# **Jatai and Ghanam Specification and Input deliberation Note**

## **Jatai & Ghanam Specifications**

1. The Specification for generating Padams into Jatai is given in the Article on “Basics of Jata paatam” and Ghanam in the “Basics of Ghana paatam”. But this is only a basic.
2. There are a number of rules that are followed
   1. Specific rules from classical text like prAtiSakyam
   2. Specific rules from texts like Jata Mani and Jata DarpaNam.
   3. Exceptions that arise in the interpretation for specific set of words
   4. Rules adopted for specific areas of SamhitA like the Kandam, PraSnam and the Passage/Anuvaakam.

So to check the correct application of the above, the reference of all these rules must find a place in the input Excel though all these details may not be required from a Programming perspective.

1. The Input must be given in a fasion that a single Excel sheet is used to program the generation of Jatai and Ghanam. The input column must be recognised as being applicable to Jatai or Ghanam or both. Example, Trikrama where three padams are taken for Jatai instead of two padams and for such combinations four padams are taken in Ghanam instead of three.
2. Some of these basics must find a place in the output format.
3. The Output should include all reference to the Padam like the Kandam, PraSnam, Anuvaakam and Panchati number, Panchati number, serial number of the Padam in the Panchati, reference to specific rule if is applied. Specific columns must be fixed for reference.
4. The core basic in generation of Jatai and Ghanam is Padam and the Kramam. The rules followed in Kramam must be followed in Jatai and Ghanam subject to exceptions that are followed as prakruti and vikruti.
5. Specification must also be provided for the reverse order or a Padam has any type of sandhi with itself during reverse order.
6. The proof reader must ensure that the prakruti matches fully with the rules/statements in the SamhitA.
7. The manual filling of Excel input is subject to some errors so a check shall be made that the Padams given follow some standard pattern and thus the input errors are reduced.

## **Visarga Sandhi**

Issues pertaining to Visarga Sandhi is described below:

1. The Visarga Sandhi rules as given in Specification Sheet as compiled from Articles shall be generated by Program.
2. The Padam ending with aH sound for which the visargam becomes ‘r’ shall be indicated in the Excel Sheet.
3. The Padam ending with aH sound for which visargam becomes ‘O’ as exception shall be indicated in Excel Sheet.
4. The Padam ending with AH sound which becomes ‘r’ shall be indicated
5. The Padam combination for which Visargam takes a specific sound like ‘s’, Sh, or H retained shall also be indicated

## **Vowel Sandhi**

1. The Vowel Sandhi shall be derived from Specification Sheet from Articles.
2. All Exceptions shall be indicated in Excel Sheet

## **Consonant Sandhi**

1. The Consonant Sandhi shall be derived from Specification Sheet from Articles.
2. All Exceptions shall be indicated in Excel Sheet

## **Vowel Elongation**

1. All Vowel elongation rule shall be indicated in Excel Sheet
2. General rule is that there is no Vowel elongation when the padam follows itself in reverse order.

## **Avagraha formation**

1. Normal avagraha shall be based on general rule for ‘aa’ ‘ae’ and ‘O’
2. There are a number of words for which first ‘a’ does not elide as per PratiSakyam. This needs input in Excel along with the rule for avagraha in reverse order and with the same Padam.
3. If elision is normal it will not be indicated; but every case of non-elision shall be given as input in Excel Sheet.

## **Pragraha formation**

1. Pragraha will be indicated as PG. The ending ‘I’, ‘U’ ‘ae’ or O will not be subject to Sandhi.
2. Excel sheet should indicate Paragraha in reverse order or based on special rule

## **Augmentation, special elision and Substitution**

1. Augmentation is a rule that a letter is added when it follows another word with specific letter/word rules. E.g mithu + caranta = mithuScaranta. Ut+ tabAna = utstabAna.
2. Elision is when u,v or r sound is dropped normally.
3. Substitution is when one letter becomes another with or without augmentation vivasvAn+ athitiH becomes viasvA(gm)athith or   
   vanaspatIn +anu becoming vanaspatI(gm) ranu.
4. The indicator must say whether it is Augmentation, elision or substitution or both and give on what letter or end or start this is applied. This requires good observation of rules.

## **Table of Excel fields with description**

|  |  |  |  |
| --- | --- | --- | --- |
| **Excel Col.** | **Details it holds** |  |  |
| A | Kandam |  |  |
| B | PraSnam |  |  |
| C | Passage Name |  |  |
| E | TS N.N.N.N ref |  |  |
| F | Panchati No in PraSnam |  |  |
| G | Padam Srl No in Panchati |  |  |
| H | Padam Srl No in Anuvaakam |  |  |
| I | Padam srl no in PraSnam |  |  |
| J | Padam | The actual Padam |  |
| K | Padam Nature | Padam Split, Pragraha |  |
| L | End of Ruk |  |  |
| M | Spl Padam Indicator | Tri kramam, 4 pada Ghanam, Identical Padadvayam |  |
| N | Padam exapansion | For PG, PS, end of Ruk, padam of preposition |  |
| O | Direct J or G | Copy from the Jata or Ghana Vaakyam given next |  |
| P | Jata Vaakaym | For the two words or three words | Manual Input In Excel |
| Q | Ghana Vaakyam | For the three words of four words | Manual Input in Excel |
| R | Visarga Exception | ‘r’ , ‘O’ s, Sh, H | With next word |
| S | Visarga Exception | r’ , ‘O’ s, Sh, H | With previous word |
| T | Vowel Sandhi Exception |  | With next word |
| U | Vowel Sandhi Exception |  | With previous word |
| V | Consonant Sandhi |  | With next word |
| W | Consonant Sandhi |  | With pre word |
| X | Vowel elong |  | Next word |
| Y | Vowel elong |  | Pre word |
| Z | Avagraha 1 |  | next |
| AA | Avagraha 2 |  | self |
| AB | Avagraha 3 |  | previous |
| AC | Pragraha 1 |  | Previous |
| AD | Pragraha 2 |  | self |
| AE | Type of AES | AS,ES, A,E, S |  |
| AF | Padam start |  |  |
| AG | Padam end |  |  |
| AH | Letter added |  |  |
| AI | Letter Subs |  |  |
| AJ | Letter elided |  |  |
| AK | Next padam start |  |  |
| AL | Next padam end |  |  |
| AM | Letter added |  |  |
| AN | Letter Subs |  |  |
| AO | Letter elided |  |  |
| AP |  |  |  |
| AQ |  |  |  |