Reference No:

Revision History:

Name	Change Date	Version	Description of Changes
Omar Javed	06th November, 04	0.1	Created
Sara Hussain	20th Dec, 2004	4.1.0.0	Modified (added TENSE feature)
Sara Hussain	7th Feb, 2005	4.1.1.2	Added FORM and _INFL_AGREEMENT feature for infinitival entry
Sara Hussain	21st Feb, 2005	4.1.1.3	Added DEVERBAL feature for deverbals.

POS ID: UPOS13

Part of Speech Name: Verb

Part of Speech String: v

Lexical Entry Template:
<*word*>: v, ^ PRED = '<*logical form of word*>', ^_VERB_FORM = '<*logical form of word in roman*'>, ^_SUBJ_CASE = {NOM, ERG}, ^_MORPH FORM = {root, subjunctive, perfective, habitual, infinitive, percative}, ^ TNS_ASP HABITUAL = {POS}, ^CAUSATION = {NO, SINGLE, DOUBLE}, ^ NUM = {SG, PL}, ^ GEND = {M, F}, ^PERSON = {1, 2, 3}, ^ RESPECT = {NORESPECT, FAMILIAR, USUAL, EXTRA}, ^ TENSE = {PRES, FUTURE, PAST}, ^_INFL_AGREEMENT = {POSITIVE, NEGATIVE},^FORM={NOM, OBL}, ^DEVERBAL = {ADJECTIVE, NOUN}.

Sample Lexical Entry:
ابالتا : v,^Pred ='ابال<SUBJ,OBJ>', ^_VERB_FORM = 'ubal',^ _SUBJ_CASE=NOM, ^_MORPH FORM = habitual, ^ TNS_ASP HABITUAL = POS, ^CAUSATION = NO, ^ NUM = SG, ^ GEND = M, ^ PERSON = {1, 2, 3}, ^ RESPECT = NORESPECT.

ابالتے : v,^Pred ='ابال<SUBJ,OBJ>', ^_VERB_FORM = 'ubal',^ _SUBJ_CASE=NOM, ^_MORPH FORM = habitual, ^ TNS_ASP HABITUAL = POS, ^CAUSATION = NO, ^ NUM = PL, ^ GEND = M, ^ PERSON = {1, 2, 3}, ^ RESPECT = {NORESPECT, FAMILIAR, USUAL, EXTRA}.

ابالتے : v,^Pred ='ابال<SUBJ,OBJ>', ^_VERB_FORM = 'ubal',^ _SUBJ_CASE=NOM, ^_MORPH FORM = habitual, ^ TNS_ASP HABITUAL = POS, ^CAUSATION = NO, ^ NUM = SG, ^ GEND = M, ^ PERSON = {1, 2, 3}, ^ RESPECT = {FAMILIAR, USUAL, EXTRA}.

ابالتی : v,^Pred ='ابال<SUBJ,OBJ>', ^_VERB_FORM = 'ubal',^ _SUBJ_CASE=NOM, ^_MORPH FORM = habitual, ^ TNS_ASP HABITUAL = POS, ^CAUSATION = NO, ^ NUM = SG, ^ GEND = F, ^ PERSON = {1, 2, 3}, ^ RESPECT = NORESPECT.

ہے : v, ^ _VERB_FORM='hay_pred', ^_MORPH_FORM = SUBJUNCTIVE, ^CAUSATION = NO, ^ NUM = SG, ^ GEND ={M, F}, ^ PERS = {2, 3}, ^ RESPECT = NORESPECT, ^ _ALLOWED_FORM = {PERFECTIVE, HABITUAL}, ^ TENSE = PRES.

کھانا : v,^Pred ='کھا<SUBJ,OBJ>', ^_VERB_FORM = 'kha', ^ _SUBJ_CASE=NOM, ^_MORPH_FORM = INFINITIVE, ^CAUSATION = NO, ^ NUM = SG, ^ GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = NOM, ^_INFL_AGREEMENT = POSITIVE.

کھانے : v,^Pred ='کھا<SUBJ,OBJ>', ^_VERB_FORM = 'kha', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = INFINITIVE, ^CAUSATION = NO, ^ NUM = SG, ^ GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = OBL, ^_INFL_AGREEMENT = POSITIVE.

کھانے : v,^Pred ='کھا<SUBJ,OBJ>', ^_VERB_FORM = 'kha', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = INFINITIVE, ^CAUSATION = NO, ^ NUM = PL, ^ GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = {NOM,OBL}, ^_INFL_AGREEMENT = POSITIVE.

کھانی : v,^Pred ='کھا<SUBJ,OBJ>', ^_VERB_FORM = 'kha', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = INFINITIVE, ^CAUSATION = NO, ^ NUM = {SG,PL}, ^ GEND =F, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = {NOM, OBL}, ^_INFL_AGREEMENT = POSITIVE.

//entries with gender feature absent
کھانا : v,^Pred ='کھا<SUBJ,OBJ>', ^_VERB_FORM = 'kha', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = INFINITIVE, ^CAUSATION = NO, ^ NUM = SG, ^PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = NOM, ^_INFL_AGREEMENT = NEGATIVE.

کھانے : v,^Pred ='کھا<SUBJ,OBJ>', ^_VERB_FORM = 'kha', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = INFINITIVE, ^CAUSATION = NO, ^ NUM = SG, ^PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = OBL, ^_INFL_AGREEMENT = NEGATIVE.

//deverbal entry
بنتا: v,^Pred ='بن<SUBJ>', ^_VERB_FORM = 'ban', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = HABITUAL, ^CAUSATION = NO, ^ NUM = SG, ^ GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT, FAMILIAR,USUAL,EXTRA}, ^ FORM = NOM, ^DEVERBAL = {ADJECTIVE, NOUN}.

بنتے: v,^Pred ='بن<SUBJ>', ^_VERB_FORM = 'ban', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = HABITUAL, ^CAUSATION = NO, ^ NUM = SG, ^ GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = OBL, ^DEVERBAL = {ADJECTIVE, NOUN}.

بنتے: v,^Pred ='بن<SUBJ>', ^_VERB_FORM = 'ban', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = HABITUAL, ^CAUSATION = NO, ^ NUM = PL, ^ GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = {NOM,OBL}, ^DEVERBAL = {ADJECTIVE, NOUN}.

بنتی: v,^Pred ='بن<SUBJ>', ^_VERB_FORM = 'ban', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = HABITUAL, ^CAUSATION = NO, ^ NUM = {SG,PL}, ^ GEND = F, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = {NOM,OBL}, ^DEVERBAL = ADJECTIVE.

بنتی: v,^Pred ='بن<SUBJ>', ^_VERB_FORM = 'ban', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = HABITUAL, ^CAUSATION = NO, ^ NUM = SG, ^ GEND =F, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = {NOM, OBL}, ^DEVERBAL = NOUN.

بنتی: v,^Pred ='بن<SUBJ>', ^_VERB_FORM = 'ban', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = HABITUAL, ^CAUSATION = NO, ^ NUM = PL, ^ GEND =F, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = NOM, ^DEVERBAL = NOUN.

بنتی: v,^Pred ='بن<SUBJ>', ^_VERB_FORM = 'ban', ^_SUBJ_CASE=NOM, ^_MORPH_FORM = HABITUAL, ^CAUSATION = NO, ^ NUM = PL, ^ GEND =F, ^PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = OBL, ^DEVERBAL = NOUN.

//the hoa word

بوا: v,^Pred ='بو', ^_VERB_FORM = 'ho', ^ _SUBJ_CASE=NOM, ^_MORPH_FORM = PERFECTIVE, ^CAUSATION = NO, ^ NUM = SG, ^ GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = NOM, ^DEVERBAL = {ADJECTIVE, NOUN}.

بوئے: v,^Pred ='بو', ^_VERB_FORM = 'ho', ^ _SUBJ_CASE=NOM, ^_MORPH_FORM = PERFECTIVE, ^CAUSATION = NO, ^ NUM = SG, ^GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = OBL, ^DEVERBAL = {ADJECTIVE, NOUN}.

بوئی: v,^Pred ='بو', ^_VERB_FORM = 'ho', ^ _SUBJ_CASE=NOM, ^_MORPH_FORM = PERFECTIVE, ^CAUSATION = NO, ^ NUM = {SG,PL}, ^GEND =F, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = {NOM,OBL}, ^DEVERBAL = ADJECTIVE.

بوئے: v,^Pred ='بو', ^_VERB_FORM = 'ho', ^ _SUBJ_CASE=NOM, ^_MORPH_FORM = PERFECTIVE, ^CAUSATION = NO, ^ NUM = PL, ^GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = {NOM,OBL}, ^DEVERBAL = ADJECTIVE.

بوئی: v,^Pred ='بو', ^_VERB_FORM = 'ho', ^ _SUBJ_CASE=NOM, ^_MORPH_FORM = PERFECTIVE, ^CAUSATION = NO, ^ NUM = SG, ^GEND =F, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = {NOM, OBL}, ^DEVERBAL = NOUN.

بوئے: v,^Pred ='بو', ^_VERB_FORM = 'ho', ^ _SUBJ_CASE=NOM, ^_MORPH_FORM = PERFECTIVE, ^CAUSATION = NO, ^ NUM = PL, ^GEND =M, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = NOM, ^DEVERBAL = NOUN.

بوؤں: v,^Pred ='بو', ^_VERB_FORM = 'ho', ^ _SUBJ_CASE=NOM, ^_MORPH_FORM = PERFECTIVE, ^CAUSATION = NO, ^ NUM = PL, ^GEND ={F,M}, ^ PERS = {1,2,3}, ^ RESPECT = {NORESPECT,FAMILIAR,USUAL,EXTRA}, ^ FORM = OBL, ^DEVERBAL = NOUN.

Description
Verbs (or main verbs) are used to represent actions performed.

The description of the features is following:

| _SUBJ_CASE can be: | NOM | *Example:*ابالتا |
| | ERG | *Example:*ابالے |

_MORPH FORM can be:	bare:	*Example:* اتر
	subjunctive:	*Example:*اترے
	perfective:	*Example:*اترا
	habitual:	*Example:*اترتا
	infinitive:	*Example:*اترنا
	percative:	*Example:*اترئیے
	It cannot be null or more than one.	

| TNS_ASP HABITUAL can be: | | |
| | POS: | *Example:* ابالتا |

CAUSATION can be:	NO:	*Example:* اتر
	SINGLE:	*Example:*اتار
	DOUBLE:	*Example:*اتروا
	It cannot be null.	

| NUM (Number) can be: | SG (singular): | *Example:* اترا |

	PL (plural):	*Example:* اترے
	It cannot be null or both.	

GEND (Gender) can be:	M (masculine):	*Example:* اترا
	F (feminine):	*Example:* اتری
	It cannot be null or both.	

PERSON (Person) can be:

	3 (3rd person):	*Example:* اترے
	2 (2nd person):	*Example:* اترو
	1 (1st person):	*Example:* اتروں

RESPECT can be:	NORESPECT, FAMILIAR, USUAL, EXTRA
	It cannot be null. It is used for agreement.

TENSE can be:	PAST:	*Example:* تھا
	PRES:	*Example:* ہے
	FUTURE:	*Example:* ہو
	This an optional feature used specifically for ' hay_dat' and ' hay_pred' conditions.	

FORM can be:	NOM:	*Example:* کھانا
	OBL:	*Example:* کھانے
	This is an optional feature used for infinitival and deverbal entries.	

_INFL_AGREEMENT (Infinitival gender agreement) can be:

	POSITIVE:	*Example:* کھانی
	NEGATIVE:	*Example:* کھانا
	This an optional feature used specifically for infinitival verb entry. It cannot be both.	

DEVERBAL can be:	NOUN:	*Example:* ہوؤں
	ADJECTIVE:	*Example:* ہوئے
	This is an optional feature used for deverbal entries. It can be both.	

The detail of the feature values is discussed in analysis section.

Examples:

لکھنا، کھاتا، سوئے، پڑھیں، چل

POS Status: Active

Reference:
[1] Urdu Verbs Forms and Features (MT-02_Verb Features.doc)
[2] جامع القواعد، ابو اللیث صدیقی
[3]اردو صرف ونحو، مولوی عبدالحق
[4]نئی اردو قواعد، عصمت جاوید

Related POS: UPOS114, UPOS115, UPOS116

Replaces: -UPOS13

Reason: -

Replaced by: -

Reason: -

Analysis: Following is the in-depth analysis of the rule.

Analysis: About all the writers e.g. [2, 3, 4] of Urdu Grammar has categories verbs into more than one types. All of them are agreed that Verb (or Main Verb) is a type of verb that shows some action. Consider following examples:

اسے خط **لکھنا** پڑتا ہے۔

وہ آم **کھاتا** جاتا ہے۔

وہ کتاب **پڑھ** رہا ہوگا۔

In above examples, لکھنا، کھاتا، پڑھ are verbs (or main verbs). These verbs are used to show the action performed. The other verbs used in these sentences are used to show tense, aspect and manner of the action. For example, in second example, verb کھاتا is used to show the main action of sentence i.e. to eat. The other verbs جاتا and ہے are used to show continuity and present tense respectively.

Different inflectional forms of a verb can be represented using following features: Predicate, _VERB_FORM, _MORPH Form, TNS_ASP, Causation, Gender, Number, Person, and Respect. The description of these features is given in [1].

Infinitivals (verb in bare form + suffix نا, نی and نے) have been modeled as verbs having nominal properties. They introduce a feature of _INFL_AGREEMENT which tells whether the infinitival verb agrees with its embedded object or not (see UGR104 for details). If the agreement is NEGATIVE then the gender feature GEND is missing in that entry as can be seen in the sample entries given above. Infinitive verbs like nouns show nominative and oblique forms. For this reason feature of FORM has been introduced. This feature is also used to show different forms in deverbals.

Deverbals are verbs that can occur as adjective or noun in a sentence. DEVERBAL feature in a verb entry shows presence of deverbals as nouns or as adjective. The FORM feature gives the nominative or oblique form of a deverbal.

Result: We decided on Analysis.

Future Work: