

'teacher'



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·	·				
			:		
	()				
			[].		
			. :		
		:	•		
	.[]				
· ·			•		

'er' 'teach'

s/es

ly

[]

s '0' : es ·

word Main stem Find stem

going go goe

being be bee

.[]

.

word net

bee being ² Morphology

³ Krovetz

ing bee

be .

. . []

. (morphological)

" " :) (:)

Find (w)		W
Prefix (W, prf)	W	pfr
Postfix (W, pof)	W	pof
RePrefix (W, prf)	W	prf
RePostfix (W, pof)	W	prf

```
Word: The word for stemming.
Result: result of stemming.
//if the word is in dictionary don't need stemming
                                                                                                                                                                               If(PostFix(Word, { "پ", "پ", "پ", "پ", "پ", "پ", "پ")}){
W1 = Word;
                                                                                                                                                                                                               RePostFix(Word, { "ه", "ه", "ه", "ه", "ه", "ه");
If find(Word)
                                                                                                                                                                                                               If(find(Word){
Result = Word:
                                                                                                                                                                                                                                              Result += Word + "+":
                                                                                                                                                                                Result += { "مْ", "مِ", "م", "مِ", "مْ" };
"مي" This part if for werb begin with"
//مضارع اخباري و ماضى التزامي
                                                                                                                                                                                Return;}}
                                                                                                                                                                               Word = W1;
If (PreFix (Word,"مي") {
                                Reprefix(Word,"مى");
                                                                                                                                                                               //ماضىي ساده
                               Result +="مي";
                                                                                                                                                                               If(PostFix(Word,{ "هِ", "هِ", "هِ", "هِ")}){
                                                                                                                                                                               If find(Word){
                                                                                                                                                                                                              If(find(Word){
                                                               Result += Word:
                                                                                                                                                                                                                                               Result += Word + "+";
                                                               Return; }
If(PostFix(Word, { "هِ", "هِ", "هِ", "هِ", "هِ") } {
                                                                                                                                                                               Result += { "نه", "يه", "يه", "يه" };
                               RePostFix(Word, { "ه", "ه", "ه", "ه", "يد", "يد", "يد", "يد", "يد", "ه");
                                                                                                                                                                               Return;}
                                If(find(Word){
                                                                                                                                                                               Word = W1;
                                                               Result += Word + "+";
                                                                                                                                                                                //ماضى نقلي
Result += { " ي", " ي", " ي", " ي", " ي" };
                                                                                                                                                                               If(PostFix(Word, { "ه اند" , "ه ايم", "ه ايم", "ه ايم", "ه ايم" , "ه ايم" ) {
                                                                                                                                                                               RePostFix(Word, \ \{ \ ``o'', \ ``o'', \ ``o'', \ ``o'', \ ``o'', \ ``o'' \});
Return;}}
Word = W1;
                                                                                                                                                                                                               If(find(Word){
                                                                                                                                                                                                                                               Result += Word + "+";
//امر و ماضىي ساده
If (PreFix (Word,"ب"){
                                                                                                                                                                               Result += { "ه اند", "ه ايد", "ه ايم", "ه ايم", "ه ايم"};
                                                                                                                                                                               Return;}
                               Reprefix(Word,"→");
                               Result +="ب";
                                                                                                                                                                               Word = W1;
                                                                                                                                                                               //ماضى بعيد
                               If find(Word){
                                                                                                                                                                               If(PostFix(Word, { "ه بودند", "ه بوديم", "ه بودي", "ه بودي")، بودم" }) الإسلام المالية الم
                                                               Result += Word;
                                                                                                                                                                               RePostFix(Word, { "ه بودند" , "ه بودیم", "ه بودیم", "ه بودیم" ) ;;
                                                               Return;
If(PostFix(Word,{ "په", "په", "په", "په", "په")}(
                                                                                                                                                                                                              If(find(Word){
                                                                                                                                                                                                                                              Result += Word + "+";
                               RePostFix(Word, \{ "`\circ", "\circ", "\circ", "\circ", "\circ", "\circ" \);
                                                                                                                                                                               Result += { "ه بودند", "ه بودیم", "ه بودیم", "ه بودی", "، بودم" };
                                If(find(Word){
                                                                                                                                                                               Return:}
                                                               Result += Word + "+":
                                                                                                                                                                               Word = W1;
Result += { "ند", "نيد", "ني"," د", "ي" };
                                                                                                                                                                               //ماضى التزامي
Return;}}
                                                                                                                                                                               If(PostFix(Word, { "ه باشند" , "ه باشيم" , "ه باشيم" , "ه باشيم" , "ه باشيم" ) ( الله باشيد الشيم" ) المنافذة 
//امر و ماضىي ساده منفي
If (PreFix (Word,"ن") {
                                                                                                                                                                               RePostFix(Word, { "ه باشند", "ه باشيم", "ه باشدي", "ه باشدي", "ه باشي");
                               Reprefix(Word,"ن");
                                                                                                                                                                                                              If(find(Word){
                                                                                                                                                                                                                                               Result += Word + "+";
                                Result +="ن";
                                                                                                                                                                                Result += { "ه باشند" , "ه باشيد" , "ه باشيم" , "ه باشد" , "ه باشي " , "ه باشم" } ;
                               If find(Word){
                                                               Result += Word;
                                                                                                                                                                               Return;}
                                                               Return;}
                                                                                                                                                                                 Word = W1;
    \rightarrow
                                                                                                                                                                               If (prefix(Word,"ن")
                                                                                                                                                                                \{/\!/Remove\ the\ ``\dot{\upsilon}`'\ from\ prefix\ and\ check\ all\ part\ for\ it\ \ according\ the\ table\ 1\}
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+ +	+	
+ +	+	

- [1] R. Krovetz, 1993: **"Viewing morphology as an inference process"**, in R. Korfhage et al., Proc. 16th ACM SIGIR Conference, Pittsburgh, June 27-July 1, 1993; pp. 191-202.
- [2] J. P. Callan, M. Connell, A. Du. "Automatic discovery of language models for text databases", ACM SIGMOD International Conference on Management of Data, pages 479-490, 1999.
- [3] K. Aas and L. Eikvil, "Text Categorisation: A Survey", http://citeseer.nj.nec.com/, aas99text.html, 1999.
- [4] M. F. Porter. "An algorithm for suffix stripping", *Program*, 14(3):130t137, 1980.
- [5] E.M Voorhees, "using wordnet for text retrieval", WordNet an electronic lexical Database, Page 285-303, MIT Press.
- [6] Kazem Taghva, Russell Beckley, Mohammad Sadeh, "A Stemming Algorithm for the Farsi Language". ITCC (1): 158-162, 2005.

كراوتز	775	۲۱.	١٣	94,17
کر او تز ۲	775	719	۴	٩٨,٢٠