

# ***GUIDELINES FOR MALAYALAM MORPH ANALYSIS***

## **Introduction**

Malayalam is a morphologically rich and agglutinative language. Many suffixes can be added to noun and verb root. It has many postpositions and auxiliaries. It is an inflectional language also. Malayalam has no personal termination in verbs.

## **Morph Analysis**

Morph analysis is the analysis of morphological features of a word. Morph features are expressed as grammatical suffixes attached to the root of words. The grammatical categories of a language can be distributed in the sentence either as free forms or as bound forms . These are analysed in morph feature analysis.

In SSF format, the morph contains 4 columns – address, token, category and feature structures. Address is the serial number , token is the particular word of the sentence, category is the grammatical category of that word, and feature structure is the morphological features of that word (fs).

*For example, take nouns. A noun is analysed as root + lexical category + features as gender, number, person, case etc. Verbs are analysed as root + lexical category + features as tense, mood, aspects etc. Special features such as specificity, emphasis, dubitative honorific, voice, causality, passive, question, negative etc. are optional features.*

For morph analysis of a given word, 8 values are assigned:

1. Root of the word
2. Lexical category of the word
3. Gender
4. Number
5. Person
6. Case

7. Case marker (cm) in the case of nouns and tense, mood and aspect (tam) in the case of verbs.
8. In the 8<sup>th</sup> column, all the suffixes with connectives, which come after the root, will be given.

According to this, the analysis of a given word is as follows:

<fs af='root, lcat,gen,num,person, case/tam'>

For example, if the category is Noun, the following steps are to be taken:

1. Check its gender – masculine/ feminine / neuter(m/f/ne)
2. Check its number – singular/plural (sg/pl)
3. Check its person – 1/2/3
4. Check its case – direct / oblique (d/o)
5. Check its case marker – Accusative/ Dative/ Instrument/ locative etc.
6. Add all the suffixes including the link morph in the last column .

If the category is a verb :

Add the category (v)

1. Add the tense-mood-aspect suffixes in the 7<sup>th</sup> column.
2. Add all the suffixes together with link morph in the last column(8<sup>th</sup>)

## Morph Features in Malayalam

### Nouns and Pronoun

#### *Gender*

The gender suffixes in Malayalam are -an , -i and -am.

-an is added for masculine.

kaLLan ooTi 'The thief ran'

-i is added for feminine.

KaLLi ooTi 'The thief woman ran'

-am is added for neuter gender.

kaLLam parayarutu      Don't say lies '

In pronouns, the gender suffixes are -an, -aL and -tu.

- an is added for masculine gender .

avan vannu      'He came'

- aL is added for feminine gender.

avaL vannu      'She came'

- tu is added for Neuter gender.

atu nalla pustakam aaNu      'That is a good book'

### *Number*

There are only two numbers in Malayalam – Singular and plural. The word in its original form is singular. The plural suffixes in Malayalam are -ar, maar and -kaL. -ar is for words of both gender ( samardhar 'able people') , -maar is for words of a particular gender ( ceeTTanmaar 'brothers'). And -kaL is for inanimates and rational groups (ilakaL 'leaves', kuTTikaL 'children').

### *Person*

In pronouns , the persons are 1<sup>st</sup> , 2<sup>nd</sup> and 3<sup>rd</sup> .

NJaan 'I' is 1<sup>st</sup> person singular

NJaNGaL 'we(excl.) is 1<sup>st</sup> person plural'

nammal 'we (incl.) is 1<sup>st</sup> person plural'.

nii 'you' is 2<sup>nd</sup> person singular

niNGaL is 2<sup>nd</sup> person plural

taaNGaL is 2<sup>nd</sup> person honorific

avan – 3<sup>rd</sup> person masculine

avaL – 3<sup>rd</sup> person feminine

atu – 3<sup>rd</sup> person neuter

The reflexive pronoun is taan.

The question words are aaru 'who', entu'what', eetu 'which', ennu'when', eNGane'How' etc.

When suffixes are added to the 1<sup>st</sup> person singular NJaan 'I', it becomes the oblique form en - .

enRe peena 'My pen'

Similarly, when suffixes are added to the 2<sup>nd</sup> person nii 'you', it becomes the oblique form nin - .

ninRe pustakam 'your book'

## Case

The case suffixes in Malayalam are the following .

- |    |                    |   |
|----|--------------------|---|
| 1. | Accusative – e     | raamane 'Rama(Acc.)'                                    |
| 2. | Dative - kk, u     | raamanu'Rama(Dat.)'                                     |
| 3. | Instrumental – aal | raamanaal 'Rama(Inst.)'                                 |
| 4. | Sociative – ooTu   | raamanooTu 'Rama(soc.)'                                 |
| 5. | Genitive – Te ,uTe | raamanRe 'Rama(Gen.)'<br>siitayuTe 'sita(Gen.)'         |
| 6. | Locative – il, kal | vii TTil 'in the house'<br>kaalkkal 'in the leg'        |
| 7. | Ablative -ilninnu  | raaman marattilninnu viiNu<br>'Rama fell from the tree' |

## Verbs

### PastTense

For verbs the past tense suffixes are - tu , -ttu, -ccu – nnu , - R Ru, -TTu, - NTu, NJu, -Nu , ntu, - i etc.

The following are examples:

|          |          |
|----------|----------|
| neytu    | 'weaved' |
| koTuttu  | 'gave'   |
| aTiccu   | 'beat'   |
| vannu    | 'came'   |
| tooRRu   | 'failed' |
| iTTu     | 'put'    |
| kaNTu    | 'saw'    |
| paRaNJJu | 'said'   |
| viiNu    | 'fell'   |
| ventu    | 'boiled' |
| aayi     | 'became' |

### Present Tense

The present tense suffix is – unnu in malayalam

raaman paaTunnu      'Rama sings'

### Future Tense

The future tense suffix is – um.

raaman varum      'Rama will come '

Among Moods, the Imperative mood suffix is – uka (varuka 'come'), the Optative mood suffix is – aam (ninakku pookaam 'you may go') and the Compulsive mood suffix is – aNam (nii naaLe varaNam 'you should come tomorrw').

There are a large a number of aspects (auxiliaries) in Malayalam.

- iri - , -iTTu-, -koNTu-, viTu-, -iTu-, kaLa-, -aak-, -varu-, -koL-, -koTu-, -taru are some of them .

## Morph Feature Analysis

### *Nouns (N)*

Singular nouns are analysed as follows:

<fs af = 'raaman,n,m,sg,3,d,o,o'>

Plural nouns are analysed as follows:

<fs af = 'amma,n,f,pl,3,d,maar,maar'>

### *Pronouns (Pn)*

a. Singular (avaLkku 'to her')

<fs af=avaL,pn,f,sg,3,d,kku,kku'>

b. Plural (NJaNGaLuTe 'of us')

< fs af=NJan,pn,ne,pl,1,o,kaLuTe NGaLuTe'>

### *Adjectives (adj)*

valiya viiTu 'big house'

<fs af=valiya,adj, ,, ,, , '>

### *Adverbs (adv)*

raaman veegam ooTi 'Rama ran fast'

<fs af='veegam,adv , , , , , '>

### *Postpositions (psp)*

avaL raamane kuRiccu paRaNJJu 'she said about Rama'

<fs af=kuRiccu,psp , , , , , '>

### *Nouns of Space and Time (NST)*

Since NST can also occur independently and behave like a noun, all NST's will be treated as noun and will be given feature structures accordingly.

raaman marattinRe mukaLil aanu.  
'Rama is on the top of the tree'.

Here , mukaLil 'on the top of the tree' is NST and the feature structure is as follows:

<fs af=mukaLil,nst,ne,sg,3,d,..'>

### *Pronouns which does not change forms*

Pronouns can be of two types:

- a. Those which can change forms and can take suffixes.
- b. Those which does not change forms.

appool 'then', ippool 'now', aviTe 'there', annu 'that day', innu 'today' etc. are examples. These forms will have the feature structure as shown below.

<fs af='appool,pn, , , , , , '>

### *Cardinal Number (QC)*

enikku 1000 ruupa kiTTi          'I got 1000 rupees'

When a number is followed by a noun, the following feature structure is given:

<fs af ='1000,num, , , , , , '>

If QC is followed by vibhakti., it will be given all the feature structures of noun.

50 kiloograaminu ' for 50 kgs'

### *Ordinal Number*

Onnaam sammaanam siitaykku aaNu  
'The first prize is to Sita'

The feature structure is as follows:

<fs af='onnaam,num, , , , , '>

### *Quantifier*

dhaaraaLam kuTTikaL 'many students '

The feature structure is as follows:

<fs af = 'dhaaraaLam, qtf, , , , , '>

### *Verb*

#### *Finite verb (VGF)*

The verbal constructions are composed of a verb root and auxiliary suffixes.

paaTikkoNTirikkunnu 'continuing singing'  
paaT – is the verb root 'to sing', - i - is the past tense suffix, –  
koNT- and -iri- are auxiliaries denoting progressive aspect, - kk- is Link  
Morph and -nnu is the present tense suffix .

#### *Non-finite verb forms*

#### *Relative participle (RP)*

Relative participles modify nouns.

avan paRaNJa kaaryam satyam aaNu 'The matter he said is true'



Here, PaRaNJJa ' which is said ' is VGNF and –a is the relative participle suffix . The feature structure is as follows:

<fs af=paRa,v,,, ,NJua,NJa'>

### *Relativized forms of aaNu and uNTu*

uLLa is the relativized form of uNTu and aaya is the relativized form of aaNu

enikkuLLa viiTu 'The house which I have'

dhanikanaaya raaju 'Raju who is rich'

<fs af='uL,v, ,, ,a,a'>

<fs af='aa,v, ,, ,a,ya'>

### *Verbal participle*

raaman paaTikkoNTu vannu 'Rama came by singing'

In PaTikkoNTu vannu, paaT – is the root -i is the past tense suffix and – koNTu is the VP suffix.

The feature structure is as follows :

<fs af='paaT,v, ,, ,ikoNTu , ikkoNTu'>

The VP suffix is added from other attributes.

raaman karaNJJu paRaNJJu 'Rama said by crying'

Here karaNJJu is Verbal Participle '.

The feature structure is as follows:

<fs af ='kara,v,,, ,NJJu ,NJJu'>

amma kuLicciTTu uRaNGi 'Mother slept after taking bath'

Here - iTTu is VP. The feature structure is as follows:

<fs af ='kuLi,ccuiTTu,cciTTu'>

### *Conditional participle (- aal)*

-aal is the suffix of Conditional Participle.

nii nannaayi pathiccaal paassaakum

'If you study well, you will pass'

The feature structure is as follows;

<fs af ='pathi,v, ,,, ccuaal, ccaal'>

### *Adverbial participle of time*

ninnappool 'while standing'

raman RooDiL ninnappool raviye kaNTu

'Rama saw Ravi while standing in the road '

Here, - appool is the Adverbial Participle of time.

The feature structure of it is as follows.

<fs af = nil,v, , , nnaappool,nnappool'>

### *Nominalised verb forms*

Sentences with Nominalized verb forms are commonly seen in Malayalam.

raaman aaNu atu ceytatu. 'It is Rama who did that'

Here , ceytatu 'who did that' is the Nominalized verb form. These forms have the gender markers as suffixes, which cannot be separated from the verb. These Nominalized verb forms are capable of taking their own arguments. Case suffixes and postpositions can be added to these forms. -tu is the nominal suffix. In order to be able to show the exact verb-

argument structure in the sentence, it is essential that the crucial information of a noun derived from a verb is preserved. Therefore, considering their verbal nature, these nominalized verb forms have to be marked as Non-finite verbs (VNF).

The feature structure of nominalized verb forms is as follows:

<fs af = 'cey,v, ,, ,, tatu,tatu'>

### *Infinitives (VINI)*

#### *Purposive Infinitive*

The purposive Infinitive suffix is – aan.

amma kuLikkaan Pooyi                      'Mother went to take bath'

The feature structure of the above form is as follows:

<fs af = 'kuLi,v, ,, ,, aan,kkaan'>

#### *Pure Infinitives*

raavile ezhunnellkkuka prayaasam aaNu

'It is difficult to wake up in early morning '

Here, ezhunneelkkuka is Infinitive. Its feature structure is as follows :

<fs af = 'ezhunneel,v, ,, ,, uka,kkuka'>

#### *Passive*

The passive suffix in Malayalam is –peTu - .

raavaNan raamanaal kollappeTTu

'Ravana was killed by Rama'

The feature structure is as follows:

<fs af = 'kollu,v, ,, ,, peTuTTu,appeTTu'>

### *Causative*

The causative suffixes are – i - , and -ppi - .

amma kuTTiye aahaaram kazhippiccu  
'Mother made the child eat food'

The feature structure is as follows:

<fs af = 'kazhi,v, ,, ,, ppiccu, ppiccu'>

### *Question*

The question suffix is – oo.

nii naaLe varumoo? 'Will you come tomorrow?'

The feature structure is as follows:

<fs af = varu,v, ,, ,, ,, umoo,umoo'>

For Negative sentences, the Question suffix is -ee.

nii varunnillee? 'Are you not coming?'

The feature structure is as follows:

<fs af = ' varu,v, ,, ,, ,, unnuillee, unnillee'>

### *Negative*

The Negative of aaNu is alla and of uNDu is illa. The Negative suffix illa comes as bound morpheme in some verbs.

Vannilla 'Didn't come'

The feature structure is as follows:

<fs af =va,v, ,, ,, nnuilla, nniilla'>

### *Emphatic ( - ee )*

The emphatic suffix in Malayalam is – ee.

avaL paalee kuTikkuu            'she drinks only milk '  
<fs af = 'paal,n,ne,sg,3,d,ee,ee'>

### *Directional*

The suffix of direction in Malayalam are – eeykku and – illeeykku.

KuTTi enRe mukhatteeykku nookki    'The child looked towards my face'  
<fs af = 'mukha, n,ne,sg,3,d,eeykku,tteeykku'>

raaman skuuLileeykku pooyi            'Rama went towards the school'  
<fs af = 'skuul,n,ne,sg,3,d,ileeykku,ileeykku'>

### *Conjunctions*

The co-ordinating conjunction markers are not free forms in Malayalam. These are bound morphemes (-um 'and' and -oo 'or'). In morph analysis, these are added from other attributes.

raamanum siitayum            'Rama and Sita'

The feature structure is as follows:

<fs af = 'raaman,n,m,sg,3,d,um,um ' '

raamanoo siitayoo            'Rama or Sita'

<fs af = 'siita,n,f,sg,3,d,oo,yoo'>

The subordinating conjunctions are free forms .

*Other morphemes seen in Malayalam sentences are the following:-*

*Default particle (rpd) suffix ( - um ) - Inclusive*

The default particle um 'also' is added as suffix (inclusive suffix).

siitayum vannu 'Sita also came'

The feature structure is as follows:

<fs af = 'siita,n,ne,sg,3,d,um,yum'>

### *Classifier (CL)*

The classifiers in Malayalam are:

ennii, mutalaaya, tuTaNGiya etc.

The feature structure is as follows:

<fs af = 'ennii, cl, ,, ,, , '>

### *Punctuation (punc)*

Punctuations are analysed as follows:

<fs af = '., punc, ,, ,, , '>

### *Symbols (sym)*

Symbols are analyzed as follows:

<fs af = '- ,sym, ,, ,, , '>

### *Intensifiers (intf)*

vaLare, eeRe, oTTu etc. are intensifiers.

vaLare nalla viiTu 'very good house'

The feature structure is as follows:

<fs af = ' vaLare, intf , ,, ,, , '>

### *Interjection (intj)*

ayyoo!, haavoo!, hoo! etc. are interjections.

<fs af = 'ayyoo, intj, ,, ,, , '>

## Morph types

|    |   |   |
|----|---|---|
| 1  | <i>Noun</i>   | <i>N-NN</i> <fs af = 'kalkkaTTa, n, ne, sg, 3, d, o, ,'>                      |
| 2  | <i>Pronoun</i>  | <i>PR-PRP</i> <fs af = 'avan, pn, ne, sg, 3, d, o,o'>                         |
| 3  | <i>N-NST</i>  | <i>nst</i> <fs af = 'mukalil, nst, ne, sg, 3, d, o,o'>                        |
| 4  | <i>Question pronoun</i>   | <i>PR-PRQ</i> <fs af = 'entu, prq, ,, ,, ,'>                                  |
| 5  | <i>Demonstrative</i>  | <i>DEM</i> <fs af = aa, dem, ,, ,, ,'>  |
| 6  | <i>Postposition</i>   | <i>PSP</i> <fs af = 'paRRi, psp, ,, ,, ,'>                                    |
| 7  | <i>Adjective</i>  | <i>ADJ</i> <fs af = ' eeRiya, adj , ,, ,, ,'>                                 |
| 8  | <i>Adverb</i>   | <i>ADN</i> <fs af = 'eLuppam, adv, ,, ,, ,'>                                  |
| 9  | <i>Intensifier</i>  | <i>INTF</i> <fs af = 'eeRe, intf, ,, ,, ,'>                                   |
| 10 | <i>Finite verb</i>  | <i>GF</i> <fs af = 'paRa, v, ,, ,, unnu, yunnu'>                              |
| 11 | <i>VGNF (RP)</i>  | <i>RP</i> <fs af = 'va,v, ,, ,, nnu, a, nna'>                                 |
| 12 | <i>VGNF(VP)</i>   | <i>VP</i> <fs af = ' paRa ,v, ,, ,, NJuiTTu, NJuiTTu'>                        |
| 13 | <i>VGNF (Participle of Time)</i>  | <fs af = 'nil, v, ,, ,, , nnaappoL, nnapool '>                                |
| 14 | <i>VGNF (Conditional)</i>   | <fs af = 'va, v, ,, ,, nnuaal, nnuaal'>                                       |
| 15 | <i>VGNF (Nominaized verb)</i>   | <fs af = paaT, V, ,, ,, , iatu, iyatu'>                                       |
| 16 | <i>VGINF (Infinitive)</i><br>16.01 <i>Purposive</i><br>16.02 <i>Pure Infinitive</i> | <fs af = 'ooTu, v, ,, ,, aan, aan,'><br><fs af = 'nata, v, ,, ,, uka, kkuka'> |
| 17 | <i>QT - QTF</i>   | <fs af = ' kuRaccu, gtf, ,, ,, ,'>  |
| 18 | <i>RP-RPD</i>   | <fs af = 'avaL' rpd, ,, ,, ,, , um, um'>                                      |
| 19 | <i>CC - CCS - UT</i>  | <fs af = enna, avy, ,, ,, ,'>   |
| 20 | <i>CC - CCS</i>   | <fs af = eNKilum, avy, ,, ,, ,'>  |
| 21 | <i>QC</i>   | <fs af = '100, num, ,, ,, ,'>   |
| 22 | <i>QO</i>   | <fs af = 'onnaam, num, ,, ,, ,'>  |
| 23 | <i>QC (2015- il)</i>  | <fs af = '2015, num, ,, ,, il, il'>   |

|    |                     |                                 |
|----|---------------------|---------------------------------|
| 24 | <i>PR</i>           | <fs af =aviTe, pn, ,, ,, ,>     |
| 25 | <i>Punctuation</i>  | <fs af = - , punc ,, ,, ,>      |
| 26 | <i>Symbol</i>       | <fs af = 'sym, ,, ,, ,>         |
| 27 | <i>Classifier</i>   | <fs af = 'ennii, CL, ,, ,, ,>   |
| 28 | <i>Interjection</i> | <fs af = 'ayyoo, intj, ,, ,, ,> |