Contents

1 Swaram Specifications for derivation of Jatai and Ghanam

1.1 Basic Swarams:

The basic swarms are udAttam (not marked), anudAttam and Swaritam.

Dheerga Swaritam with double line is an extension of Swaritam only.

When Swaritam becomes Dheerga Swaritam.

1.1.1 At any place in a vedic statement a long letter has Swaritam but followed by a Conjunct consonant

Examples

गणानान्त्वा गणपतिꣳ	स्थिरै–रङ्गैं–स्तुष्टुवाꣳ
नमो निषङ्गिणे स्तेनानां पतये	नम आव्याधिनीभ्यो
नमो व्रातेभ्यो	नमो रथेभ्यो
नमः सेनाभ्य	कर्मरिभ्यश्च वो

1.1.2 At the end of a vedic statement or padam which has

A long letter ending with Swaritam (long letter, visaraga letter or long anuswaram or a halant) Examples

सहस्राक्षाय मीढुषे ।	नातताय धृष्णवे ।

अव पश्चात्तात् । अव पुरस्तात् । अवोत्तरात्तात् ।	प्रचोदयात
अस्मन्निवपन्तु सेनाः	तन्मित्र एति पथिभि र्देवयानैः
वायु र्नक्षत्र–मभ्येति निष्ट्यां	पूषा रेवत्यन्वेति पन्थां ।

short anuswaram letter Examples

अववक्तारं । अव श्रोतारं । अवदातारं । सरिषः पातुनक्तं ॥	नीचातंधक्ष्यत सन्न शुष्कं । ऋषिभि–स्संभृत॰ रसं ।

1.1.3 A long letter with visargam or anuswaram which forms a conjunct consonant with followin letter

Examples

उभाभ्यां देव सवितः प्रजायां ब्राह्मण॰ हन्ति	सा मां मेधा, आमां मेधा तेषां ँवः पुरो,

| यो देवानां पुरोहितः । | समान लोकतां ँयन्ति |

1.2 Consideration in Programming

The program should take all the Dheerga Swaritams as Swaritams intially and derive the entire swaram formation and then apply the Dheerga Swarita rules. In a running Vedic Statement many of the Dheerga Swaritam in padam becomes Swaritam in Vaakyam, Kramam, Jatai or Ghanam. Also care should be taken to mark dheerga swaritam for letters which acquire swaritam due to Swara rules and one of the rules mentioned above gets applied and it derives a Dheerga Swaritam.

1.3 Basic flow of Swaram

1.3.1 All padams are in udAttam in Pada Paatam:

All the Padams will be represented together with Sandhis but will retain their udAttam with no change in Swaram. This rule holds good for Krama,Jatai and Ghana Paatam.

Rudra Ghanam Anuvaakam 10 Statement 10

10. mA | BeH | mA | मा । भेः । मा ।)

Jatai -   mA Ber Ber mA mA BeH |

मा भेर् भेर् मा मा भेः ।

Ghana-   mA Ber Ber mA mA Ber mA mA Ber mA mA Ber mA |

मा भेर् भेर् मा मा भेर् मा मा भेर् मा मा भेर् मा ।

All are udAttams; only Visarga Sandhi rule of BeH which becomes 'r' since visarga sound is 'ae' is applied. No Other Sandhi. No Swaram for all Padams since they are all original udAttams.

1.3.2 All Padams are fully marked in anudAttam

All the Padams will be represented together with Sandhis but will retain their audAttam as in Pada Paatam. The rule holds good for Krama, Jatai and Ghana Paatam.

Rudram – Anuvaakam 1 – Statement 2

2. teq | ruqdraq | (ते ꞁ रुद्र)

Jatai - teq ruqdraq ruqdraq teq teq ruqdraq |

ते रुद्र रुद्र ते ते रुद्र

Ghanam - Statement 33. naqH | ruqdraq | mRuqDaqyaq |

(नः ꞁ रुद्र ꞁ मृडय ꞁ)

noq ruqdraq ruqdraq noq noq ruqdraq mRuqDaqyaq mRuqDaqyaq ruqdraq noq noq ruqdraq mRuqDaqyaq |

नो रुद्र रुद्र नो नो रुद्र मृडय मृडय रुद्र नो नो रुद्र मृडय ꞁ

Both Padam marked in full anudAttam. Visargam 'naH' becomes no. No vowel Sandhi. No Swaram change. Recited in full anudAttam. Apply same rule for Ghanam also in Statement 33.

1.3.3 Padams with full anudAttam or more than one anudAttam

The Padams will be rendered in anudAttam in the beginning of a krama, jatai or ghana Vaakyam till they occur or intervened by udAttam; after this the pracaya anudattam will be rendered as udAttam in a krama, jatai or Ghana Vaakyam.

Example 1:

11. teq | aqstuq | dhanva#ne | (ते । अस्तु । धन्वने ।)
teq aqstvaqstuq teq teq aqstuq dhanva#neq dhanva#ne
astu te te astuq dhanva#ne |

ते अस्त्वस्तु ते ते अस्तु धन्वने धन्वने अस्तु ते ते अस्तु धन्वने ।

First two padams are in full anudAttam. Astu+astu becomes asvastu in Sandhi.

Jatai will be in full anudAttam "teq aqstvaqstuq teq teq aqstuq "

ते अस्त्वस्तु ते ते अस्तु

Ghanam will be rendered in anudAttam till aqstuq now follows 'dha' in udAttam, then regular flow will follow. Padams in full anudAttam in Padam will be rendered in udAttam in Krama,Jatai and Ghana Vaakyam.

Example 2: Rudra Anuvaakam 1

84. aqvoqcaqt | aqdhiqvaqktA | praqthaqmaH |

अवोचत् । अधिवक्ता । प्रथमः
Jatai - aqvoqcaq daqdhiqvaqktA &dhi#vaqktA vo#ca
davoca dadhivaqktA |

अवोच दधिवक्ता ऽधिवक्ता ऽवोच दवोच दधिवक्ता

Ghanam - aqvoqcaq daqdhiqvaqktA &dhi#vaqktA vo#ca
davoca dadhivaqktA pra#thaqmaH pra#thaqmo a#dhi
vaqktA vo#ca davoca dadhivaqktA pra#thaqmaH |

अवोच दधिवक्ता ऽधिवक्ता ऽवोच दवोच दधिवक्ता प्रथमः प्रथमो

अधि वक्ता ऽवोच दवोच दधिवक्ता प्रथमः ।

Here first padam is full anudAttam; second one three anudAttam with last akshara udAttam. So till ==ktA== is reached all letters are rendered in anudAttam as in Pada Paatam.

As per consonant Sandhi '==t==' becomes '==d==' before vowel. With a it becomes '==da==' but will be not swaram change as all are anudAttam as per Pada Paatam.

1.4 **General Logic:**

If an ==udAttam== as per Pada Paatam comes in, the ==previous letter== shall be ==anudAttam== and the ==following letter== shall be ==Swaritam.==

But if the following letter is ==udAttam==, the ==next possible letter== that can take swaritam will be marked in Swaritam.

After ==udAttam==, an ==anudAttam== which is ==specific to that Padam== follows, it will ~~not acquire Swaritam~~ but retain its ==anudAttam.==

The expansion of this logic requires detailed study of Padams and Swaram rules which are detailed in the following Sections.

2 Basic types of Padams

All the rules given below are subject to change when a Sandhi occurs since Swaram of the constituent letters change as per Sandhi Rules or application of Pracaya.

Note - @ symbol used for anudAttam, # for swaritam and $ for dheerga Swaritam in the following tables.

2.1 Padam with No Marking; normally single letters (with visarga,halant ending also)

Marking in Pada Paatam	udAttam
Prime Swaram	This single letter. Jeeva Swaram as per Classical Ref.
Examples of Padams	mA,tat, tvam, Sam, yat , A (eti), yAH मा, तत् , त्वम् , शम्, यत् , आ, याः
Conversion to Vaakyam	always udAttam in Vaakyam; When the halant in these words join another vowel to form a Consonant, this new consonant may acquire swaram. If another letter with swarm combines with this UdAttam, it will remain udAttam Swaram normally.
Swaram Rules in Vaakyam	1) Previous Possible letter is anudAttam, 2) Following Possible letter is Swaritam

Exceptions	Words like **mA** may be **marked in anudAttam** based on Vaakyam in Pada Paatam. This udAttam may change subject to Sandhi Rules.
	Sandhi of this udAttam with following anudAttam can give derived Swaritam. (see <mark>Section</mark> on Swaritam)

2.2 <u>Single letters with marking (with visarga,halant ending also)</u>

Marking in Pada Paatam	anudAttam
Prime Swaram	**This single letter**
Examples of Padams	**mE@, tE@, tvA@, na@H, va@H, mA@, ca@,**
	मे , ते, त्वा , नः, वः, मा, च
Conversion to Vaakyam	1. Rendered with anudAttam in Vaakyam at the start of a Ruk 2. Rendered as udAttam in the middle of a Ruk
Swaram Rules in Vaakyam	can acquire Swaritam or anudAttam based on flow of Vaakyam
Exceptions	Variance may occur due to Sandhi rules

2.3 Padam with two letters

2.3.1 First anudAttam & Second udAttam

Marking in Pada Paatam	first letter anudAttam
Prime Swaram	The first letter in anudAttam
Jeeva Swaram	Classical Method the udAttam(Second)
Examples of Padams	Si@vA, u@ta, a@sau शिवा, उत , असौ
Conversion to Vaakyam	first always anudAttam and second will be udAttam
Swaram Rules in Vaakyam	1) Following Possible aksharam is Swaritam
Exceptions	Subject to Sandhi Rules

2.3.2 both letters marked as anudAttam

Marking in Pada Paatam	Both in anudAttam
Prime Swaram	First anudAttam
Examples of Padams	ru@dra@, a@stu@, ku@ru@, a@sya@ e@na@m रुद्र । अस्तु । कुरु अस्य , एनम्
Conversion to Vaakyam	1. Rendered with anudAttam in Vaakyam at the start of a Ruk 2. Rendered as udAttam in the middle of a Ruk

Swaram Rules in Vaakyam	Both these letters **can** acquire Swaram, First one as Swaritam to support previous anudAttam and Second as anudAttam to support upcoming Swaritam.
Exceptions	Sandhi Rules

2.3.3 first as udAttam and Second one as Swaritam

Marking in Pada Paatam	**first as udAttam** and Second one as Swaritam
Prime Swaram	**the Swaritam** **the first occurring udAttam in Classical Text**
Examples of Padams	nama#H, viSvA$, hastE$,maya#H, नमः, विश्वा । हस्ते । मयः
Conversion to Vaakyam	1. Rendered without Change
Swaram Rules in Vaakyam	Swaram is retained as it is. First udAttam does not acquire Swaram. The Swaritam can acquire anudAttam to support following letter.
Exceptions	Sandhi Rules and application of Pracayam

2.4 Padam with three letters with first anudAttam,udAttam, Swaritam

Marking in Pada Paatam	First anudAttam, second udAttam and third Swaritam
Prime Swaram/Jeeva Swaram	The first anudAttam is Prime The udAttam is Jeeva Swaram as per Classical method
Examples of Padams	ga@NAnA$m , ma@nyavE$. ta@nuvA$, su@manA$H, a@Bita#H mI@DhuShE$, dhRu@ShNavE$, गणानाम् , मन्यवे , तनुवा , सुमनाः , अभितः मीढुषे , धृष्णवे
Conversion to Vaakyam	1. Rendered without Change
Swaram Rules in Vaakyam	1. Rendered without Change. But the Swaritam of the third letter can acquire anudAttam to support a following Swaritam
Exceptions	Sandhi Rules

2.5 Padam with three letters or more letters

2.5.1 all marked in anudAttam

Marking in Pada Paatam	All in anudAttam
Prime Swaram/Jeeva Swaram	The first letter

Examples of Padams	mRu@Da@ya@, a@vO@ca@t, va@dA@ma@si@
	मृडय । अवोचत् । वदामसि ।
Conversion to Vaakyam	1. Rendered with anudAttam in Vaakyam at the start of a Ruk 2. Rendered as udAttam in the middle of a Ruk
Swaram Rules in Vaakyam	normally letters can acquire Swaram. Generally first one as Swaritam last one as udAttam normally to support previous anudAttam or following Swaritam.
Exceptions	Sandhi Rules

2.5.2 all except last letter marked in anudAttam

Marking in Pada Paatam	all except last letter marked in anudAttam
Prime Swaram	The last marked anudAttam. The last letter udAttam in Classical method
Examples of Padams	pra@tha@maH, a@ru@NaH, ka@vI@nam
	प्रथमः, अरुणः , कवीनाम् ।
Conversion to Vaakyam	1. Rendered with anudAttam in Vaakyam at the start of a Ruk 2. Rendered as udAttam in the middle of a Ruk

Swaram Rules in Vaakyam	Letters marked in anudAttam **before prime anudAttam** can acquire Swaram. Following possible letter will be Swaritam
Exceptions	Sandhi Rules

2.5.3 Has a set of anudAttam and one Swaritam

Marking in Pada Paatam	Has a set of anudAttam and a Swaritam
Prime Swaram	The **last of the Anudattam** marked. As per Scholars, the **UdAttam** that comes after the <mark>last anudAtta</mark>, in Classical method.
Examples of Padams	Si@vata#mA, su@ma@~ggala#H , a@va@sarpa#ti sa@ha@srA@kShAya# शिवतमा , सुमङ्गलः , अवसर्पति , सहस्राक्षाय
Conversion to Vaakyam	1. Rendered with anudAttam in Vaakyam at the start of a Ruk if more than one anudAttam. 2. Rendered as udAttam in the middle of a Ruk

Swaram Rules in Vaakyam	1. any of the anudAttam marked before the Prime anudAttam can acquire swaram in Vaakyam.
	2. The letters that come after Swaritam, marked as udAttam in Vaakyam (**ekaSruti part**) can acquire swaram to Support following Swaritam generally
Exceptions	Sandhi Rules or application of Pracayam

2.5.4 Swaritam comes as a Second letter

Marking in Pada Paatam	Second letter is Swaritam
Prime Swaram	This Swaritam First occurring **udAttam before this Swaritam** in Classical method.
Examples of Padams	nIla#grIvAH ,dhanva#naH saha#srAkSha , bANa#vAn नीलग्रीवः, धन्वनः , सहस्राक्ष, बाणवान्
Conversion to Vaakyam	First letter will be always udAttam. Rendered as it is in Vaakyam.
Swaram Rules in Vaakyam	Rendered as it is in Vaakyam. The letters that come after Swaritam marked in udAttam, (ekaSruti part), can acquire swaram to Support following Swaritam generally

Exceptions	Sandhi Rules or application of Pracayam

2.5.5 Swaritam comes in the first letter

Marking in Pada Paatam	First letter is Swaritam
Prime Swaram	This Swaritam
Examples of Padams	vyu#ptakESAya trya#mbakam व्युप्तकेशाय । त्र्यंबकम्
Conversion to Vaakyam	Rendered as it is in Vaakyam.
Swaram Rules in Vaakyam	The letters that come after Swaritam marked in udAttam, (ekaSruti part), can acquire swaram to Support following Swaritam generally
Exceptions	Generally not affected by Sandhi Rule since such words are out of one or more padams with Sandhi involved.

2.6 Padams with only anudAttam and Swaritam

These are words with special mention in Sanskirt Grammar. These are Padams/words with the last letter as conjunct consonants of letter **'y','v', 'l',**. These **Padans have anudAttam before Swaritam** and no udAttam is marked in Pada Paatam.

Marking in Pada Paatam	All initial letters in udAttam and the last letter as Swaritam
Prime Swaram	This Swaritam

Examples of Padams	yA@tu@dhA@nya#, Sa@ra@vyA#, rA@ja@nya#H, sEnAqnyE$, vI@ryA#ya, ka@lvA$H (ca mE) यातुधान्यः । शरव्या । राजन्यः सेनान्ये , वीर्याय , खल्वाः
Conversion to Vaakyam	Rendered as in Padam at the beginning of a Ruk. Rendered with the last anudAttam and Swaritam in Vaakyam.
Swaram Rules in Vaakyam	The Swaritam of these words **remain Swaritam** and does not acquire udAttam to support following Swaritam.
Exceptions	<mark>Generally not</mark> affected by Sandhi Rule. Will become udAttam if avagraha gets formed.

2.7 <u>Padams with first udAttam followed by anudAttam</u>

There are a few words that **have udAttam**, as first letter, in Pada Paatam and as well as in Vaakyam followed by an anudAttam. Generally in other words/Padams this word <mark>would have got</mark> represented as anudAttam in Pada Paatam with an ability to acquire Swaram.

As Per Padam	As in Vaakyam	Comments and Notes
वनस्पतयः	वनस्पतयः	Note '<mark>va</mark>' in vanaspati is not marked as anudAttam as per Pada Paata Rule. An exception for this word is found in pAnini's ashtAddhyAyI (PA) that '<mark>va</mark>' is udAttam. (SU)
बृहस्पतिः	बृहस्पतिः	Note 'bRu' in vanaspati is not marked as anudAttam as per Pada Paata Rule. An exception for this word is found in PA, that '<mark>bRu</mark>' is udAttam. (SU)

<mark>The first udAttam of these special word shall be treated as it is and the previous possible swaram shall become Acquired anudAttam.</mark>

2.8 Padam Spilt words with anudAttam after Swaritam or two udAttams together

Normally, in a single padam not joined by two padams,

1. There will be only one udAttam and two udAttams do not come together

2. All letters that occur after Swaritam, that is the Ekasruti part will be marked in udAttam with ability to acquire swaram.

But when two padams are joined to form a joint padam these rules may not be applied to keep the flow or essence of SamhitA. Some such words with split padams are given below:

As Per Padam	As in Vaakyam
aqgnIShomA$ByAqmityaqgnI – somA$Byam अग्नीषोमाभ्यामित्यग्नी– सोमाभ्याम्	aqgnIShomA$ByAm (gnI and Sho(so) are two udAttams from last and first letter of two padam split अग्नीषोमाभ्याम्
dyAvA#pRuthiqvIByAqmitiq dyAvA# - pRuqthiqvIByA$m द्यावापृथिवीभ्यामिति द्यावा– पृथिवीभ्याम्	dyAvA#pRuthiqvIByA$m (two swaritams with two udAttams dyA and vI द्यावापृथिवीभ्याम्
dyAvA#pRuthiqvyoritiq dyAvA# -pRuthiqvyoH	dyAvA#pRuthiqvyoH (second Padam has prime anudAttam after a swaritam of first padam)

द्यावापृथिव्योरिति द्यावा – पृथिव्योः	द्यावापृथिव्योः
dyAvA#pRuthivI itiq dyAvA# - pRuqthiqvIq द्यावापृथिवी इति द्यावा – पृथिवी	dyAvA#pRuthivI (here pRuthivI is ekasruti with no swaram) द्यावापृथिवी
dyAvA#pRuthiqvI itiq dyAvA# - pRuqthiqvI द्यावापृथिवी इति द्यावा – पृथिवी	dyAvA#pRuthiqvI (here pRuqthiqvI in second indicates thi is prime anudAttam द्यावापृथिवी

The programming consideration is these have to be taken as it is from the Pada Paatam and processed for Swaram.

3 Different perspective of the nature of Swaras

Connotations: - Used with an idea to help Veda learners who could observe flow of Swarams. These terms are **not a part of any Classical text** and are given for easy understanding to note the change in Swara flow.

Abbreviations used:

PP – Pada Paatam, V – Vaakyam

PS – Prime Swaritam, PU – Prime udAttam, PA – Prime anudAttam

SA – Support anudAttam ES – Ekasruti (udAttam letters after Swaritam)

AS – Acquired Swaritam AU – Acquired udAttam AA – Acquired anudAttam

In PP/V	Swaram nature	Nature as A/U/S or what it can become	Explanation	Hints/Comments
PP	**PS**	Swaritam	Prime in a Padam	
PP	**PU**	udAttam	Prime in a Padam	
PP	**PA**	anudAttam	Prime in a Padam	
PP	**SA**	Support anudAttam	Letters that are **marked additionally as anudAttam** in Pada Paatam.	These can acquire Swaram; when they **donot**, then they are represented as **udAttam** in Vaakyam
PP	**ES**	Ekasruti	Letters appears as udAttam after the Prime Swaritam in	Represented as udAttam in vaakyam unless

			Padam and all Other Paatams	Swaram is acquired
V	**AS**	Acquired Swaritam	A letter that **acquires Swaritam** to support a prior anudAttam	Or due to Sandhi
V	**AA**	Acquired anudAttam	A letter that **acquires anudAttam** to support a following Swaritam	Or due to Sandhi
V	**AU**	Acquired udAttam	Swaritam gives up its Swaram to next letter Swaritam anudAttam becomes udAttam due to Sandhi or Swaram rule	Normal Rule Specific to the situation and words
V	PS	PS	Retains in Swaritam	
V	PS	AA	Becomes AA to support a following Swaritam	Or Sandhi Rule
V	PS	AU	Becomes AU to support the next letter which is Swaritam	Or Sandhi
V	PS	AU	Becomes AU due to Sandhi Rules	Avagraha formation
V	PU	PU	More common. Remains PU without acquiring Swaram.	Previous letter anudAttam and next letter swaritam

V	PU	AS	Acquires Swaritam due to Sandhi Rules	
V	PU	AA	Acquires anudAttam due to Special rules	Or Pracayam
V	PA	PA	Will generally remain PA	
V	PA	AU	Subject to Sandhi Rules	
V	PA	AA	Subject to Sandhi Rules	
V	PA	A~~S~~	Will not become AS to support PA or AA	Can become an independent Swaritam Subject to Sandhi Rules

4 Swaram Rules

In this Section we are first providing the Rules from Prati Sakhyam (PS) and related Classical text on the rules of Swaram acquisition during Sandhi.

The Readers are requested to focus on the examples and the technical names are provided for the interested readers. Our study is still in progress to gain further insights into the application of rules based on selective or restrictive conditions.

The Swaram formations that have been understood are represented in a table in **Section 4**

4.1 Rules for Swaram acquisition during Sandhi (from PS)

- **Chapter 10 –Rule 10** - When an udAttam (acute) Swara enters the combination the result is udAttam (acute) Swara.

  This is subject to some **exceptions of udAttam-anudAttam** combination where **a Swaritam** gets formed.

  Note: The udAttam referred here is Prime udAttam and not Ekasruti part which is represented without any swaram (accent) as udAttam.

- When Swaritam (circumflex) and anudAttam (grave) combine result is Swaritam (circumflex) (Rule 12)

- Rule 15 '**e**' vowel and '**u'** vowel become **y** and **v** respectively

- Rule 16 and when they are udAttam (acute) the following anudAttam (**as per Pada Paatam)** (grave) becomes Swaritam (circumflex)

- Rule 17 also when **'U'** is the result of the combination

- **Chapter 20** – Rule 1 When e, ee,u, U are converted into **y** or **v,** in Vowel Sandhi, the resultant Swaritam accent is **kShaipra,** if it results out of a combination of **udAttam and anudAttam**.

- Chapter 20 -2 -But where a syllable containing a *y* or *v* *acquires Swaritam* (circumflexed) in a fixed word, being *preceded by an anudAttam* (grave) syllable, or *not preceded by anything (First letter),* that is to be known as *nitya.*
- Chapter 20 -3 - If, moreover, there is an **udAttam** (acute) standing **in another word**, then, if there be a Swaritam (circumflex) resulting from a rule of combination, it is *prAtihata.*
- Chapter 20 -4 - After such a one, in case of the loss of '*a'*, that is elision of **'a'** resulting in formation of **avagraha**, it is *abhinihata.*
- Chapter 20 -5 -Where an '**ee'** *or' 'uu(U)'* results out of joining two short **e+e**,**u+u** it is *praSliShtaa*. **(PS refers 'uu' only; 'ee' referred in other sources)**
- Chapter 20 -6 - Where there is a hiatus, **pause given for uttering two vowel sounds,** between two words or within a formed word, it is *pAdavRutta.*
- Chapter 20 -7 -Where an udAttam (acute) precedes the resultant Swaritam, it is **tairovya~jjana**.
- Chapter 20 -8 -These are the names of the Swaritam (circumflex) accents.
- Chapter 20 -9/10, in the **kShaipra, abhinihata and nitya**, the effort is **firmer**.
- Chapter 20 -11 - In the **praSliShtaa and prAtihata**, the effort is **gentler**.
- Chapter 20 -12 -In the **tairovya~jjana and pAdavRutta**, the effort is **feebler**.

Important Note:
When a halant (like k,p,c,t,m) joins a Vowel to form a Swarayukta Aksharam
(a Vowel based consonant), the swaram of the following Vowel is acquired by the newly formed Consonant. This should not be treated as a formal Vowel Sandhi.

Example:

bAhuByAm + uta = bAhuByAmuta

बाहुभ्याम् + उत = बाहुभ्यामुत

ByAm has dheerga swaritam at it is at the end of the Padam; m +uta forms uta and the byAm is not follwed by a normal consonant so it will have swaritam only.

Note: In the examples discussed below, please note that some of the swarams, which are formed due to Sandhi, may acquire different swaram to support following aksharam. The resultant word is given with original swaram as per rule but in Vaakyam they may acquire swaram to support a previous anudAttam or a following udAttam.

Kindly take note of the same when you compare with Vaakyam/SamhitA.

The Padams given on the left side of the table are given without the 'iti' combination, but derived final Padam.

4.2 Sandhi Rules for combinations of A/U/S

Letter coming up First	Letter coming up next/Following	Swaram of Resultant Letter	Comments/Notes if any
PU	PU	PU	
PU	SA	PU	
PU	PA	PU	See next rule

PU	PA	AS	As Per Rules in Chapter 20 mentioned above esp. when **'v','y'** , letters are formed with **'e' and 'u'**
PU	PS	PU/PS **Retained**	PS cannot come as the first letter except with derived words with Nitya Swaritam. Then Nitya Swaram is generally not affected.
SA	PA	PA	
SA	SA	SA	This will retain SA in Pada Paatam but **udAttam in Vaakyam** when not influenced by Swarm rules.
SA	PU	PU	Though may be considered as Acquired UdAttam it is the combined letter retaining the PU of following letter.
SA	PS	PS	First PS technically Nitya Swaram it may retain its position
ES	SA	UdAttam	ES is hidden SA. So combination gives (SA in Pada Paatam) **udAttam in Vaakyam** unless it acquires Swaram as support

ES	**PU**	**PU**	ES does not influence PU. PU remains PU.
ES	**PA**	**PA**	ES does not influence PA. Remains PA unless there is exception depending on words or formation of Swaras.
ES	**PS**	**PS/AS**	Normally first letter of following padam cannot be Swaritam. If it is a Nitya Swaram it will be retained
PS	PS	Commonly Not Applicable	A Prime Swaritam may be followed by a Derived Swaritam from Sandhi or Vice Versa. Then **Kampa Swaram** is formed subject to conditions. **Section 5**
PS	**SA**	**PS**	As Rule. Support anudAttam does not influence nature of preceding or following Swaram.
PS	**PA**	PS/AA	Unless Swaritam is formed through Rules given in 6.1. The **PA becomes AA mainly to support following Swaritam**

PS	PU	AU	Exception special Sandhi of letters then becomes AA

4.3 <u>Sandhi Samples of udAttam occurennce</u>

This gives combinations of udAttam with udAttam and udAttam with Swaritam.

The udAttam examples will also include Support anudAttams and Ekasruti (ES) which are from technical perspective treated as Support anudAttams with rights to acquire swaram. **They do not influence a Prime UdAttam**.

The results for all these examples will be udAttam.

Padams involved in Sandhi	Resultant word/Padam
1.8.22.4 (PU+PU) अभि । इत् । अयज्वनः 'Bi' of aBi (PU) udAttam comines with 'e' of 'it' will give 'BI'	इयक्षत्यभीदयज्वनो
1.8.5.2 (PU+PU) मनः । नु । आ । हुवामहे । Here Sandhi results in a letter 'nva' with 'v'. No Swaritam will result. PU+PU is udAttam only.	मनो न्वा हुवामहे Note: Swaritam results only in a combination of PU+PA (SA) which results in 'v' 'y' letters due to Vowel Sandhi.
4.5.1.1 (ES+PU) गिरिश +अच्छ । ES (udAttam in PP) + udAttam results in udAttam letter 'SA"	गिरिशाच्छा Sandhi letter not influenced by any other Swaram rule. cCa becomes cCA due to rule for elongation of letter based on grammar rule.

Sa is an EkaSruti considered as Support anudAttam (SA). Represented as udAttam in PP. 'a' of acCa is PU.	
बिभर्षि + अस्तवे same like the example as above 'rShi' is udAttam in PP but in effect a Support anudAttam. 'a' is PU.	बिभर्ष्यस्तवे 'Shya' is udAttam. This Sandhi letter not influenced by any other Swaram rule.
TS 4.5. (PS+PU) वारिवस्कृताय + ओषधीनाम् Here Swaritam ya (PS) + 'O' udAttam (PU) gives 'yau' udAttam (AU) and is not influenced by Swaram rule.	वारिवस्कृता—यौषधीनां 'Sha' in OshadhInAm is prime swaritam PS. kRu anudAttam, tA udAttam, yau udAttam (AU) due to sandhi and then Swaritam (PS) retained.
TS 4.5. (ES+PU) (PS+PU) अनातताय इति अनातताय ya (ES/SA) udAttam)+'e' (udAttam) produces 'yE' (udAttam). The 'ti' of iti with Swaritam combines with 'a' (udattam) to form 'tya' as udAttam.	अनातत्तायेत्यना – तताय Here the 'naa' has Swaritam which is the prime swaram. 'a' becoming 'tya' retains udAttam. 'ti' PS combines with 'a' PU to give AU. 'tA' acquires anudAttam (since it is ES) to support Swaritam 'nA'.
1.2.11.1 (PU+PA) रायः । प्र । इषे । भगाय ।	रायः प्रेषे भगाय

Pra is udAttam. 'e' of ishE is PA. 'a' plus 'e' sound gives prE which is udAttam only. PU+PA does not produce Swaritam as **'e' or 'u' is not** involved in Sandhi resulting in 'v' or 'y'	'gA' of BagAya is Swaritamv (PS). Since previous two Padams have produced pRE and ShE both udAttams. The 'ya' swaritam (PU) of rAya acquires anudAttam (AA) to support 'ga' Swaritam
1.6.4.1 (PS+PU) (ES+PA) अनु । उत् । जेषम् । सोमस्य । अहम 'nu' (PS) combines with 'u' of 'ut' PU to give 'nU' derived udAttam only. Due to this 't'+'jE' (SA) becomes 'jjE' and acquires Swaritam (AS) after udAttam 'nU'. ShAm becomes Sha(gm) before sO it has SA and becomes AA to support 'ma' of sOmasya.	मनूज्जेष॒ष् सोमस्याह In this same example, sya marked in udAttam is ES with Support anudAttam this when combining with PA 'a' of aham retains its PA as 'syA' after Sandhi
1.7.6.7 (PU+PA) सभा । इष्ट्वा । प्राङ् । उत्क्रम्य BA is PU. Combines with 'e' (PA) gives BE (UdAttam) as per vowel sandhi.	सभेष्ट्वा प्राङुत्क्रम्य 'ng' combines with 'u' to give 'gnu' (has no swaram influence) to support 'mya'.
1.8.1.1 (PU+PA) मुञ्च । इमम् । अꣳहसः ।	मुञ्चेममꣳहसः

'nja' (PU) combines with PA 'e' of imam to give njE ,udAttam	**njE, ma, ma(gm)** are all udAttams. The support for swaritam 'ha' (PS) comes from PA 'mu' of munja.
2.1.3.1 (PU+PA) इव । हि । इमे । लोकाः । 'hi' is PU, combines with 'e' of imE to give 'hI' (udAttam).	इव हीमे लोकाः । 'va' of iva has support anudAttam(SA) it acquires (AA) to support udAttam 'hI'
1.5.7.6 (PU+SA) एव । इन्द्रिये । प्रति । 'va' PU combines with SA 'e' will result in udAttam 'vE'	वेन्द्रिये प्रति

4.4 <u>Sandhi Samples of anudAttam occurrence</u>

In Pada Paatam, the last akshara/letter may be a Support anudAttam through marking and there will be no Prime anudAttam as last letter. Ekasruti letter can be the last akshara of a Padam. This is in effect Support anudAttam but left unmarked. They donot influence the nature of following Swarams.

Though the rule says, "that when udAttam enters the combination, the net result will be an udAttam". Practically, we observe if the first aksharam of the following Padam has anudAttam, normally it is the primary swarm of that Padam and most the sandhi results form an anudAttam only. Readers need to distinguish the udAttam occurring after a Swaritam which is a part of Ekasruti, as Swarams which are influenced by other Swaram that combines.

Padams involved in Sandhi	Resultant word/Padam
1.1.1.1 (SA+PA) इषे त्वा + ऊर्जे त्वा 'tvA' is a Support anudAttam in Pada paatam. 'vA' in tvA combines with 'U' in Urje to produce 'O' as per Vowel Sandhi; but this will result in anudAttam 'tvO' since the Support anudAttam (SA) does note have influence like original Prime udAttam.	इषे त्वोर्जे त्वा The 'U' in Urje is the prime anudAtta Swaram and its combination 'vO' shall retain anudAttam only as it precedes anudAttam 'rjE'. The 'tvA' (SA) acquires Swaritam (tvA) to support this prime anudAttam.
4.5.1.1 (ES+PA) गिरिशन्त + अभि – चाकशीहि 'inta' is a part of Ekasruti (ES) which is nothing but unmarked anudAttam not original udAttam. This combination will produce anudAttam only influenced by 'a' of aBi which is prime anudAttam.	गिरिशन्ताभि चाकशीहि inthA after Vowel Sandhi is anudAttam. Bi is udAttam; no change as per Rule. cA acquires Swaritam.
4.5.1.3 (SA+PA) सहस्र + अक्षाय 'sra' support anudAttam combines with prime anudAttam 'a' to give anudAttam.	सहस्राक्षाय 'srA' anudAttam, kShA udAttam and 'ya' Swaritam.

4.5 When Swaritam (circumflex) and anudAttam (grave) combine result is Swaritam

<mark>(Explanation re-written in this Version.</mark>)

The anudAttam referred here is anudAttam as per Pada Paatam.
It may be a Prime or Support anudAttam to the Padam.
If the first letter of the following Padam is prime anudAttam, the combination though as per rule results in Swaritam, but becomes <mark>an anudAttam</mark> to support following Swaritam.

If the first letter is a support anudAttam, it still results in Swaritam.
But due to Swara rule it may acquire anudAttam in the middle of a mantra to Support following Swaritam.

Padams involved in Sandhi	Resultant word/Padam in Vaakyam
1.4.5.3 (PS+SA) सहस्रशो –अव + एषाम् 'va' Swaritam (PS) plus 'ae' Support anudAttam (SA) gives 'vai' in Swaritam. Support anudAttam **though treated as udAttam in Vaakyam**, gets treatment of anudAttam in Padam.	सहस्रशो ऽवैषा॑ Elision of 'a' $(\int)$ does not have influence of flow of Swarams.
4.5.2.1 (PS+SA) रुद्राय + आततविने ya (Swaritam PS) with 'A' as Support anudAttam results in Swaritam – 'yA'	रुद्राया–ततविने Similar to the example above.

TS 1.1.12.1 (PS+PA) समाराभ्य + उर्ध्वः + अध्वरः Bhya+u becomes bhyO but gets anudAttam since 'rdhvO' is a udAttam. Note this combination does not produce a new 'y','v' letter. Refer to Swaram Rules in 6.1 to result in special Swaritams mentioned there.	समारभ्योध्वौ अध्वरो Flow – bhyO anudAttam, rdhvO udAttam and 'a' swaritam
TS 1.2.6.1 (PS+PA) ऊर्ध्वा + यस्य + अमतिः + भाः Here sya+a becomes 'syA' acquires anudAttam since the combination does not produce special Swartiam mentioned in 6.1	मूर्ध्वा यस्यामतिर्भा Flow – 'syA' anudAttam, 'ma' udAttam and 'ti' swaritam
TS 1.2.7.1 (PS+PA) चन्द्रेण + अमृतम् + अमृतेन Similar to above example	चन्द्रेणा–मृतममृतेन
TS 1.2.14.3 (PS+PA) द्युम्नानि + अर्यः + वि + दुरः + अभि + द्यौत्	द्युम्नान्यर्यो विदुरो अभि द्यौत्

'ni' Swaritam and 'a' anudAttam has produced 'nya' anudAttam, precedes 'ryO' udAttam therefore acquires anudAttam to support 'rO' . 'nya' is a letter that forms a conjuct letter with 'y' but not formed through a combination of PU+PA	'vi' and 'du' of duraH are udAttams and donot acquire Swaram. **PS+PA generally results in AA**.
TS 1.2.14.6 (PS+PA) दह + अशसः + रक्षसः + पाहि + अस्मान् The Sandhi produces 'ha' (PS)+ 'a' (PU)='hA' is anudAttam since not y,l letters are formed; before udAttam 'Sa' to support Swaritam 'sO'.	दहाशसो रक्षसः पाह्यस्मान् hi (PU) with 'a' (PA) produces swaritam with formation of 'y' letter. This hya is formed in a fixed word immediately after 'pA' (anudAttam) so it is Nitya Swaritam. Refer to Rule in 6.1
TS 1.3.1.1 (PS+PA) यवय + अस्मत् + द्वेषः very similar example to the above.	यवयास्मद्द्वेषो
TS 1.4.1.2 (PS+PA) अन्तरिक्षे+तेन+अस्मै + यजमाना 'na' Swaritam with 'a' Prime udAttam produces,'nA' (AA).	अन्तरिक्षे तेनास्मै यजमाना So, 'kShE' acquiring anudAttam (AA) to support 'na'

No special conditions met. But 'na' in tEna is PS.	

Note: We find that when a Prime Anudattam enters a combination, the net effect is Acquired AnudAttam as per Sandhi as per Current Study. Exceptions are under Study.

Note: The Sandhi rules are appled first but when a vaakyam is formed with Padams, finally rules for marking/adjusting the Swaras have the final authority or power as per current analysis.
Readers' inputs will be highly appreciated for exceptions.

4.6 Examples of Swaritam formation for a combination of PU+AnudAttam

Note: Main Condition is that a Prime anudAttam must have Sandhi with Prime or Support anudAttam **and** this Sandhi must involve letters **'e' or 'u'** in the Prime anudAttam end and must produce letters with **'y' or 'v'**.

Ekasruti reflected as anudAttam at the end of previous Padam is not Prime udAttam.

This Section **also** gives examples **where Swaritam is not formed** as the combination **does not involve letters with 'v', 'y'** due to vowel Sandhi of letters **'e' and 'u'**.

Padams involved in Sandhi	Resultant word/Padam
1.1.3.1 (PU+SA) पृथिवि । असि । 'vi' PU combines with 'a' SA as per Rule should give Swaritam – 'vya'	पृथिव्यसि New letter is formed with 'y' on Sandhi.
4.7.14.1 (PU+SA) वर्चः । विहवेषु । अस्तु ।	वर्चो विहवेष्वस्तु

'Shu' PS combines with 'a' SA. SA does not have special effect and on Sandhi acquires Swaritam only.	This is different from the Rule of PU+ anudAttam. But note Shva is formed through Sandhi. PS remains AS after Sandhi.
4.2.3.2 (PU+SA) अप्सु । अग्ने । Combination of PU Psu with PA 'a' of agnE	अफ्स्व॑ग्ने Note 'sva', with sound 'v' is formed
2.1.2.6 (PU+PA) ब्रह्मवर्चसी । एव । भवति	ब्रह्मवर्च॑स्ये॑व भ॑वति 'Ba' of Bavati acquires Swaritam after anudAttam va. Swaritams formed as per rule given in 6 'syE' remain as it is.
2.1.3.2 (PU+PA) ग्रामी । एव । भवति	ग्राम्ये॑व भ॑वति Similar to previous example
2.1.10.3 (PU+PA) प्रतीची॑ । अस्मै ।	प्रतीच्य॑स्मै
5.1.7.3 (PU+PA) वारुणी । उखा । अभीद्धा॑	वारुण्यु॑खाऽभीद्धा॑

2.1.10.3 (PU+PA) व्युच्छन्तीति वि—उच्छन्ती । वि । उच्छति । The first Padam with explanation of Padam, is special the fixed word has 'vyu' as PA. This Supports udAttam 'cCa' as a grammar rule. This is specific to that word and treat as a Special Padam.	व्युच्छन्ती व्युच्छति 'vi' (PA) am in second part combines with 'u' SA to form 'vyu' forms a Swaritam as per Rule.
2.3.13.3 (PU+PA) (PU+SA) वि । ऊहति । दिक्षु । एव । प्रति । तिष्ठति 'vi' and 'U' combine as PU+SA to give vyU as Swaritam. (Nitya Swaram)	व्यूहति दिक्ष्वेव प्रतितिष्ठति 'kShu' (PU) combines with 'ae' (PA) to give kShvEva swaritam, These Swaritams do not get AA to support following Swaritam 'ti' .
4.5.11.1 PU+SA PU+PA अस्मिन् । महति । अर्णवे । अन्तरिक्षे । 'ti' (PU) combines with 'a' SA to give 'tya' Swaritam. The anudAttam support for this is available from SA 'ha'. The 'ma'	अस्मिन्—महत्यर्णवे—ऽन्तरिक्षे 'a' of antarikShE elides to avagraha, vE acquires Swaritam and becomes dheerga Swaritam; 'ri' retains swaritam (PS).

which is an AS to support 'a' retains its position.	Note when Special Swaritams as per Sandhi Rules are formed, they retain their position.
1.1.2.2 (SA+PA) (PU+PA) (PS+SA) हरामि । उरु । अन्तरिक्षम् । अनु । इहि 'mi' (SA) with 'u' PA will be PA. This is not PU+PA though 'y' letter is formed as 'myu'. 'ru' (PU) with 'a' forms Swaritam 'rva'	हराम्युर्वन्तरिक्षमन्विहि 'ri' of antariksham retains Swaritam as it follows a special swaritam. 'nu' PS combines with 'e' of ihi to form a Swaritam. PS+SA is AS only since SA doesnot influence swaram. So 'nvi' is Swaritam.
1.7.9.1 (PU+SA) जायॆ । आ । इहि । 'A' (PU) joins SA 'e' to give 'ae'. This does not produce any letters with 'y' or 'v' hence it will acquire udAttam only.	जाय एहि
2.1.1.2 (PU+SA) एव । अस्मै । अनपगाः । 'vA' obtained during Sandhi is not through letters e or u hence a udAttam; similar to previous example.	एवास्मा अनपगाः

2.1.2.7 (ES+PA) (PU+SA) ज्योक् । आमयति । अग्नेः । एव । अस्य । 'ti' is ES and its combination with 'a', though forms a letter with 'y' does not become Swaritam. 'tya' retains anudAttam only.	ज्योगामयत्यग्नेरेवास्य Like previous examples 'vA' cannot acquire swaritam. udAttam only.
2.2.5.3 (PU+PA) (PU+SA) गायत्रिया । एव । एनम् । 'yA' PU combines with 'e' (PA) to give 'yai' . 'va' PU combines with 'e' of enam (SA) to give 'vai'	गायत्रियैवैनं Though the combination of PU+SA since it does not produce letters with 'y' or 'v'
2.1.1.1 PS+SA भूतिम् । उप । एति । अप्रदाहाय । 'pa' (PS) combining with 'ae' does not give 'pai' as Swaritam. 'ti; of 'eti' combines with 'a' (PU) to give udAttam 'tya'	भूतिमुपैत्य प्रदाहाय So 'pai' which should be normally be Swaritam acquires anudAttam (AA). This is based on word formation. Since 'tya' is AU, pra acquires Swaritam.
2.3.13.1 PS+PA PU+PU गृहेषु । अप्सु । ओषधीषु । 'Shu' PS combines with PA 'a'; gives 'Shva' AA before Psu (PU)	गृहेष्वप्स्वोषधीषु Psu (PU) combines with 'O; to give 'ShvO' (AU). Swaritam rule does not apply.

3.4.7.1 ES+SA	
तस्य । नक्षत्राणि । अफ्सरसः 'Ni' (ES) combined with 'a' (SA) will not produce Swaritam. 'Nya' will be acquired udAttam.	तस्य नक्षत्राण्यफ्सरसो

4.7 Examples of KShaipra

When e, ee,u, U are converted into **y or v,** in Vowel Sandhi, the resultant Swaritam accent is *kShaipra,* if it results out of a combination of **udAttam** and **anudAttam**.

The examples given the table below are of a combination of udAttam and anudAttam which produces 'y' or 'v'. Includes further classifications given later.

Padams involved in Sandhi	Resultant word/Padam
TS 1.2.14.6 पाहि + अस्मान्	पाह्यस्मान्
TS 1.3.14.3 तव + ऊती + अश्याम Va (PS)+U (PA) gives 'vO' before udAttam tI. When 'y' or 'v' are formed due to presence of e,ee.u and U, swaritam is formed before udAttam ShyA the following Swaritam is also retained	तवो त्यश्याम .'tya' does not acquire anudAttam to support the following swaritam 'ma'. Since it is Kshaipra swaritam.

TS 1.4.43.1 युयोधि + अस्मत्	युयोध्यस्मत्
3.4.9.6 PU+SA सिनीवाली । अनुष्टुप्	सिनीवाल्यनुष्टुप्
2.2.5.4 PU+SA एव । तेजस्वी । अन्नादः ।	एव तेजस्व्यन्नाद

4.8 Examples of Nitya

Where a syllable containing a '*y'* or '*v'* *acquires Swaritam* (circumflex) in a fixed word, being **preceded by an anudAttam** (grave) syllable, or **not preceded by anything,** that is to be known as **nitya. 'nitya' swaram is supposed to be stronger in terms of retaining its position as per a note provided by the Scholar in PA.**

Padams involved in Sandhi	Resultant word/Padam
TS 1.4.10.1 Nitya सु + आग्रयणः	स्वाग्रयणो
TS 2.6.8.3 Nitya सु + इष्टम्	स्विष्टं

TS 4.4.4.4 Nitya सु + आहुतः	स्वाहुतः
T.S.1.8.6.2 Nitya त्रि + अंबकं	त्र्यंबकं
1.1.13.1 (PU+SA) Nitya वि । अस्यताम् ।	व्यस्यतां ।
TS 1.2.8.2 Nitya विक्षु + अग्निम् Here the Swaritam if formed at the beginning of a word preceeded by anudAttam in 'vi'	विक्ष्वग्निं

Note: The Swarams after the nitya swaritam becomes ekasruti.
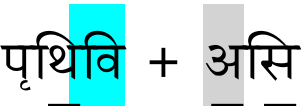
4.8.1 Examples of Nitya retaining its position

Padams involved in Sandhi	Resultant word/Padam
उरु + अन्तरिक्षम् Here the Swaritam if formed at the beginning of a word preceeded by anudAttam in 'u'	उर्वन्तरिक्षम In all the other examples above, the first letter forms a Swaritam when 'v', y' sounds are formed with 'e' or 'u'. Note 'rva' retains Swaritam and does not become anudAttam to

Padams involved in Sandhi	Resultant word/Padam
	support 'ri', which retains its Swaritam in regular flow.
T.S. 1.6.7.2 हि । एतयोः 'hi' joins with 'ae' producing 'hyE' it retains it position. After following udAttam ta, 'yO' also retains its Swaritam.	ह्येतयो
T.S.4.6.1.5 नि । अत्रिणम् Example similar to previous one.	न्येत्रिणां 'nya' acquires its Swaritam through Sandhi but Nam also retains its position.

4.9 Examples of prAtihatA

There is an udAttam (acute) standing in another word, then, if there be a Swaritam (circumflex) resulting from a rule of combination, it is *prAtihata*.

Padams involved in Sandhi	Resultant word/Padam
TS 1.1.3.1 पृथिवि + असि	पृथिव्यसि

TS 1.5.8.5 तेजस्वि + एव । अस्य தேஜஸ்வி + ஏவ । அஸ்ய തേജസ്വി + ഏവ । അസ്യ 'ae' of eva is PA. Though it becomes Swaritam. Va+a becomes vA which is udAttam.	तेजस्व्येवास्य தேஜஸ்வ்யேவாஸ்ய തേജസ്വ്യേവാസ്യ So 'sya' acquires Swaritam
TS 1.3.14.3 तव + ऊती + अश्याम	तवो त्यश्याम

Note: prAtihatA Swritam also retain their status.

4.10 Examples of aBhinihatA

After formation of Swaritam, in case of the loss of '*a*', that is elision of **'a'** resulting in formation of avagraha, it is *abhinihata*.

Padams involved in Sandhi	Resultant word/Padam
मा अग्ने भागिन॒	माऽग्ने भागिन॒
यः अपां पुष्पं ँवेद	योऽपां पुष्पं ँवेद । (yO gets Swaritam as it had udAttam, but does not become Dheega Swaritam since letter

	following '�S' is a normal consonant 'pAm' not conjunct consonant.
1.5.1.2 सः । अग्निः । अब्रवीत् SaH becomes sO through Vowel Sandhi 'a' of agni elides to avagraha. Thus 'sO' is an aBinihatA swaritam. This is an AS. This retains its position. This 'sO' shall not acquire anudAtttam and become AA in this example.	सोऽग्निरब्रवीद् The 'a' of agni is a PA. following 'gni' is PU. The visargam for sound 'ni' is 'r' this 'r' combines with 'a' (SA) to become 'ra' and this acquires Swaritam since it follows 'gni' udAttam.
1.5.2.1 यः । अग्निम् । उद्वासयते **Example very similar to above**	योऽग्निमुद्वासयते
2.6.2.1 ES+SA सोमेन । उत्तरार्धे । अग्नये । 'rdhE' (PU) gets Swaritam on elision of 'a' to avagraha. Since this swaritam is special, 'gnE' retains its PS.	सोमेनोत्तरार्धे ऽग्नये
1.5.10.1 नमः । अग्नये । अप्रतिविद्धाय Normally a formation like this would	नमोऽग्नये ऽप्रतिविद्धाय The anudAttam support for 'pra'

have produced namO$gnayE. In the next part, a which follows 'yE' elides, that is followed by 'pra' a PS. So the Swaritam of 'yE' shifts to 'pra' and 'yE' becomes udAttam (AU).	shall come from 'mO' only as it has Swaram. So in this flow, mO of maH acquires anudAttam. (AA) An aBinihatA swaritam is not formed in Vaakyam.

Note: aBhinihatA Swaritam retain its position before following Swaritam.

4.11 PraSliShtaa

Where an '*ee' or 'uu*' results out of joining two short **e+e**,**u+u** , it is *praSliShtaa*.

Padams involved in Sandhi	Resultant word/Padam
TS 3.2.9.5 प्रती + ईक्षते + यत्	प्रतीक्षते यद्
TS 3.3.3.3 अपि + इहि + वशी	अपीहि वशी
TS 5.5.5.4 दिक्षु + उपदधाति	दिक्षूपदधाति
(now examples from Pada Paatam) इन्द्रवायू इति इन्द्र–वायू	(more examples will be seen due to joining 'iti') इन्द्रवायू इतीन्द्र–वायू

इन्द्रियावान् इति इन्द्रिय – वान्	इन्द्रियावानितीन्द्रिय – वान्
इषुधिः इति इषु–धिः	इषुधिरितीषु–धिः
TS 2.5.11.8 श्रावय + इति + इदम् + देवाः 'ti' of iti is PS + 'e' of idam (PA) gives 'tI' in anudAttam. PS+PA = PA as seen in previous examples	श्रावयेतीदं देवाः 'dE' in deva acquires Swaritam to support 'tI' anudAttam. So **PraSliShtaa swaram is not formed here.**
TS 2.6.5.6 असि + इति + इमाम् + अभि + मृशति + इयम् The first derivation of 'tI' is 'ti' PS of iti with 'e' of imam (a PA) resulting in anudAttam.	असीतीमामभि मृशतीयं Second 'tI' is formed with the combination of 'ti' of mRuShati which is SA and 'e' of iyam which is PA. the combination gives anudAttam only) So **PraSliShtaa swaram is not formed here like in example above.**

4.12 pAdavRutta

Where there is a *hiatus*, **pause given for uttering two vowel sounds**, between two words or within a word, it is *pAdavRutta.*

Padams involved in Sandhi	Resultant word/Padam
सह नौ अवतु 'nau' in Sandhi becomes nA+v creating nA+ vavatu (v+avatu). Kindly refer to article on Vowel Sandhi.	सह ना ववतु As per recital rule, a Pause is given, a pause that indicates Vowel Sandhi.
रुद्र + मन्यवे + उतो Kindly refer to article on Vowel Sandhi. 'vE' sound becomes 'va' before vowel 'u'	रुद्र मन्यव उतोत Since the source words undergo a change, a pause is given to indicate presence of Sandhi.
MEdha Suktham अश्विनौ + उभौ + आ + धत्ताम्	अश्विना–वुभा–वाधत्तां 'nau' +'u' vowel gives Swaritam 'nA' rightly supporting 'a' of aSvinau. 'nA' at the middle of the statement should be rendered with a pause, before 'vu' to indicate presence of hiatus pause.

सेनानि ग्राम<u>ण्यौ</u> <u>उ</u>र्वशी The Sandhi of '**Nau**' and '**u**' produces '**NA**', a pause needs to be given before we recite '**vu**' that is out of the Sandhi.	सेनानि ग्राम<u>ण्या</u> – <u>वु</u>र्वशी च

4.13 Tairovya~jjana.

Where an **udAttam (acute) precedes** the resultant Swaritam, it is **tairovya~jjana**.

Padams involved in Sandhi	Resultant word/Padam
<u>इति</u> + <u>अब्रवीत्</u> Swaritam '**tya**' precedes udAttam '**e**'	इत्यब्रवीत्
<u>प्रति</u> + <u>अस्य</u> Swaritam '**tya**' precedes udAttam '**pra**'	प्रत्यस्य
<u>अधि</u> + <u>अवोचत्</u> '**dhi**' is udAttam in the previous word. Combining with '**a**' it produces **dhya.**	अध्यवोचद '**dhya**' gets Swaritam since it follows a udAttam –'**a**'.

Note: When these Swaritams like Kshaipra, nitya and pratihata are derived, they can occur immediately after an anudAttam without a need for an udAttam as per normal flow of swarams.

It is also observed that words formed out of v,y, acquire Swaritam and they donot acquire anudAttam before th next word starting with an udAttam. (as seen in indicative examples above)

4.14 <u>Special Swaritams</u>

We have discussed Special Padams with **Swaritam following an anudAttam** in Section 4.6. These examples are given below. The Swaritam retains its position.

Vaakyam	Comments
T.S.1.6.9.1 तावानुक्थ्यो यावत्यमावास्या	'kthyO' retains swaritam before 'yA' as similar to examples in nitya swaram 6.6.2 but these words are not formed due to sandhi but out of a full padam, ukthyaH.
T.S.1.7.2.2 मनुष्यान् यां पितृभ्यो	yAn has swaritam occurs before udAttam yAm
T.S.3.4.8.2 होतव्या ओजो वै होतव्या यावन्तोऽस्य	'vyA' is Swaritam occurs before udAttam O of OjO, vyA retains Swartiam but jO of OjO which swaritam acquires anudAttam before udAttam vai in normal course.
T.S.4.5.1.1 शिवा शरव्या या	'vyA' retains swaritam before udAttam 'yA'
T.S.6.1.1.1	'ShyA' retains swaritam before udAttam 'u'

मनुष्या꠰ उदीचीꣳ रुद्रा	
1.2.13.2 बहुभिः । वसव्यैः । आ । प्र । यच्छ । (ES + PU no change)	बहुभिर्वसव्यैरा प्र यच्छ
5.1.4.5 हि । राजन्यः । यम् ।	हि राजन्यो यं
5.1.5.6 मानव्यः । हि ।	मानव्यो हि
5.1.6.4 वीर्यम् । वै ।	वीर्यँ वै
5.2.1.3 वीर्यम् । अनु ।	वीर्यमनु

<mark>Special Swaritams will lose Swaritam during Sandhi or avagraha formation, then they become Udattam. Combing with 'iti' they change. We will indicate it in the Excel Sheet.</mark> But this can be handled through program itself.

Examples

5.4.10.5 चेतव्या । इति । (vyA swaritam plus 'I' udattam becomes udattam) A+I = E (ae)	चेतव्येति
2.6.4.2 पितृदेवत्या । अतिखता । इयतीम्	पितृदेवत्याऽतिखातेयतीं (eka sruti khA acquires anudAttam to support ya of iyatim
5.4.11.3 जमदग्निः । विहव्याः। अपश्यत्	जमदग्निर्विहव्या अपश्यत् (visargam is dropped no Sandhi no avagraha formation either special swaritam retained)

5 Kampa Swaram (Two Swaritams together)

There are instances that two Swaritams are formed next to each other with the rules we have studied about Swaritams. As per Rule, the first one does not give up its Swaritam because of its right to retain the Swaritam.

The first one by rule will be marked in dheerga swaritam since one part is rendered in Swaritam and next part bringing down to andAttam, so that the next can be rendered as swaritam or dheerga swaritam, if applicable.

If more than one follow in succession, the successive Kampa swaram shall be marked in dheerga swaritam and the last one if dheerga swaritam is applicable.

Table of Examples

Padams involved in Sandhi	Resultant Vaakyam
TS 2.1.6.5 भवति । बहुदेवत्यः । हि । एषः vatyaH is special swaritam as discussed above. It retains its Swaritam. 'hi' udAttam with 'e' creates a Swaritam 'hyE' which will retain its Swaritam. 'yaH becomes yO and its followed by a conjunct consonant hyE and thereore yO acquires dheerga Swaritam.	भवति बहुदेवत्यो(1ं) ह्येष The 'tyO' is rendered in dheerga Swaritam towards the last part it is brought to udAttam in a slide and then the extension of 'O' in yO is rendered in anudAttam (for one matra) as marked in (1) and then 'hyE' would be rendered in Swaritam. Kindly learn the technique from your Guru for proper sliding.
T.S. 2.2.11.5 आसन्न् । ते । अन्यः । अन्यस्मै Example is very similar to the one above. 'a' elides, 'tE' acquires	आसन् ते(1ं) न्यो॒ऽन्यस्मै Here second Swaritam 'nyO' also acquires dheerga Swaritam. After

dheerga Swaritam as it precedes ''nyO''.	the slide to anudAttam, it will be rendered in dheerga Swaritam.
T.S.5.4.3.3 सः । अर्कः । अभवत् । Example similar to first one.	सोऽ(1)ऽर्कोऽभवत्
T.S.6.1.1.7 सः । अपः । अभि । अम्रियत । In this part of Vaakyam, three Swaritam gets formed. 'sO' and 'pO' in dheerga Swaritam and 'Bya' in Swaritam.	सोऽ(1)पोऽ(1)भ्यम्रियत
T.S. 6.1.11.5 विश्वानि । हि । एषः । अभि । Similar to Other formations given for observation/understanding of readers.	विश्वानि ह्ये(1) षोऽभि

6 Swara formation with avagraha

This Chapter is an extension of Swara rules already established. But the Swaram of the 'a' avagraha shifts the swaram as if a Sandhi has occurred which is indeed.

6.1 'a' is a Support anudAttam

Notes : **A Support anudAttam is a part of the pracaya swaram and it does not acquire swaram in Vaakaym unless it is derived based on the previous anudAttam or upcoming Swaritam.**

PanchAti Ref/Type of Swaras	Padams	Vaakyam after Avagraha formation
TS 2.5.3.1 (ES+SA)	पूर्णमासे । अनुनिर्वाप्यम् । अपश्यत् 'sE' is ekasruti and 'a' of anu is support anudAttam. The result is a support anudAttam in Padam.	पूर्णमासेऽनुनिर्वाप्यमपश्यत् In Vaakyam, no Swaram. Reflected as udAttam.
4.7.1.1 (SA+SA)	मे । अपानः Combination of two support anudAttams produce anudAttam in Padam.	मे ऽपान Reflected as udAttam in Vaakyam.
4.7.3.2 (SA+SA)	मे । अनमित्रम् Similar to above example	मे ऽनमित्रं
4.7.7.2 SA+SA	मे । अतिग्राह्याः	मे ऽतिग्राह्याश्च

4.7.15.5 **SA+SA**	यत् । इदम् । मा । अभि शोचति Here 'mA' acquires Swaritam to support 'e' idam since it is Support Anudattam.	यदिदं माऽभिशोचति 'a' of aBi elides. Bi is anudAttam and supports 'ca.'
2.3.4.1 **PU+SA+** **SA**	वै । आदित्यः । अर्यमा । अर्यमणम् । एव । 'tyaH' is Prime Udattam and in combination with SA 'a' becomes swaritam since letter with 'y' is formed.	वा आदित्योऽर्यमाऽर्यमणमेव 'mA' is udAttam and retains udAttam. The rule for swaritam formation is not applicable since no letter with 'y' or 'v' is formed.
4.5.1.3 **PU+SA**	असौ । यः । अवसर्पति Here the combination of 'ya' udAttam and 'a' produces swaritam due to misra swaram formation 'O' sound	असौ यो ऽवसर्पति
4.5.4.1 **PS+SA**	रथिभ्यः । अरथेभ्यः Similar to above example	रथिभ्यो–ऽरथेभ्य
4.5.9.2 **PS+SA**	नमः । अपगुरमाणाय Similar example. maH becoming mO results in elision of 'a'	नमोऽपगुरमाणाय

3.1.1.1 PS+SA	सः । तपः । अतप्यत । Similar to above examples	स तपोऽतप्यत

6.2 'a' is a Prime anudAttam

Notes: A Prime anudAttam in combination with other Swaras result in a anudAttam. However, a combination of PU and PA result in Swaritam when 'y' or 'v' is formed due to vowel sandhi. Kindly refer to Chapter 5 in Pada Paatam Article.

PanchAti Ref/Type of Swara	Padams	Vaakyam after Avagraha formation
4.7.9.1 SA+PA	मे । अर्कः । च SA+ PA results in anudAttam 'mE.	मेऽर्कश्च As a result the following 'ca' which is support anudAttam acquires Swaritam.
4.7.3.2 (SA+PA)	मे । अमृतम् । च Similar to example above.	मे ऽमृतं च But 'tam is a prime Swaritam.
4.5.1.3 ES+PA	अस्य । सत्वानः । अहम् 'naH' becomes nO but acquires the anudAttam of 'a'	अस्य सत्वानोऽहं
3.3.3.2 ES+PA	छन्दसा । अग्नेः Similar to above example	छन्दसाऽग्नेः

4.7.15.5 **SA+PA**	अनु । नः । अद्य । अनुमतिः ।	अनुनोऽद्यानुमति
4.7.14.3 **PU+PA**	पुनः । ते । अमा । एषाम्	पुनस्ते ऽमैषां
	Here udAttam 'tE' combined with 'a' produces 'tE' in Swaritam.	So 'na' acquires support anudAttam. Elided 'a' is prime anudAttam, so (SA) ShAm acquires Swaritam in the normal flow.
1.5.9.4 **PU+PA**	सः । अग्निम् । अस्तौत्	सोऽग्निमस्तौथ्
	SaH (PU)acquires Swaritam and becomes dheerga Swaritam as the following letter gni is conjunct consonant	
1.6.6.4 **PU +PA** **Special**	बभूव । सः । अस्मान् ।	बभूव सो अस्माꣳ
	asmAn does not elide after SaH as per a rule in PS. (11-9)	SaH drops visargam to become SO as per Vowel Sandhi but does not acquire swaram as 'a' is not elided. PS 12-9
1.6.12.4 **PU+PA** **(gm)**	कृधि । यः । अस्मान् । अभिदासति ।	कृधि यो अस्माꣳ अभिदासति
	Here 'yaH' becomes yO but does not acquire swaram due to following word with (gm)	**Rule behind this formation needs further study**.

1.5.1.1 PS+PA	उपयन्तः । अग्नौ । वामम् । 'ntha' Swaritam with 'a' anudAttam produces 'acquired anudAttam'	यन्तोऽग्नौ वामं When 'a' is elided, nthO acquires anudAttam.
1.5.10.1 PS+PA PS+PU	नमः । अग्नये । अप्रतिविद्धाय 'maH' on becoming 'mO' acquires anudAttam since elided a is anudAttam	नमोऽग्नये ऽप्रतिविद्धाय 'yE' swaritam in combination with 'a' UdAttam will give udAttam 'yE;
3.2.8.3 PS+PA	यान् । अग्नयः । अन्वतप्यन्त । Example similar to first part of above example	यानग्नयोऽन्वतप्यन्त

6.3 'a' is a Prime udAttam

Notes: A Prime udAttam following any other Swaram results in udAttam only by general rule.

PanchAti Ref/Type of Swaras	Padams	Vaakyam after Avagraha formation
4.7.7.1 SA+PU	मे । अदाभ्यः । च 'mE' support anudAttam takes the PU of 'a' to become 'mE'	मे ऽदाभ्यश्च

3.2.1.1 **SA+PU**	अनु । त्वा । आ(एति) । रभे । Similar to above. But note that 'nu' of anu acquires anudAttam to support the udAttam that gets formed.	अनु त्वाऽऽरभे
3.2.1.2 **SA+PU** **PU+PU**	गृह्यन्ते । अथ । वै । अस्य । एते । अगृहीताः। Both combinations with udAttam results in udAttam only	गृह्यन्तेऽथ वा अस्यैतेऽगृहीता
4.5.1.1 **ES+PU**	तनूः । अघोरा । अपापकाशिनी	तनूरघोरा ऽपापकाशिनी
4.7.15.4 **SA+PU** **NE**	मरुताम् । मन्वे । अधि । नः 'a' of adhi does not elide. The rule is under study.	मरुतां मन्वे अधिनो

4.5.1.3 **PU+PU**	सहस्रशः। अव । एषाम् । हेडः Combination of udAttams produces udAttam - SO	सहस्रशो ऽवैषाꣳ हेड
2.3.12.1 **PU+PU**	गृह्णाति । यः । अश्वम् । Similar to above.	गृह्णाति योऽश्वं
4.7.14.2 **PU+PU**	हव्या । आकूतिः Similar to the above example	हव्याऽऽकूतिः
4.7.14.1 **PS+PU**	त्वया । अध्यक्षेण Combination of Swaritam 'yA' and udAttam 'a' produces udAttam only.	स्त्वया–ऽद्ध्यक्षेण 'yA' acquires udAttam on elision of udAttam 'a'
4.7.14.2 **PS+PU**	पूर्वे । अरिष्टाः । स्याम Similar to the above example	पूर्वे ऽरिष्टाः स्याम
2.2.4.2 **PS+PU**	भवति ।अग्नये । अन्नपतये Similar to the above example	भवत्यग्नयेऽन्नपतये
2.6.3.3 **PS+PU**	यथा । अक्षः । अनुपात्तः	यथाऽक्षोऽनुपात्तो

PS+PU	Similar to the above example	
3.1.5.1 **PS+PU**	आत्मनः । अनाव्रस्काय । Similar to the above example	आत्मनोऽनाव्रस्काय

6.3.1 Programming Consideration:

There are a number of rules in PratiSakyam and conventions used in certain Sections of SamhitA that 'a' elides or does not elide. So it is difficult to program rules based on complex criteria. The Input for Jatai and Ghanam shall have a **manual indicator that the 'a' elides or not.**