

## Pig Latin Translator Functions

```

function PL = eng2PL(eng)
% function PL = eng2PL(eng)
% S. Scott Moor November 2007
% This function is designed to convert sentences to Pig Latin. It uses the
% eng2PLword function to translate each word.
%
% Input: eng = an English phrase
% Output: PL = new Pig Latin phrase

% Internal Variables
% word = accumulates and temporality stores each English word
% PLword = temporary storage for each Pig Latin word

% Initialize accumulation variables as empty variables
word = [];
PL = [];

% Loop steps through each character in the phrase. It accumulates letters
% for a word until it runs into a space.
for i = 1:length(eng)
    if eng(i) == 32 % identifies spaces
        PLword = eng2PLword(word); % if space is found translates one word to pig Latin
        PL = [PL, PLword, ' ']; % adds each new word & a space to the final phrase
        word = []; % resets the word variable to empty
    else
        word = [word, eng(i)]; % accumulates letters into each word if not a space
    end
end
PLword = eng2PLword(word); % translates the final English word
PL = [PL, PLword, ' ']; % adds the final word to pig Latin phrase

```

With a partner examine the code and answer the following questions:

1. How is each word separated out for translation
2. How are translated words assembled into a Pig Latin phrase?

```

function x = eng2PL_word(x)
% function x = eng2PL_word(x)
% S. Scott Moor, October 2007
% This is an improved function for translating single English words into
% Pig Latin. The first letter will be capitalized if it was capitalized in the original word.
%
% Input x = a single word string of at least 2 characters (no spaces)
% Output x = the Pig Latin equivalent

% Internal variables:  cons = a cell array of all lower-case consonants
%                    vowel = a cell array of all lower-case vowels

% determine if first letter is capitalized and save result
a = (x(1) < 95);
% make all letters lower case and set up list of vowels & consonants
x=lower(x);
cons = {'b','c','d','f','g','h','j','k','l','m','n','p','q','r','s','t','v','w','x','z'};
vowel = {'a','e','i','o','u','y'};
% Initialize flag for while loop
i = 1;
% Use while loop to move consonants to the end of the word until a vowel is
% found.
while i == 1
    switch x(1)
    case cons
        x = [x(2:end),x(1)]; % move leading consonant to the end of the word
    case vowel
        i = 0; % change flag so loop is exited when vowel is found
    otherwise
        disp('ERROR: entered word has an element that is neither a consonant or a vowel')
    end
end
% add 'ay' to the end and capitalize the first letter if first letter was
% capitalized in original word
x = [x,'ay'];
x(1) = x(1) - 32*a;

```

3. How is eng2plword able to move consonant groups not just the first consonant?

4. Do you for see any cases that our translator might still have trouble with?