
Contents

1	Jatai and Ghanam Specifications.....	3
1.1	Jata Paatam basic Structure:	3
1.2	Jata Paatam example from Rudram.....	4
2	Special Rules for Jatai	10
2.1	Dvipadam which are identical.....	10
2.1.1	Programming Consideration:.....	10
2.2	Dvipadam which are not identical.....	10
2.2.1	Programming Consideration:.....	10
2.3	Dvipadam combined as one Padam.	10
2.3.1	Programming consideration.....	11
2.4	Trikrāmam.....	11
2.4.1	Programming Consideration:.....	11
3	Ghanam Specifications	12
3.1	Ghana basics:	12
3.2	Ghanam Example	13
3.3	Dvipadam – two identical padams follow one another	13
3.4	Two Similar Padam in upayanamaskaram in Rudram or other text.	13
3.4.1	Progamming Consideration	14
3.5	Dvipadam – two not identical padams follow one another	14
3.6	Dvipadam combined as one Padam.	14
3.7	Trikrāmam intervenes:	14
4	Other common issues	16
4.1	Application of Visarga Sandhi Rules	16
4.2	Application of Vowel Sandhi Rules.....	16
4.3	Application of Consonant Sandhi Rules	16
4.4	Application of Avagraha	16
4.5	Application of Pragraha.....	16
4.6	Application of Augmentation, Substitution and Elision	17

1 Jatai and Ghanam Specifications

1.1 Jata Paatam basic Structure:

The rules or principles of Jata Paata recital are as follows:

1. Assume there are seven words in a mantra as a Ruk.
We will number these words as 1,2,3,4,5,6,7
 2. First take words 1 & 2 and recite them as **12 , 21 ,12**
 3. Then drop 1, take 2 and 3 recite **23, 32, 23 ..** (and continue this till the statement (Ruk) is over.)
 4. If the statement 4 is a word with two padams **4a** and **4b**, **before taking up 5,6**; it is chanted as **4 iti 4a pause 4b**. The student now grasps the details of the Padams that make this word **4**. This is like in Kramam or Ghanam. We call this for the project as **Padam Split (PS)**.
 5. If the Pragraha (PG) (see example) is dropped, it is rendered as PG iti PG.
 6. To indicate that the Ruk has ended a final recital of **7 iti 7**.
 7. Then the next Ruk is taken up as in Step 2. (as indicated in 3 above also)
 8. All rules relating to normal Veda recital, Swaram rules, Vowel Sandhi Rules, Visarga Sandhi Rules, Consonant Sandhi Rules and other grammar rules are applied.
 9. The Swaram markings and acquisition follow the normal Veda recital rules.
 10. Rules like dropping one 'A' (letter 'aa'), if they follow each other.
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1.2 Jata Paatam example from Rudram

The Pada Paatam of first mantra from Anuvaham 1 of Rudram is given as follows: (from the book containing source work of Sri Bhattacharya Misra)

नमः । ते । रुद्र । मन्यवे । उतो इति । ते । इषवे । नमः ।
1 2 3 4 5 6 7 8

नमः । ते । अस्तु । धन्वने । बाहुभ्यामिति बाहु – भ्याम् ।
1 2 3 4 5

उत । ते । नमः ॥
6 7 8

Now the Pada Padam gives all the padams only. While reciting we need to take care of all Recital rules, Word formation, grammar etc. Let us see how this converts into Jata. Please note that we have used Dheerga Swaritam in the Padam.

The Pada Paatam shall mark a padam, **without any swaram**, in **all anudAttam only**. (lower note). While combining words these padams need to be converted to udAttam and apply Sandhi and Swaram rules.

Explanation of the flow:

Notes and Explanations with Padam	Jata Paata
Padam 1,2 - नमः + ते । Flow – 12, 21,12 namaha+te becomes namaste;	(ओं) नमस्ते ते नमो नमस्ते 'te' in blue acquires anudAttam to support the following intended svaritam of namO but this mO acquires anudAttam to support the

namaha becomes nam ^{mO} before 'na' of following namaha as per visarga sandhi.	'ma' in namaste
Padam 2/3, ते । रुद्र Flow – 23,32,23 'te and rudra' do not have swaram and acquires anudAttam swaram.	ते रुद्र रुद्र ते ते रुद्र Now there is no scope of rule to introduce any other swaram so the entire flow is in anudAttam.
Padam 3/4 - रुद्र । मन्यवे Flow – 34,43,34 Rudra is rendered with anudAttam at start then it is rendered normally since it has no designated swaram.	रुद्र मन्यवे मन्यवे रुद्र रुद्र मन्यवे in ManyavE , 'vE' is a dheerga letter with swaram the Swaritam becomes Dheerga Swaritam at end.
Padam 4/5. मन्यवे । उतो इत्ति । Flow – 45,54,45 ManyavE becomes Manyava due to following Vowel 'U as per Vowel Sandhi	मन्यव उतो उतो मन्यवे मन्यव उतो Word- iti is not considered as it is an indicator in Pada Paatam to mean that 'utO' is a Pragrihya . (PG) Pragrihyas are words which are not subject to Sandhi at the end.
Padam 5/6. उतो इत्ति । ते । Flow - 56,65,56 'iti' will be ignored since it is an indicator. 'te' with 'ae' sound takes 'a' sound 'ta' before vowel letter	उतो ते त उतो उतो ते > 'te' acquires dheerga swaritam due to being a dheerga letter at the end. This is acquired because of u

word utO.	
<p>Padam 5 उतो इति ।</p> <p>Flow – 5 iti 5 PG iti PG</p> <p>This is like krama paatam.</p> <p>'iti' is dropped so utO iti utO is taken; 'e' in iti + u in utO combine to give ityu.</p>	<p>उतो इत्युतो</p> <p>Please note that first letter of PG can be subject is Vowel or Consonant sandhi. Not the last letter like O, E, I or U</p>
<p>Padam 6,7 ते । इषवे</p> <p>Flow – 67,76,67</p> <p>'ta' and 'va' marked in blue have 'ae' sound but takes 'a' sound before vowel 'e'</p>	<p>त इषव इषवे ते त इषवे</p> <p>'ta' and 'va' acquire anudAttam to support the 'sha' in ishava & ishava</p>
<p>Padam 7/8 इषवे । नमः ।</p> <p>Flow – 78,87,78</p> <p>'ve' marked in blue acquires anudAttam to support the following intended svaritam of namaH.</p> <p>First namaha becomes namO before following namaha. This namaha loses visargam due to following vowel 'e'</p> <p>But mO marked in yellow becomes anudAttam to support following namaH.</p>	<p>इषवे नमो नम इषव इषवे</p> <p>नमः</p> <p>The 'ma' marked in green becomes anudAttam to support svaritam of 'Sha' in ishava.</p> <p>'va' acquires anudAttam to support Sha in ishavaE.</p>

<p>Padam 8 End of Ruk in Samhita. 8 iti 8.</p> <p>Padam 8 - नमः ।</p> <p>First namaha loses visargam before 'e', ma acquires anudAttam to support intended svaritam of 'ti', but ti itself acquires anudAttam to support 'ma' in second namaha.</p>	<p>नम इति नमः</p> <p>End of the Ruk will be indicated as 'R' in the Padam Input template.</p>
<p>Start of second ruk.</p> <p>Padam 1,2 - नमः । ते</p> <p>Flow- 12,21,12</p> <p>This is exactly same as the first ruk's start with 1,2</p>	<p>नमस्ते ते नमो नमस्ते</p>
<p>Padam 2/3 - ते । अस्तु</p> <p>Flow 23,32,23</p> <p>astu+astu combines, tu changes to 't'+ 'v'</p>	<p>ते अस्त्वस्तु ते ते अस्तु</p> <p>Since te and astu do not have swaram it is rendered in full udAttam.</p>
<p>Padam 3/4 अस्तु । धन्वने</p> <p>Flow – 34,43,34</p> <p>'astu' at start acquires anudAttam, since it is followed by Padams with swaram the combination of astvastu gets only swarm for stu at end to support 'nva'</p>	<p>अस्तु धन्वने धन्वने अस्त्वस्तु</p> <p>धन्वने</p>
<p>Padam 4/5 - धन्वने । बाहुभ्याम्</p>	<p>धन्वने बाहुभ्याम् बाहुभ्याम्</p>

<p>Flow – 45,54,45</p> <p>Pada Paatam is given as</p> <p>बाहुभ्यामिति बाहु – भ्याम्</p> <p>Here the 'iti' has been added to split the Padam. iti has svaritam on ti by Pada Paata rules.</p> <p>In Pada paata style, the bAhubhyAm with iti becomes</p> <p>bA`hubhya`miti, the split is given as</p> <p>bA`hu – bhyA`m.</p>	<p>धन्वने धन्वने बाहुभ्याम् ></p> <p>'bhyAm' acquires anudAttam to support 'ti' in 'iti' if you combine second part</p> <p>bAhu+bhyAM, bA has anudAttam, hu is udAttam so, when bhyAm is combined it acquires svaritam; becomes a dheerga svaritam since it is dheerga letter.</p> <p>While rendering Jata paatam, bhyam acquires anudAttam to support 'nva' in dhanvane. 'ne' in dhanvane also requires anudAttam to support following dhanvane</p>
<p>Padam 5/6 - बाहुभ्याम् । उत</p> <p>'m' combines with u of uta to give 'mu'</p> <p>'ta' of uta combines with u of following uta to become 'tO' vowel sandhi rule is 'a' + 'u' = 'O'</p>	<p>बाहुभ्यामुतोत बाहुभ्यां</p> <p>बाहुभ्यामुत</p>
<p>Padam 5 Flow 5 iti 5</p> <p>Padam 5 - बाहुभ्याम्</p>	<p>बाहुभ्यामिति बाहु – भ्यां ></p>
<p>Padam 6,7 - उत । ते ।</p> <p>Flow – 67,76,67</p> <p>Uta+uta becomes utOta (a+u = O)</p>	<p>उत ते त उतोत ते ></p>

<p>Padam 7/8 - ते । नमः</p> <p>Flow – 78,87,78</p> <p>‘mO’ and ‘te’ acquire anudAttam to support ‘ma’ in namaH part of Namaste and namaha</p>	<p>ते नमो नमस्ते ते नमः</p>
<p>Ruk ends. Padam 8 Flow is 8 iti 8</p> <p>Padam 8 - नमः ।</p>	<p>नम इति नमः ।</p>

2 Special Rules for Jatai

2.1 Dvipadam which are identical

If two padams are identical in terms of their akshara and swara. Then jatai is not repeated with 6 padams. Only 1,2 with Sandhi, Visarga and other grammar rules.

1. Example: aqdan**ti**# | aqdan**ti**# |

Jata Vaakyam - aqdan**tya**aqdan**ti**# | (Vowel Sandhi with necessary Swaram Rules)

2. Example - nama#H | nama#H

Jata Vaakyam - namoq nama#H |

2.1.1 Programming Consideration:

Program identifies and performs the operation it will be great.

2.2 Dvipadam which are not identical

If the words are same but Swaram is different, it must be repeated with 6 padams so there is clarity.

1. Example: mAq | mA | (same Padam with different Swaram)

Jata Vaakyam - mAq mA mA mA# mAq mA

2. aqsUrtA\$ | sUrtA\$ | (dissimilar though sounds similar)

Jata Vaakyam - asUrtAqsUrtAqsUrtAq&sUrtAq&sUrtAqsUrtA\$ |

2.2.1 Programming Consideration:

if condition in 2.1 is not met, repeat normal rules to derive 6 padams

2.3 Dvipadam combined as one Padam.

This is treated as one Padam only.

Example: iqheha# | eqShAqm |

Jata Vaakyam - iqhehai#ShAm eShAmiqheheqhehai#ShAm

lqha+iqha becomes iqheha# which will be treated together as one Padam jointly together.

2.3.1 Programming consideration

None. It is only a vedic special indication about source of a padam. Jatai or Ghanam will be constructed as if it is one Padam.

2.4 Trikramam

There are instances in Jatai there is a need to take 3 Padams and render it like Jatai when words with A ending is followed by another A in udAttam.

So it is taken as 3 padams and rendered as 123,321 123

Example - mA | A | sthAqt

Jata Vaakyam - mA &&sthA\$t sthAqdA mA mA &&sthA\$t |

Actually in Grammar, A+A is only A but when two sounds intervene with one A ending followed another A in SamhitA, a && (double avagraham) is represented.

What happens if only two padams are taken as mA | A |

The Jatai becomes mA | A | A | mA mA | A |

This will derive mA (mA+A) &&mA mA(mA+A) **Scholars object to && because three As together is still A.** So a Student lacks logic to remember the padams nor the jatai can be derived out of strong logic.

2.4.1 Programming Consideration:

Trikramam shall be indicated manually in the Excel input Sheet.

So 3 Padams are taken together. When A+A results in loss of A, we must indicate the loss through a *. ButvA+A+aharat.. A+A+a is A but we will represent it as *& so student still knows about existence of sound but lost but needs right extension as per her School of learning.

3 Ghanam Specifications

3.1 Ghana basics:

The rules or principles of Ghana Paata recital are as follows:

1. Assume there are seven words/Padams in a mantra as a Ruk.

We will number these words as **1,2,3,4,5,6,7**

2. First take up Words 1,2,3. The recital shall be as follows:

12,21,123,321,123. In the second set, drop 1, take **234**

Recite **23,32,234,432,234.** This continues till the ruk ends.

3. If the statement 4 is a word with two padams **4a** and **4b**, **before**

taking up 5,6; it is chanted as **4 iti 4a pause 4b.** The student now grasps the details of the Padams that make this word **4**. This is similar to Krama Paatam.

4. If a Paragraha (PG) is dropped then it will be rendered as PG iti PG.

5. When the two words 6,7 are taken up; the chanting rule (as explained above with three letter combination) cannot be followed; so it is recited as **67, 76,67.** The flow of the mantra and its word are repeated to memorise the words/padams.

6. To indicate that the Ruk has ended a final recital of **7 iti 7 like in Krama Paatam.**

7. Then the next Ruk is taken up as in Step 2.
-

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8. All rules relating to normal Veda recital, Swaram rules, Vowel Sandhi Rules, Visarga Sandhi Rules, Consonant Sandhi Rules and other grammar rules are applied
 9. The Swaram markings and acquisition follow the normal Veda recital rules and is clearly marked in the Pada Paatam.
 10. Elongation of rendering is made for the statements where padam is split like in Krama Paatam.

3.2 Ghanam Example

Kindly refer to the Rudra Ghana Chapter 1 for details. The complete Baraha file is also available with individual Padams.

3.3 Dvipadam – two identical padams follow one another

1. **Example-** dyuqmat | nama#H | nama#H || (R)
dyuqman namoq namo# dyuqmaddyuqman namoq nama#H

Classical Rule says **donot repeat the third padam of the Ghana**. So there should be only six padams. But Chennai based Ghanam rendering include the nama#H to indicate there is actually an identical padam which is dropped. **This makes it seven**. See Rudram example also below.

Note next when nama#H | nama#H || is taken up we say namo namaH only in Jatai or Ghanam since next namaH is end of the Ruk

Last will be **nama iti namaH** for Ruk

3.4 Two Similar Padam in upayanamaskaram in Rudram or other text.

Flow in Rudram Anuvaakam 2

5. AqvyAqdhinI#nAm | pata#ye | nama#H |
AqvyAqdhinI#nAqM pata#yeq pata#ya AvyAqdhinI#nA
mAvyAqdhinI#nAqM pata#yeq namoq namaqspata#ya AvyAqdhinI#nA
mAvyAqdhinI#nAqM pata#yeq nama#H |
-

6. AqvyAqdhinI#nAm |
AqvyAqdhinI#nAq mityA\$ - vyAqdhinI#nAm |

7. pata#ye | nama#H | (hidden nama#H here)
pata#yeq namoq namaqspata#yeq pata#yeq namoq nama#H |

8. nama#H | nama#H | (namaH end and beginning namaH of next
salutation – no Ruk here)
namoq nama#H |

9. nama#H | kaqkuqBAya# | niqShaq~ggiNe\$ |
nama#H kakuqBAya# kakuqBAyaq namoq nama#H kakuqBAya#
niShaq~ggiNe# niShaq~ggiNe# kakuqBAyaq namoq nama#H kakuqBAya#
niShaq~ggiNe\$ |

3.4.1 Progammig Consideration

This is indicated as J for joining two statements (namaskarams) and this is working as per Viswanad's program. Retain as it is. Padam input Excel shall give the same.

3.5 Dvipadam – two not identical padams follow one another

When Padams differ in swaram or letter. The complete Ghanam is rendered as 12-21-123-321-123.

1. Example mAq | mA | mAq |
Ghana Vaakyam - mAq mA mA mA# mAq mA mA# mA mA mA#
mAq mA mA\$ |

3.6 Dvipadam combined as one Padam.

This is treated as one Padam only. Similar to example with iheha in Jatai explanation.

3.7 Trikramam intervenes:

If Trikramam intervenes as padam 2,3,4 We will indicate 4G as an indication to take 4 padams when padam 1 comes in the Excel Row.

Assume there are 5 padams in a statement as **teq** | **mA** | **A** | **sthAqt** |
indra#sya |

Against row with padam – **teq** we will indicate 4G so that program will take four padam as **teq** | **mA** | **A** | **sthAqt** | But against **mA** Trikramam will be indicated. The flow is given below

1. **teq** | mA | A | sthAqt |

1J - teq mA mA te# teq mA | (take two padam only)

1G - teq mA mA te# teq mA &&sthA\$t sthAqdA mA te# teq mA &&sthA\$t

2. **mA** | A | sthAqt | (take three for Padam and Ghanam)

2J - mA &&sthA\$t sthAqdA mA mA &&sthA\$t |

2G - mA &&mA mA&&sthA\$th sthAqdA mA mA &&sthA\$t |

3. A | sthAqt | indra#sya | (now normal flow)

3J - A sthA\$th sthAqdA sthA\$t |

3G - A sthA\$th sthAqdA sthAqdindra#syaq indra#sya sthAqdA
sthAqdindra#sya |

4 Other common Programming Logic

All the indication will be given if the rule pertains to operation of one Padam with next Padam, with itself or previous word in Jatai/Ghanam reverse order.

4.1 Application of Visarga Sandhi Rules

The normal visarga Sandhi Rules given in Specification Excel sheet and as in Articles shall be applied.

But the Visargam becomes something different like 'aH' becoming 'r', this will be indicated in the Excel Sheet.

4.2 Application of Vowel Sandhi Rules

The normal Vowel Sandhi Rules given in Specification Excel sheet and as in Articles shall be applied.

When Sandhi results in a change of letter like 'e' or 'ai' becoming 'a','A' respectively, space shall be provided to indicate that words have a sandhi not joined and normally a pause is given.

Whenever a vowel comes after a halant, always join them as a consonant.

4.3 Application of Consonant Sandhi Rules

The normal Vowel Sandhi Rules given in Specification Excel sheet and as in Articles shall be applied.

Exception shall be indicated in Padam Excel sheet.

4.4 Application of Avagraha

Avagraha rule shall be applied before A,e,O. There are specific set of words which donot elide or elide in reverse direction. This will be indicated when no elision is there.

4.5 Application of Pragraha

Paragraha is not subject to Sandhi of the last word ending in I,E,U or O.

First word is subject to Sandhi if applicable. If Pragraha is not be applied but Sandhi performed in reverse flow, it will indicated in Excel Input.

4.6 Application of Augmentation, Substitution and Elision

There will be specific column indicating whether it is A,S or E. The indication will be given if the whole word or first letter or last letter that changes and to what. So execution of the program is easy.

4.7 Direct Jatai and Ghanam

If the Jatai or Ghana Vaakyam cannot be derived due to any odd rule or condition through logic or the logic is complex. The entire jata or ghana vaakyam shall be given in a separate field. That needs to be copied for the set of two or three words depending on whether it is Jatai or Ghanam.