```
// need this for Scanner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      // sentinel string that terminates program
                                                                                                                                                                                                                           /* PROMPT USER FOR STRINGS AND DISPLAY MORSE CODE EQUIVALENT UNTIL USER ENTERS SENTINEL */
                                                                                                                                                                                                                                                                                                                  public static void main (String [] args)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        final String SENTINEL = "$";
```

import java.util.\*;

class MorseCode

// Scanner object wrapped around the keyboard, for user input

 $Scanner\ keyboard = \mathbf{new}\ Scanner\ (System.in);$ 

"---."};

```
// strip leading and trailing whitespaces and force to upper-case
                                                                                                                          System.out.print ("\nEnter a string of alphabetic characters (" + "\" + SENTINEL + "\" + " to quit): ");
                                                                                                                                                                                                                                                 String input = keyboard.nextLine ().trim ().toUpperCase ();
// prompt user and get first input string
```

```
// sentinel string terminates loop, which processes each input string in turn
// If input is not SENTINEL, translate to Morse Code, and then prompt and input again and translate again, repeatedly
                                                                                                                                                           while (!input.equals (SENTINEL))
```

```
// walk through input character by character and translate each one
                                                                                                        //blanks between words of input are treated special
                                                                                                                                                                                                    // space between words of input maps to space on output
                                                                                                                                                                                                                                                                                                                                                                            System.out.print (morseCode [input.charAt(i) - 'A'] + (i < input.length() - 1?"":``(n")); // append "" if not at end of input.length() - 1?" " : '`(n") |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     // strip leading and trailing whitespaces and force to upper-case
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      // end while
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               // end main
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              // end class MorseCode
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    System.out.print ("\nEnter a string of alphabetic characters (" + "\" + SENTINEL + "\" + " to quit): ");
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                input = keyboard.nextLine ( ).trim ( ).toUpperCase ( );
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      // prompt user and get next input string
for (int i = 0; i < input.length ( ); i++)
                                                                                         if (input.charAt(i) = = ')
                                                                                                                                                                                          System.out.print ("");
```