

We are now ready to program a function PIGLATIN which takes an English sentence as argument, in the form of a list, and turns it into PIGLATIN. Each word is transformed according to the rules

- a. If a word begins with a vowel, add "way" to the word.
- b. If the word does not start with a vowel, take all the consonants of the beginning of the word up to the first vowel, move them to the back of the word, and add "ay." First (SETQ VOWELS (QUOTE (A E I O U Y)))†; then DEFINE:

```
(PIGLATIN (LAMBDA (SENTENCE)
  (MAPCAR SENTENCE (FUNCTION PIGWORD) ) ) )
(PIGWORD (LAMBDA (WORD) (PROG (EXPL FRONT)
  (SETQ EXPL (EXPLODE WORD) )
  (COND ( (MEMBER (CAR EXPL) VOWELS) NIL)
    (T (GO NOTFIRSTVOWEL) ) )
  FIRSTVOWEL
  (RETURN (COMPRESS (APPEND EXPL (QUOTE (W A Y) ) ) ) )
  NOTFIRSTVOWEL
  (SETQ FRONT (CONS (CAR EXPL) FRONT) )
  (SETQ EXPL (CDR EXPL) )
  (COND ( (NULL EXPL) (RETURN (PRINT (LIST (QUOTE ERROR) WORD) ) ) )
    ( (MEMBER (CAR EXPL) VOWELS) (GO END) ) )
  (GO NOTFIRSTVOWEL)
  END (RETURN (COMPRESS (APPEND EXPL
    (APPEND (REVERSE FRONT) (QUOTE (A Y) ) ) ) ) )
  ) ) )
```

The label FIRSTVOWEL is not used but makes the program easier to follow. If the argument of PIGWORD has no vowel, for example, SHRDL, then the value of PIGWORD would be (ERROR SHRDL), and this list is also PRINTed. We shall now show some examples:

```
(PIGWORD (QUOTE ACTIVITY) )
VALUE IS ...
ACTIVITYWAY

(PIGWORD (QUOTE CONTAGIOUS) )
VALUE IS ...
ONTAGIOUSCAY

(PIGLATIN (QUOTE (ACTIVITY IS CONTAGIOUS) ) )
VALUE IS ...
(ACTIVITYWAY ISWAY ONTAGIOUSCAY)
```

†Why is "y" a vowel?