



Center for Research in Urdu Language Processing
National University of Computer and Emerging Sciences, Lahore Pakistan

POS ID: EPOS114

Part of Speech Name: Modal Verbs

Part of Speech String: modal

Lexical Entry Template:

<word>:modal, ^TNS-ASP TENSE={PRES,PAST,FUTURE},^ALLOWED_FORM=BARE,^MODAL_STRUCT MODAL_FORM = {may, can, will, shall...}, ^ MODAL_STRUCT PERMISSION = {POS,NEG} , ^ MODAL_STRUCT PRES_ABILITY = {POS, NEG} , ^ MODAL_STRUCT PAST_ABILITY = {POS, NEG}, ^ MODAL_STRUCT NECESSITY = {POS,NEG}, , ^ MODAL_STRUCT POSSIBILITY = {0,1,2} , ^ MODAL_STRUCT OBLIGATION = {POS, NEG}.

Sample Lexical Entry:

may:modal, ^TNS-ASP TENSE = PRES, ^_ALLOWED_FORM = BARE,^VOICE = {ACTIVE,PASSIVE}, ^MODAL_STRUCT MODAL_FORM = 'may', ^ MODAL_STRUCT PERMISSION = POS , ^ MODAL_STRUCT PRES_ABILITY = NEG , ^ MODAL_STRUCT PAST_ABILITY = NEG, ^ MODAL_STRUCT NECESSITY = NEG, ^ MODAL_STRUCT POSSIBILITY = 1, ^MODAL_STRUCT OBLIGATION = NEG.

Description: Verbs like *will, might, may*, etc. are called Modal Auxiliary verbs [1, p.96]. They can behave only like helping verbs, and differ in behavior from the full verb and primary verb (auxiliary).

The following features are attached to a modal:

TENSE can be:

PRES (present):	<i>Example:</i> I can do it.
PAST (past):	<i>Example:</i> I <u>could</u> have done it.
FUTURE (future):	<i>Example:</i> I <u>will</u> go to the zoo.

It cannot be null or more than one at the same time.

MODAL-FORM can be: all the central modals (discussed in the analysis section below)

MODAL-STRUCT has the following features:

Modal	Permission	Necessity	Possibility None(0), Weak(1), Strong(2)	Ability		Obligation
				present	past	
Can	+	-	2	+	-	-
Could	+	-	2	+	+	-
Will/ Shall	-	-	1	-	-	-
Would	-	-	0	-	+	-
Should	-	-	0	-	-	+
May	+	-	1	-	-	-
Might	-	-	1	-	-	-
Must	-	+	0	-	-	-

These features have been extracted from [1] and are generalized.



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Examples:

She may come to the party.
I could have gone home.

POS Status: Active

Reference:

[1] "A Comprehensive Grammar of the English Language", by Randolph Quirk, Sidney Greenbaum, Geoffrey Leech, Jan Svartvik
[2] Notes by Dr. Shahbaz Arif, Head of Linguistic Department, Punjab University, Lahore.

Related Rules: EGR100

Related POS: -

Replaces: EPOS011

Reason: MORPH-FORM deleted

Replaced by: -

Reason: -

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

Analysis 1: The modal auxiliaries are so called because of their contribution of meanings in the area known as MODALITY (including such concepts as volition, probability, and obligation), but such verbs have a broader semantic role than the label suggests. [1, p.120]

They behave as auxiliaries only, in contrast with the full verbs which act only as main verbs, and primary verbs which may act as main verb or auxiliary. [1, p.96]

The following table lists all the "central modals" in English [1, p.135]:

NON-NEGATIVE	UNCONTRACTED NEGATIVE	CONTRACTED NEGATIVE
Can	Cannot	Can't
Could	Could not	Couldn't
May	May not	Mayn't
Might	Might not	Mightn't
Shall	Shall not	Shan't
Should	Should not	Shouldn't
Will	Will not	Won't
'll	'll not	
Would	Would not	Won't
'd	'd	
Must	Must not	Mustn't

The words present in same rows can for some purposes be regarded as present and past forms of the same verb. But for other purposes, they behave as independent verbs. [1, p.136]

The following syntactic features are common to all auxiliary verbs, i.e. modal verbs as well as primary verbs behaving as auxiliaries [1, Pp.121-126]:

1. **Place before "not":** In forming the negative finite clauses, the first auxiliary is placed before the negative word "not".

Example: She can/may do it She can/may not do it



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Vs.
She saw the play * She saw not the play

2. **Inversion of Subject and the auxiliary:** The subject noun phrase and the auxiliary (the first auxiliary if there are two or more) change places, especially in interrogative clauses:

Example: She will come. Will she come?

Vs.
She plans to come* Plans she to come?

3. **Emphatic positive:** Use of the auxiliary to deny a negative which has been stated or implied:

Example: Won't you try again Yes, I will try again.

4. **Operators in reduced clauses:** Auxiliaries can function as operators in reduced constructions, where the main verb is omitted either by ellipsis or by pro-form substitution:

Example: Won't you try again? Yes, I will.

5. **Pre-adverb position:** Frequency subjuncts, like "always" or "never", and disjuncts, like "certainly" or "probably", typically, but not necessarily, follow auxiliaries as operators whereas they precede main verbs.

Example: She would never/probably believe this story

6. **Interchangeable Quantifier position:** Quantifiers like "all", "both" and "each" which modify the subject of the clause may occur after the operator as an alternative, in many instances, to the predeterminer position:

Example: All the boys will be there. The boys will all be there.

Vs.
All our team played well. * Our team played all well.

The following additional features are unique to modal auxiliary verbs [1, Pp.127-128]:

1. **Construction with the bare infinitives:** Modal auxiliaries are normally followed by the infinitive, which is bare (i.e. the bare form of the verb alone) except with "used" and (usually) "ought":

Example: They will be asked questions.

2. **Finite functions only:** They can only occur as the first (operator) element of the verb phrase. They cannot occur in nonfinite functions, i.e. as infinitives or participles, and as a consequence of this can occur only as first verb in the verb phrase:

Example: * to may, * is maying, * has mayed

3. **No third person inflections:** Modal auxiliaries are not inflected in the 3rd person singular of the present tense, i.e. they have no -s forms:

Example: You must write. She must write

Vs.
You like to write. She likes to write

4. **Abnormal time reference:** Not only the present forms, but the past forms of the modal auxiliaries can be used to refer to present and future time (often with hypothetical or tentative meaning):

Example: I think he may/might retire next May.

Analysis 2:

Chart of modal auxiliaries [2]

Modal	Meanings	Examples
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1. Can	Ability Strong possibility Suggestion Permission	Bob can ski very well. Don't stop your car suddenly. You can cause an accident. Sue: My roommate is a nuisance. Bob: you can get a single room Jim: can I see you again? Pat: yes, I would like that.
2. Could	Past ability Ability based on certain condition Strong possibility Permission Polite request Suggestion Past of can in indirect speech.	When I was ten years old, I Could pat my head and rub my stomach at the same time. You could be a good pianist if you practiced more. Be careful with those matches! You could start a fire. Could I use your eraser? Could you please be quite? You could get your father a pen for his birthday Gail said she could drive us to the airport.
3. May	Permission Weak Possibility (1) about a future action (2) about a present condition.	Dr. Smith may I borrow your lecture notes? I might go home during the next break. Jim may be home sick. He has been very depressed for two weeks.
4. Might	Weak possibility (1) about a future action (2) about a present condition Past of indirect speech	I might go home during the next break. He said he might go home before the break is over. He said he might go home before the break is over.
5. Should	Obligation Expectation Advice	A teacher should have patience. That police officer should know where the downtown area is. You really should read more.
6. Must	Necessity Assumption Prohibition	You must get to work on time He must be a good writer because he has won so many awards. You must not smoke in this section of the hospital.
7. Will	Simple future Promise Determination	I'll see you tomorrow. I will be there on time. (Intonation distinguishes between a future tense and a promise.) I will get an A in this course if it kills me. (Intonation distinguishes between a future tense and determination.)
8. Shall	An offer to do something for	Shall I put these papers on desk?



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someone
First person question asking for agreement Shall we leave now?
(Are you ready to leave now?)

9. Would

Polite request Would you hold my books for a moment?
Willingness to do something Would you like to eat out tonight?
Past habitual action My last roommate would play the stereo until
3:00 in the morning.
Past of "will" in indirect speech She said Bob would help me.
Result of a condition If I had time, I would meet with you.

Result: We decided on the analysis [1]. Analysis of [2] is generalized to depict most properties of modals in concise form for declarative sentences as follows:

Modal	Permission	Necessity	Possibility None(0), Weak(1), Strong(2)	Ability		Obligation
				present	past	
Can	+	-	2	+	-	-
Could	+	-	2	+	+	-
Will/ Shall	-	-	1	-	-	-
Would	-	-	0	-	+	-
Should	-	-	0	-	-	+
May	+	-	1	-	-	-
Might	-	-	1	-	-	-
Must	-	+	0	-	-	-

Analysis for use of Modals in Interrogative and Imperative sentences will done in the later stage. It was noted that the features like request and willingness are specific to Interrogative sentences so they'll be introduced in only that use of modals.

Future Work: The following work will be done later:

- The semantic properties such as ability, possibility, permission, request, suggestion, etc. may only be required by Urdu in translation. Hence they might be removed in the next phase.
- Abnormal time reference of modal verbs will be catered in later stages.
Example: 1) I must leave for London tonight (here "must" needs a tense or not)
2) My train leaves at 8:00 pm tomorrow.