकास के प्रयासों में भी शामिल रहे। इन्हें बैलेस्टिक मिसाइल और प्रक्षेपण यान प्रौद्योगिकी के विकास के कार्यों के लिए भारत में 'मिसाइल मैन' के रूप में जाना जाता है। इन्होंने १९७४ में भारत द्वारा पहले मूल परमाणु परीक्षण के बाद से दूसरी बार १९९८ में भारत के पोखरान-द्वितीय परमाणु परीक्षण में एक निर्णायक, संगठनात्मक, तकनीकी और राजनैतिक भूमिका निभाई। कलाम सत्तारूढ भारतीय जनता पार्टी व विपक्षी भारतीय राष्ट्रीय कांग्रेस दोनों के समर्थन के साथ २००२ में भारत के राष्ट्रपति चुने गए। पांच वर्ष की अवधि की सेवा के बाद, वह शिक्षा, लेखन और सार्वजनिक सेवा के अपने नागरिक जीवन में लौट आए। इन्होंने भारत रत्न, भारत के सर्वोच्च नागरिक सम्मान सहित कई प्रतिष्ठित पुरस्कार प्राप्त किये।

सबसे उत्तम कार्य क्या होता है, किसी इंसान के दिल को खुश करना, किसी भूखे को खाना देना, जरूरतमंद की मदद करना, किसी दुखियारे का दुख हल्का करना और किसी घायल की सेवा करना...



# बस अलेक्सा से पूछें

अभी खरीदें >

क्लियरेंस  
स्टोर

फैशन  
इलेक्ट्रॉनिक्स

आज यह सब काम करें

बिल चुकाएं, पैसे भेजे, टिकट बूक करें  
और भी बहुत कुछ

हॅलो, देवीप्रसादजी घर पर है

५० ₹ काट ओवरएक्टिंग का

पच्चीस दिनमें पैसा डबल

## Final Thoughts

This project certainly marks a starting point in my journey of exploring the type design field with a keen eye towards details and a critical approach to find design solutions. The work I did previously was merely an effort to make myself acquainted with the process of type design. However, I hope this phase of the project could stand on the novelty test compared to existing solutions available for the same purposes.

The font needs further work in many areas, but the time spent on the current work progress has brought multiple learnings and sensitivity towards overall letter construction of Devanagari.

With the phenomenal guidance I got through this journey, I cannot thank my guide enough for being so humble and critical at the same time. With emerging needs for Indic script fonts in the current time, I aim to explore this field further, but with a more experimental and critical-problem solving approach.

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## Glyphs

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